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KNOWLEDGE, SKILL AND VIRTUE EPISTEMOLOGY

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ABSTRACT. According to *virtue epistemology*, one should primarily understand knowledge in terms of the relationship between cognitive success and cognitive agency. There are various ways of understanding this thesis. Along one axis, there is the debate about whether we should focus on the agent's reliable cognitive skills in general, or whether we should instead treat knowledge as primarily concerned with the manifestation of more elevated epistemic standings, like intellectual virtues. Along another axis, there is the debate about whether we should understand knowledge as being exclusively defined in terms of the subject's cognitive skills (where this category includes the intellectual virtues), or whether there needs to be supplementary conditions in one's theory of knowledge to deal with the problem posed by knowledge-undermining epistemic luck. This paper will explore these topics, and in the process offer an overview of the contemporary debate regarding issues at the nexus of knowledge, skill and virtue epistemology.

1. KNOWLEDGE, LUCK AND COGNITIVE SKILL

There is an intimate connection between knowledge and skill, to the extent that it is not seriously in question that the former demands the latter.¹ That is, when a subject has knowledge her true belief is in some significant way due to her exercise of relevant cognitive skills. This is one reason why a subject who gets to the truth in a completely random way—through guesswork, say (assuming that guesswork is ever a genuine route to belief)—doesn't count as having knowledge, since their cognitive agency is not playing any role in producing their cognitive success.² Elsewhere I have referred to this widespread intuition in epistemology as the *ability platitude*.³

Note that it is useful to keep the ability platitude apart from a second widely held intuition about knowledge. This is the *anti-luck platitude* that knowledge cannot be due to luck.⁴ For many cases, a true belief that fails to amount to knowledge runs afoul of both platitudes. In the case just

imagined, for example, where the subject's true belief is entirely through guesswork, it is true both that the cognitive success is purely down to luck and that it has nothing to do with the subject's exercise of relevant cognitive skill. Moreover, this doesn't seem to be at all accidental. If one gets to the truth through one's exercise of relevant cognitive ability, then doesn't that exclude the possibility that one got to the truth simply through luck? And if one's cognitive success is not down to luck, then what else could it be attributable to except one's exercise of relevant cognitive ability? On the face of it, then, it does look as if these two platitudes are simply two sides of the same coin.

Interestingly, however, there are also cases that appear to trade on only one of these platitudes. Consider, for example, a belief that is guaranteed to be true, given how it was formed, but where this has nothing to do with the subject's exercise of relevant cognitive agency. Perhaps, for example, there is a divine helper whose sole concern is to ensure that the subject's beliefs about a certain subject matter, formed in this particular way, are sure to be true (to the extent that the divine helper will, if need be, change the facts to conform with what the agent believes). Now imagine that our subject forms her beliefs in this regard in ways that have nothing to do with the exercise of relevant cognitive agency (such as, again, guesswork, say). Since the beliefs are guaranteed to be true, there is no plausible sense in which we can say that they are only true as a matter of luck, and hence the anti-luck platitude should be satisfied. But nonetheless they clearly don't amount to knowledge, and the natural explanation for why this is so is that they don't satisfy the ability platitude.⁵

As we will see shortly, there are also cases that seem to demonstrate that one's belief can satisfy the ability platitude but fail to count as knowledge nonetheless because it fails to satisfy the anti-luck platitude. If that's right, then the two platitudes come apart in extension in both directions. But this second type of scenario is more controversial, for reasons that I will explain. In any case, our interest just now is in the ability platitude and in theories of knowledge which take their lead from this platitude. In particular, there is a way of thinking about knowledge that takes the idea that knowledge involves cognitive skill or ability as primary. We can usefully classify such views as *virtue epistemologies*, even though such a classification covers a very broad spectrum of views. Indeed, there will be positions that fall under this classification where the proponents of