



Sosa's virtue account vs. responsibilism

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Abstract

I first present a brief interpretation of Sosa's virtue epistemology by showing how it is arguably better than Goldman's process reliabilism, why Sosa distinguishes between animal knowledge and reflective knowledge, and how Sosa's recent account of knowing full well can deal with pragmatic encroachment. Then, I raise two worries about Sosa's account: (a) Sosa's claim that one might have animal knowledge without knowing reflectively or knowing full well implies that one's true belief might manifest *both* competence and luck, which seems to pose a challenge to Sosa's solution to the Gettier problem; (b) intellectual virtue or competence does not seem to be a necessary condition for knowledge: there are cases where one knows without possessing the relevant intellectual virtue or competence. Finally, I suggest a responsibilist account of knowledge and show how it can not only handle the cases that pose a problem for Sosa's account but also explain our intuitions about different grades of knowledge.

Keywords Knowledge · Epistemic responsibility · Reliabilism · Virtue epistemology

In this paper, I will first present a brief interpretation of Sosa's view by showing how his virtue epistemology is arguably better than Goldman's process reliabilism, why Sosa distinguishes between animal knowledge and reflective knowledge, and how Sosa's recent account of knowing full well can deal with pragmatic encroachment. Then, I will raise two worries about Sosa's account: (a) Sosa's claim that one might have animal knowledge without knowing reflectively or knowing full well implies that one's true belief might manifest *both* competence and luck, which seems to pose a challenge to Sosa's solution to the Gettier problem; (b) intellectual virtue or competence does not seem to be a necessary condition for knowledge: there are cases where one knows without possessing the relevant intellectual virtue or competence. Finally, I will propose a responsibilist account of knowledge according to which knowledge requires epistemic responsibility rather than reliability. I attempt to show

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how responsibilism can not only better handle the cases that pose a problem for Sosa's account but also explain our intuitions about different grades of knowledge.

Before getting down to work, I would like to note that I have learned a lot from Sosa's writings. I regard this paper not as a refutation of his view, but as an opportunity to learn more from him: I am looking forward to his response.

1 An interpretation of Sosa's virtue account

We may better appreciate Sosa's virtue account by comparing it with Goldman's process reliabilism. According to Goldman (1998), one knows that p iff (i) one's true belief that p is produced by a reliable process, and (ii) one can rule out all the relevant alternatives to p . Now, (i) and (ii) can be true even though one does not have any evidence or good reason for p . Thus, Goldman's account allows the possibility that one can know that p without having any evidence or good reason for p . This account can easily solve the skeptical problem. The skeptics argue that even though we are actually normal people in the normal world, we cannot know that we are, because we cannot rule out the possibility that we are a brain in a vat, and our evidence does not even slightly favor the hypothesis that we are normal people in the normal world over the skeptical hypothesis that we are a brain in a vat. Goldman meets the skeptical challenge by holding that if we are actually normal people in the normal world, then we know that we are. We do not have to rule out the possibility that we are a brain in a vat, because this is not a relevant alternative. Further, in order to know that we are normal people in the normal world, we do not need evidence to favor this proposition over the skeptical hypothesis.

However, Goldman's process reliabilism seems to have some implausible implications. Consider the following case from Lehrer (1990: 163–164):

Truetemp: Suppose a person, whom we shall name Mr. Truetemp, undergoes brain surgery by an experimental surgeon who invents a small device which is both a very accurate thermometer and a computational device capable of generating thoughts. The device, call it a tempucomp, is implanted in Truetemp's head so that the very tip of the device, no larger than the head of a pin, sits unnoticed on his scalp and acts as a sensor to transmit information about the temperature to the computational system in his brain. This device, in turn, sends a message to his brain causing him to think of the temperature recorded by the external sensor. Assume that the tempucomp is very reliable, and so his thoughts are correct temperature thoughts. All told, this is a reliable belief-forming process. Now imagine, finally, that he has no idea that the tempucomp has been inserted in his brain, is only slightly puzzled about why he thinks so obsessively about the temperature, but never checks a thermometer to determine whether these thoughts about the temperature are correct. He accepts them unreflectively, another effect of the tempucomp. Thus, he thinks and accepts that the temperature is 104 degrees. It is. Does he know that it is?

Our intuition is that Mr. Truetemp does not know that the temperature is 104 degrees. Yet, his true belief that the temperature is 104 degrees is produced by a reliable process, and he is able to rule out all the relevant alternatives: if the temperature were 98 or 107 degrees, he would not have believed that the temperature is 104 degrees. Thus, the Truetemp case poses a challenge to Goldman's account.¹

Sosa's virtue account can easily handle the Truetemp case. On Sosa's view, what is essential to knowledge is not reliable process, but intellectual virtue. S knows that *p* iff S truly believes that *p* because of exercising S's intellectual virtues. An intellectual virtue, according to Sosa, is an intellectual competence, which is "a quality bound to help maximize one's surplus of truth over error" (Sosa 1985: 227). On this definition, a reliable belief-forming faculty like eyesight is an intellectual virtue or competence. But a chip implanted in the brain is not an intellectual virtue or competence, even though the person with the brain-chip can, due to the function of the chip, reliably form true beliefs. Thus, Truetemp's true belief that the temperature is 104 degrees does not result from exercising his intellectual competence. Accordingly, he does not know. In addition, Sosa's virtue account preserves a virtue of Goldman process reliabilism: It can easily solve the skeptical problem; for if we are normal people in the normal world, then we can have animal knowledge that we are normal people in the normal world without having evidence to favor this proposition over the skeptical hypothesis.

However, simply appealing to intellectual competence seems inadequate. Consider the following case provided by BonJour (1985: 41):

Clairvoyant: Norman, under certain conditions that usually obtain, is a completely reliable clairvoyant with respect to certain kinds of subject matter. He possesses no evidence or reasons of any kind for or against the general possibility of such a cognitive power or for or against the thesis that he possesses it. One day Norman comes to believe that the President is in New York City, though he has no evidence either for or against this belief. In fact, the belief is true and results from his clairvoyant power under circumstances in which it is completely reliable.

It seems that clairvoyant power is an intellectual competence according to Sosa's definition. Thus, Norman's true belief resulted from exercising his intellectual competence. Yet, intuitively, Norman does not know that the President is in New York City.

To handle such a case, Sosa distinguishes between animal knowledge and reflective knowledge. Suppose a child can competently distinguish happy faces from sad faces. But she is unaware of the fact that she has such competence. Further, if you ask her why she thinks a certain face is happy rather than sad, she would be unable to give you good reasons. In such a case, Sosa would say the child has mere animal knowledge of which faces are sad and which are happy. Put roughly, one has mere

¹ Goldman (2011) later argues that a plausible account of justification and knowledge should incorporate both reliability and evidence. He would say that Mr. Truetemp does not know because he lacks evidence.

animal knowledge that p iff one truly believes that p as a result of exercising a reliable competence, without *having a perspective* that one truly believes that p as a result of exercising a reliable competence. By contrast, one has reflective knowledge that p iff one *has a perspective* that one truly believes that p as a result of exercising a reliable competence. In his 2007 book, Sosa seems to equate “having a perspective” with “having animal knowledge.” Thus, one has reflective knowledge that p iff one has animal knowledge that one has animal knowledge that p . As Sosa (2007: 32) writes, “If K represents animal knowledge and K^+ reflective knowledge, then the basic idea may be represented thus: $K^+ p \leftrightarrow KKp$.”² With regard to the Clairvoyant case, Sosa would say Norman does not have reflective knowledge that the President is in New York City, though he has animal knowledge.

However, one might argue that Sosa’s virtue account cannot account for pragmatic encroachment. It is widely recognized that certain knowledge ascriptions are affected by practical factors like stakes and interests. Consider a variant of the pair of “bank cases” originally offered by DeRose (1992: 913):

Low stakes: Keith and his wife Sarah are driving home on a Friday afternoon. They plan to stop at the bank on the way home to deposit their paychecks. It is not important that they do so, as they have no impending bills. But as they drive past the bank, they notice that the lines inside are very long, as they often are on Friday afternoons. Keith says, ‘I know the bank will be open tomorrow, since I was there just two weeks ago on Saturday morning. So we can deposit our paychecks tomorrow morning.’ Realizing that it isn’t very important that their paychecks are deposited right away, Sarah agrees.

High stakes: Keith and her wife Sarah are driving home on a Friday afternoon. They plan to stop at the bank on the way home to deposit their paychecks. Since they have an impending bill coming due, and very little in their account, it is very important that they deposit their paychecks by Saturday. But as they drive past the bank, they notice that the lines inside are very long, as they often are on Friday afternoons. Keith says, ‘I know the bank will be open tomorrow, since I was there just two weeks ago on Saturday morning. So, we can deposit our paychecks tomorrow morning.’ But Sarah replies, ‘Banks do change their hours. If we are unable to deposit our paychecks tomorrow, we will be in big trouble.’

Let us also assume that Keith, in both cases, truly believes that the bank will be open tomorrow through exercising the same intellectual competence: Keith has the same amount of evidence in support of his belief and employs the same cognitive mechanisms in reaching his beliefs. Thus, Sosa’s virtue account seems to imply that if Keith knows the bank will be open tomorrow in the low-stakes case, then he also knows in the high-stakes case. However, intuitively, Keith merely knows the bank

² Many philosophers such as Goldman, Greco, and Kornblith provide a similar interpretation of Sosa’s reflective knowledge. But Carter et al., (2019: 4997) argue that “while some of the things that Sosa says may give the impression that reflective knowledge is just animal knowledge ‘twice over,’ this impression is, at best, misleading.” I hope Sosa will provide more clarifications.

will be open tomorrow in the low-stakes case; he does not know in the high-stakes case. In order to know in the high-stakes case, Keith needs to have more evidence than his memory belief that he was there just 2 weeks ago on Saturday morning (cf. Fantl & McGrath, 2007).

Must Sosa's virtue account explain *away* pragmatic encroachment? No, I think Sosa's (2011, 2015, 2019, 2021) recent account of knowing full well can somehow accommodate pragmatic encroachment. Consider the following case inspired by Sosa (2021: 62–63):

Mental Arithmetic: Suppose you are an accountant assigned to figure out the average salary in your home city last year. This assignment involves calculating the sum of a lot of big numbers (e.g., $6763 + 9876 + 8765 + 4578 + 2221 + 3986 + \dots + 7967 + 6986 + 1098 + 5443 + 3187 + 8029 = ?$). You have sufficient evidence to believe that a calculator is available to you and that it is more reliable than your mental arithmetic. But you do not believe these. Instead, you neglect the calculator. If a colleague suggested that you use the calculator, you would dismiss the suggestion, for you believe, without good evidence, that you can get the job done via mental arithmetic. Suppose your mental arithmetic is actually reliable. You come to believe the true proposition P (= the sum of a lot of big numbers is n) through your reliable mental arithmetic.

Sosa would say while there is a sense you know that P , there is another sense you do not know. Given the risk, you are supposed to employ the most reliable method (i.e., using a calculator) available to you. But you neglect it or refuse to employ it. You choose a less reliable method and have no good evidence that it is sufficiently reliable given the risk. Thus, you are epistemically negligent or reckless: There is a significant amount of luck that you get it right.

Consider another accountant assigned to do the same job. Let us call her Siyi. Siyi begins with a deliberate assessment of the risk and all the methods available to her. It involves both thoroughly collecting the relevant evidence and respecting the evidence. Then, Siyi employs the most suitable method (in accordance with the risk and evidence) to solve the problem: She comes to believe the true proposition P through using a reliable calculator. Sosa would say that Siyi knows better than you: Siyi is more epistemically responsible and thereby deserves more credit for getting it right, than you. Indeed, Sosa would say Siyi knows full well.

Siyi's knowledge seems to be more than mere reflective knowledge. Mere reflective knowledge, as we have seen, is iterated animal knowledge: If one believes the truth that one has animal knowledge that P (that is, one believes the truth that P through exercising a certain intellectual competence C) through exercising a certain higher-order intellectual competence C , then one reflectively knows that P . Thus, in the Mental Arithmetic case, you may well reflectively know that P even though you ignore the calculator (which is more reliable than your mental arithmetic) and fail to appreciate the risk.

If my interpretation above is correct, then Sosa's account of knowing full well can provide a plausible analysis of the bank cases. When one knows full well, one manifests a higher-order intellectual competence. This higher-order intellectual

competence combines reliability with *epistemic responsibility*, which involves assessing the risk, judging how much reliability or evidence is required to best treat the risk, and trying one best to improve reliability or collect evidence accordingly.³ Regarding the bank cases, Sosa would say that Keith has animal knowledge (and perhaps also reflective knowledge) in both the lower stakes case and the higher stakes case. However, Keith does not know full well in the higher stakes case. When the risk is very high, we reasonably expect that the subject should know full well: We care less about whether the subject has animal knowledge.⁴

2 Worries about Sosa's virtue account

In this section, I will raise two worries about Sosa's virtue account as interpreted above.

My first worry is that Sosa's account does not well accommodate Gettier-like cases. Consider the famous job case offered by Gettier (1963):

Job: Smith and Jones have applied for a certain job. Smith has strong evidence for the following conjunctive proposition: (d) Jones is the man who will get the job, and Jones has ten coins in his pocket. Smith's evidence for (d) might be that the president of the company assured him that Jones would, in the end, be selected and that he, Smith, had counted the coins in Jones's pocket ten minutes ago. Proposition (d) entails: (e) The man who will get the job has ten coins in his pocket. Let us suppose that Smith sees the entailment from (d) to (e), and accepts (e) on the grounds of (d), for which he has strong evidence. In this case, Smith is clearly justified in believing that (e) is true. But imagine, further, that unknown to Smith, he himself, not Jones, will get the job. And, also, unknown to Smith, he himself has ten coins in his pocket.

³ Sosa (2021: 171) also makes a distinction between securely knowing full well and reflectively knowing full well. The former is even higher than the latter. Cf. Brogaard (2023).

⁴ In discussing pragmatic encroachment, Sosa (2015: 177) makes a distinction between somewhat apt belief ("whose correctness manifests some degree of competence on the part of the believer, and on the matter at hand, and in the circumstances") and reliably enough belief that is apt period (which is "above a threshold of reliable competence set by the needs of human flourishing in information-sharing communities"). A true belief can be somewhat apt without amounting to knowledge. Sosa holds that certain social pragmatic needs—"the needs of human flourishing in information-sharing communities"—determine the threshold for reliable enough competence that is required for knowledge. Thus, the threshold for reliable enough competence does not vary dramatically with respect to the specific stakes of the case. It allows that knowledge may be stored and ready for retrieval and testimony in various contexts (Sosa, 2015: 179–180). Here, epistemic responsibility is not in the picture. And it is unclear how this account could handle the bank cases. But Sosa's 2021 book seems to suggest that pragmatic needs determine which type of knowledge we reasonably expect from each other in a specific context, e.g., in a low-stakes scenario, we may reasonably expect animal knowledge from each other, while in a high-stakes scenario, we may reasonably expect knowing full well from each other. Knowing full well requires higher-order intellectual competence that combines reliability with epistemic responsibility.

Intuitively, Smith does not know that the man who will get the job has ten coins in his pocket. However, it seems that Smith forms the true belief because of exercising his intellectual competence (i.e., his reliable observation and reasoning).⁵

Sosa denies that Smith forms the true belief because of exercising his intellectual competence. He clarifies that the “because of” relationship here is to be understood as manifestation (Sosa, 2021: 18). He seems to think that X manifests Y just in case X is the salient part of the causal story of Y (Sosa, 2007: 86, 95–97). He claims that Smith’s epistemic luck, not his reliable observation and reasoning, is the salient part of the causal story of why he arrives at the true belief that the man who will get the job has ten coins in his pocket.⁶

However, it seems more plausible to say that both Smith’s competence and luck are the salient parts of the causal story of why he arrives at the true belief. Put differently, his true belief manifests both his competence and luck. This can be made clearer by contrasting the Job case with a case where the subject arrives at the same true belief through unreliable observation and reasoning.

In fact, Sosa’s account of reflective knowledge and knowing full well implies that one’s true belief can manifest both competence and luck. In the Clairvoyant case, Norman has animal knowledge in the sense that his true belief manifests a certain kind of competence. But Norman does not have reflective knowledge in the sense that his true belief does not manifest a higher-order competence: There is a significant amount of luck involved. Norman forms his belief about the whereabouts of the president in an epistemically irresponsible way. If one forms a belief in an epistemically irresponsible way, but the belief is true, then one’s true belief is epistemically lucky. Similarly, in the Mental Arithmetic case, you have animal knowledge (perhaps as well as reflective knowledge) in the sense that your true belief manifests a certain kind of competence. But you do not know full well in the sense that your true belief does not manifest a higher-order competence: There is a significant amount of luck involved. The way you form the belief about the sum of a lot of big numbers is epistemically irresponsible, but your belief is true. So, your true belief is epistemically lucky.

⁵ For a related discussion, see Lackey (2007).

⁶ Sosa (2015: 32–33) asserts that manifestation is a primitive relation that cannot be analyzed further. He gives the following example to convey what he means by “success that manifests competence.” Imagine an archer who skillfully fires his arrow at a target. A freak gust of wind first blows the shot off-course, but then a second freak gust of wind fortuitously blows it back on course again. In such a case, the archer’s success does not manifest his competence. (Sosa, 2022, offers a different case of the archer to illustrate the concept of “success that manifests competence”. He says while he does not offer a fuller explication of manifestation, his account of knowledge can handle some difficult problems.) It is worth noting that Sosa early (2007) uses “manifestation” to characterize “adroitness” rather than “aptness,” as he writes, “We can distinguish between a belief’s accuracy, i.e., its truth; its adroitness, i.e., its manifesting epistemic virtue or competence; and its aptness, i.e., its being true *because* competent. Animal knowledge is essentially apt belief” (Sosa, 2007: 23–24). There, he uses “explanatory salience” to explain the “true *because* competent” relationship (Sosa, 2007: 86, 95–97). Later, Greco (2010) develops this idea.

To be sure, the luck in the Job case is different from the luck in the Clairvoyant case and the Mental Arithmetic case. We can differentiate at least three senses of epistemic luck:

- i. Irresponsibility-luck: One forms a belief in an epistemically irresponsible way, but the belief is true.
- ii. Unreliability-luck: One forms a belief in an unreliable way, but the belief is true.
- iii. Ignorance-luck: One forms a belief because of lacking some information, but the belief is true.⁷

In both the Clairvoyant case and the Mental Arithmetic case, the subjects are irresponsibility-lucky. By contrast, in the Job case, Smith forms his true belief in an epistemically responsible and reliable way. He is just ignorance-lucky: His belief that the person who will get the job has ten coins in his pocket was partly based on his ignorance that it is himself, not Jones, who will get the job.⁸

Does Sosa have good reasons to claim that while one's true belief can manifest both competence and irresponsibility-luck, it cannot manifest both competence and ignorance-luck? I do not think so. But if one's true belief can manifest both competence and ignorance-luck, then it seems that Sosa would have to say Smith in the Job case knows in some sense but does not know in another sense.

My second worry about Sosa's account is that intellectual virtue or competence does not seem to be a necessary condition for knowledge: Sometimes one can know things though one lacks the relevant competence. Consider the following case:

⁷ Pritchard (2005) proposes a modal account of knowledge-undermining luck (also known as veritic luck). He argues that a true belief suffers knowledge-undermining luck iff it is unsafe, that is, in some nearby possible worlds where S believes p , p is false. Thus, a true belief [about who will win the next election] acquired via wishful thinking suffers knowledge-undermining luck because it is unsafe. The Gettiered justified true belief also suffers knowledge-undermining luck because it is unsafe. However, this account cannot handle the case of knowledge of necessary truths. Suppose S believes that $111,111,111 \times 111,111,111 = 12,345,678,987,654,321$ merely because it looks incredibly elegant (not via correct reasoning or using a calculator). Then, S does not know the mathematical truth. However, S's true belief is safe, for the mathematical proposition is a necessary truth: It is not false in any possible world. To explain knowledge of necessary truths, Pritchard (2012) latter offers a global account of safety, which can be formulated as follows: S's belief that p , formed on basis B, is safe, iff in most nearby possible worlds (and in all of the very closest possible worlds) where S forms a belief on basis B, S's belief is true. Pritchard's global account of safety is very similar to Goldman's modal/propensity account of reliability. Also, Goldman and Beddor (2021) think local safety is also a kind of reliability in a broad sense. Thus, both local-unsafety-luck and global-unsafety-luck are unreliability-luck in a broad sense. (What I call "ignorance-luck" in the Gettier cases, on Pritchard's view, is unsafety-luck and thereby unreliability-luck.) However, there are cases (e.g., the Difficult Question case and the Bad Memory case) where knowledge seems to be compatible with unreliability-luck. I thus suggest that it is not unreliability-luck but irresponsibility-luck and ignorance-luck that are knowledge-undermining. Philosophers who hold that knowledge requires epistemic responsibility would recognize irresponsibility-luck. And the no-defeaters theorists would recognize ignorance-luck.

⁸ In Section 3, I will show that ignorance-luck is knowledge-undermining insofar as if the subject were well-informed, her original way of forming the belief would have been epistemically irresponsible. Thus, in the final analysis, only irresponsibility-luck is knowledge-undermining, or so I shall argue.

Difficult Question: Ming is a high school student with outstanding math talent compared to other students in the same school. However, when he attempts to answer a set of the International Mathematical Olympiad (IMO) questions, he gets less than 20% correct. One of the questions requires very long and complex reasoning. When Ming first tries, he is in good shape. After 2 h of continuous and uninterrupted thinking, he finally gets the correct answer through sound reasoning. However, this time it is a case of him going over the top. If he was asked to do a similar question again, he would get it wrong seven times out of ten. In other words, he lacks a reliable ability or competence to deal with such questions.⁹

Intuitively, Ming knows the answer to the difficult question. But according to Sosa's account, Ming does not know because he does not believe the answer through exercising intellectual competence, which Ming lacks.

One might say Sosa could claim that the Difficult Question case is similar to an athletic case where aptness does not require being highly reliable. Low reliability counts as competence in competitive athletics. For example, in baseball, a batter's 15% competence is deemed outstanding. Thus, Ming does have mathematical competence though he is less than 20% reliable.

Response: Sosa claims that the epistemic domain is different from the athletic domain. "Why is a batter's 15% competence deemed outstanding, as is a basketball player's 40% three-point percentage, while an epistemic ability at those levels is dismissed as subpar and inadequate to provide knowledge?" Sosa (2015: 175–176) writes, "At least in part, I suggest, the answer is that epistemic competences are relevant not only to the attainment of a good picture of things for the believer, but also to informing others, enlarging thereby the pool of shared information. Risky informed guesses do not pass muster as objectively endorsable apt attainments of the truth, properly stored for later use, and transmissible to others through public assertion" (cf. Sosa, 2021: 163). Sosa seems to argue as follows:

We are highly dependent, information-sharing beings and thereby have significant needs for identifying reliable informants across various contexts. Such needs determine how we use the concept of knowledge: We attribute knowledge to S only when we think S is a (more than 50%) reliable informant. Now a plausible theory of knowledge must be coherent with how we use the concept of knowledge: If a theory of knowledge implies that S knows that p even though S's belief that p is unreliably formed, then it is implausible. Therefore, only reliabilism is a plausible theory of knowledge.

However, the Difficult Question case shows that knowledge does not require more than 50% reliability. What is wrong with Sosa's argument? It is worth noting that while we are highly dependent, information-sharing beings, we often do not depend on kids for significant scientific information. However, we do think kids can know some significant scientific facts (e.g., Earth's circumference measured around the

⁹ Hirvelä (2019: 116) provides a similar case.

equator is about 40,000 km). Similarly, in the Difficult Question case, we attribute knowledge to Ming not because we think he is a reliable informant about the question. We depend on math teachers or professional mathematicians (rather than high school students) for correct answers to highly sophisticated mathematical questions. Thus, we do not think all knowers are reliable informants whom we may depend on when we need the relevant information. (Perhaps we attribute knowledge to certain people merely because we think they acquire the relevant true belief in an epistemically responsible way, or so I shall argue in Section 3.)

Further, it seems that we attribute knowledge not only to the talented people who unreliably overperform but also to the people who suffer cognitive decline. Consider the following case:

Bad Memory: Old MacDonald has a good farm and a bad memory. His memory is 40% reliable: If it seems to him that he clearly remembers that *p*, there is only a 40% chance that *p* is true. Old MacDonald recognizes that his memory is generally unreliable. But this recognition does not make him refrain from forming beliefs on the basis of his memory. Instead, he adopts the following belief-forming policy: If it seems to him that he clearly remembers that *p*, but he has evidence for *q* (which is an alternative to *p*), then he would not believe *p*. But if he has no evidence for any alternative to *p*, he would believe that *p* based on his clear memory of *p*. For example, Old MacDonald believes that the southern live oak on his farm was co-planted by him and his father 50 years ago, because he clearly remembers this event, and he has no counterevidence (an example of counterevidence would be that his childhood playmate told him that the southern live oak on his farm was planted by someone else). In fact, Old MacDonald's belief about the oak is true. His memory of this event involves a causal non-deviant connection.

Intuitively, it seems appropriate to say that Old MacDonald knows that the southern live oak on his farm was co-planted by him and his father 50 years ago. It is implausible to say that Old MacDonald knows nothing about the past via his memory. However, Sosa's account implies that Old MacDonald knows nothing about the past via his memory, for his memory is unreliable.¹⁰ Thus, Sosa's account is flawed.

One motivation for the claim that knowledge requires intellectual competence seems to be Sosa's beliefs (a) that knowledge excludes epistemic luck and (b) that true belief without intellectual competence, which is a reliable ability, is epistemically lucky. But as we have seen, Sosa thinks lower grades of knowledge are compatible with irresponsibility-luck. So, if Sosa holds that all grades of knowledge require intellectual competence because all grades of knowledge exclude epistemic luck, he must mean that all grades of knowledge exclude unreliability-luck.

However, we may further distinguish between different sorts of unreliability-luck. For example, while Ming's success in solving the difficult math question is

¹⁰ One might say Old MacDonald's memory is reliable in the domain of things that he and his father did together. But we can stipulate that his memory is also 40% reliable in this domain. The Bad Memory case does not purport to show the generality problem for reliabilism.

unreliability-lucky, it is very different from other sorts of unreliability-luck, such as lucky guessing, wishful thinking, and divination. For Ming's success involves epistemic conscientiousness and correct reasoning in each step. It is implausible to say that Ming's success manifests unreliability-luck (or unreliability-luck *saliently* explains Ming's success) (cf. Turri 2013). Similarly, Old MacDonald's success also involves a sense of epistemic responsibility and an appropriate causal connection between his memory belief and the fact. It is implausible to say that his true belief about who planted the southern live oak manifests unreliability-luck (or unreliability-luck *saliently* explains why his belief is true). It is more plausible to say that his belief is true because he clearly remembered that particular event. By contrast, in the case of lucky guessing, wishful thinking, or divination, the subject's success does not involve the right mechanism (i.e., correct reasoning or appropriate causal connection) and/or any sense of epistemic responsibility. Perhaps, knowledge is only incompatible with the sort of unreliability-luck that is not accompanied by the right mechanism and a sense of epistemic responsibility.

3 A responsibilist account

If my analysis in Section 2 is on the right track, then perhaps, we should move toward a responsibilist rather than reliabilist account of knowledge. As we have seen, Sosa holds that knowing full well requires both reliability and responsibility, while animal knowledge only requires reliability. Many other philosophers such as Goldberg (2018), Greco (2010), and Zagzebski (1996), who do not endorse Sosa's distinction between different grades of knowledge, hold that every case of knowledge requires both reliability and responsibility. By contrast, I want to suggest that knowledge only requires responsibility. More specifically,

Responsibilism: S knows that p just in case S's belief (that p) is true because S forms the belief in an epistemically responsible way that is undefeated. In short, knowledge is success because of being (undefeated) responsible.

In this section, I will clarify responsibilism by showing how it can deal with Gettier-like cases, the Mental Arithmetic case, the Difficult Question case, and the Bad Memory case.

Before proceeding to specific analyses, a preliminary clarification of responsibilism is in order. First, S forms the belief that p in an epistemically responsible way iff (a) S exercises her epistemic agency in forming the belief that p,¹¹ and (b) the way S forms the belief that p is epistemically blameless. As many philosophers (Foley, 2005; Goldberg, 2018; Peels, 2017) note, whether the way S forms the belief that p is epistemically blameless not only depends on the relevant evidence S currently has but also depends on S's social role and the practical or moral stakes involved.¹²

¹¹ I follow John Greco's (2010) way of using the term "epistemic agency." I agree with him that knowledge requires epistemic agency.

¹² Whose stakes matter? For an insightful discussion, see Grimm (2015).

Thus, if a high school student believes, via reading a news report, that some scientists have successfully made room-temperature superconductors, her way of forming the belief is epistemically blameless. But if a scientist on superconductors believes the same thing via reading a news report, his way of forming the belief is epistemically blameworthy: He should have carefully examined the research of the scientists who claim that they have successfully made room-temperature superconductors.¹³ In the bank cases, when the stakes are low, the way Keith forms the belief that the bank will be open tomorrow is epistemically blameless. But when the stakes are high, the way Keith forms the belief is epistemically blameworthy: He should have collected more evidence before forming the belief.

Second, the “undefeated” clause of responsibilism is inspired by the early no-defeaters response to the Gettier problem. The early no-defeaters theory is about knowledge-level justification. The core idea is simple: Knowledge requires the kind of justification that can withstand the addition of new true beliefs to the agent’s doxastic system. If acquiring a new true belief would destroy your original justification for your old true belief that *p*, then your original justified true belief does not amount to knowledge. Many philosophers think this idea can solve the Gettier problem. In the Job case, Smith fails to believe the truth that the person who will get the job is himself rather than Jones. But if he comes to believe this truth, then his original justification for his belief that the person who will get the job has ten coins in his pocket would be destroyed; thereby, his original justified true belief does not amount to knowledge. A defeater (to your original justification for your belief that *p*) is roughly defined as a true proposition that you do not believe, but if you come to believe, then your original justification would be destroyed.¹⁴

My account of knowledge appeals to the concept of epistemic responsibility rather than justification. Accordingly, a defeater is not a justification defeater, but a responsibility defeater. Suppose you originally form the belief that *p* in an epistemically responsible way because you do not believe the truth that *q*: Believing that *q* would make your original way of forming the belief that *p* no longer epistemically responsible. Then, *q* is a defeater to your epistemically responsible way of forming the belief that *p*.

Here is my analysis of Gettier’s Job case. Smith’s belief that the man who will get the job has ten coins in his pocket is formed in an epistemically responsible way because he forms this belief via exercising his epistemic agency: He makes observations and inferences. Also, Smith is clearly epistemically blameless in forming the belief: Given that this is normal recruitment (suppose the practical or moral stakes

¹³ *Nature*, one of the world’s most prestigious science journals, retracted a major paper from embattled superconductivity researcher Ranga Dias in 2023. See <https://www.scientificamerican.com/article/nature-retracts-controversial-room-temperature-superconductor-study/>.

¹⁴ For a recent defense of the general no-defeaters approach, see de Almeida and Fett (2016). As de Almeida and Fett (2016: 4) note, “Defeaters are, by definition, true propositions not in the agent’s ‘belief box.’ Beliefs that are counterevidence to a given belief are labelled, by Klein, as ‘overrides’ of the justification of that given belief. Unfortunately, however, many have become used to calling such beliefs ‘internal defeaters,’ or ‘psychological defeaters,’ or even simply ‘defeaters’! That’s the clumsy but popular way with the terminology.”

involved are normal), he does not have any epistemic obligation to inquire further (e.g., calling the HR office or waiting for the official decision letter) before forming a belief about who gets hired. However, Smith is ignorance-lucky, as there is a defeater: It is him rather than Jones who gets the job. Had Smith learned this fact, his original way of forming the belief would have been epistemically irresponsible: Originally, he forms the belief because of believing that Jones is the man who gets the job (and that Jones has ten coins in his pocket). He would have been epistemically irresponsible because his beliefs would have been baldly inconsistent, and he is reasonably expected to detect such bald inconsistency. Thus, Smith's belief [that the man who will get the job has ten coins in his pocket] is true *not* because he forms the belief in an epistemically responsible way that is undefeated.

Responsibilism can also handle the Mental Arithmetic case. In this case, the practical or moral stakes are supposed to be high. So, you can be reasonably held to a high standard of epistemic responsibility: If you ignore or refuse to use a calculator that is easily available to you and more reliable than your mental arithmetic, then the way you form the belief about the sum of a lot of big numbers is not epistemically responsible. Thus, you do not know.

In the Difficult Question case, the practical or moral stakes are normal: Ming can be reasonably held to the standard of epistemic responsibility in a normal math class. Further, Ming forms the true belief via exercising his epistemic agency, and he is epistemically blameless in forming the belief: We cannot epistemically blame a person who forms a belief that *p* through meticulous and correct reasoning from true premises that he has good reasons to believe, even though the person lacks the relevant competence, which, by definition, is a stable and reliable ability. Finally, the fact that Ming forms the belief in an epistemically responsible way seems to explain why he believes the truth.

One might think that there is a defeater: The fact that Ming lacks the relevant competence to solve such difficult questions. Had Ming recognized this fact, he would have had evidence against his belief about the answer to the difficult question, and, accordingly, his original way of forming the belief would not have been epistemically responsible: He should have not trusted his reasoning.

But we may make a distinction between misleading defeaters and genuine defeaters (cf. Klein 1976). Misleading defeaters are themselves defeated, while genuine defeaters are undefeated defeaters. The fact that Ming lacks the relevant competence in solving such questions is a *defeated* defeater: It is defeated by another fact, i.e., that Ming outdoes himself this time. Recognizing *both* facts would not make his original way of forming the belief epistemically irresponsible. (By contrast, the defeater in Gettier's Job case is undefeated and genuine.)

In the Bad Memory case, Old MacDonald is reasonably held to a low standard of epistemic responsibility in forming the belief about who planted the southern live oak, as the practical or moral stakes are supposed to be very low: It does not matter a lot if Old MacDonald's belief is false. Further, Old MacDonald forms the belief via exercising his epistemic agency, and he is epistemically blameless in forming the belief: We cannot epistemically blame a person who forms a belief that *p* via unreliable memory if (a) it seems to her that she clearly remembers that *p*, (b) she has no positive evidence for any alternative to *p*, and

(c) the practical or moral stakes are very low. She does not have any epistemic obligation to refrain from forming any memory beliefs *merely* because she recognizes that her memory is unreliable. In addition, there seems no undefeated defeater, for Old MacDonald had already been aware that his memory was not good. Had Old MacDonald learned that while his memory was not good in general, his memory of who planted the southern live oak was sound, it would not have made his original way of forming the belief epistemically irresponsible. Finally, the fact that Old MacDonald forms the belief in an epistemically responsible way that is undefeated explains why he believes the truth. (Can we imagine a case where S's belief is true and S forms the belief in an epistemically responsible way that is undefeated, but S's belief is true *not because* S forms the belief in an epistemically responsible way that is undefeated? Suppose S believes that p in an epistemically responsible way. However, S is unaware that an angel ensures that whatever S believes is true. Even if S were aware of the intervention of the angel, it would *not* have made S's original way of forming the belief epistemically irresponsible. Here, it seems that S's belief is true not because S forms the belief in an epistemically (undefeated) responsible way.)

A possible objection: Your responsibilist analysis of knowledge entails that if the way S forms the belief that p is not epistemically responsible, then S does not know that p. Now, S's belief that p is formed in an epistemically responsible way only if S is aware of (i) the relevant practical or moral stakes, (ii) the relevant intellectual abilities she has, and (iii) the alternative methods she can employ to reach a decision about whether p. However, kids and unsophisticated adults may know many things without being aware of (i), (ii), or (iii). Thus, responsibilism is false.

Reply: To be sure, there is a sense of "epistemically responsible" in which being epistemically responsible involves being aware of (i), (ii), and (iii). In this sense, being epistemically responsible seems to be epistemically praiseworthy. However, there is another sense in which, being epistemically responsible, just like being morally responsible, is blameless rather than praiseworthy (cf. Peels, 2017). For example, keeping quiet in a quiet space in your university library is morally responsible but not praiseworthy. Believing that the earth is not flat because of reading a physics textbook is epistemically responsible but not praiseworthy.

In addition, it is not appropriate to hold kids and sophisticated adults to an equal standard of epistemic responsibility, just like it is not appropriate to hold laymen and experts to an equal standard of epistemic responsibility. It is appropriate to hold laymen to a lower standard of epistemic responsibility (compared with experts), as noted above. Similarly, it is appropriate to hold kids to a lower standard of epistemic responsibility (compared with adults): The younger a kid is, the lower epistemic responsibility she bears. This explains why we are so generous in attributing knowledge to babies when they get things right.

4 Conclusion

To sum up, responsibilism seems better than Sosa's reliabilist virtue epistemology in at least two aspects: (a) it better handles Gettier-like cases; (b) it can better explain our intuitions that sometimes people can know without having the relevant competence.

Before closing, I would like to suggest that responsibilism can explain our intuitions about different grades of knowledge as well as Sosa's account. If whether one forms a belief in an epistemically responsible way depends on various factors including the social role one plays and the relevant practical or moral stakes and forming the belief that *p* in an epistemically responsible way is necessary for knowing that *p*, then it is predictable that sometimes people may know unreflectively or know reflectively but not full well. So, it is plausible to distinguish between animal knowledge, reflective knowledge, and full-well knowledge. But it does not follow that, in a specific case like Clairvoyant, one has animal knowledge without reflective knowledge. In the Clairvoyant case, we have the intuition that one simply does not know because, according to responsibilism, Norman forms the belief about the whereabouts of the president in an epistemically irresponsible way.

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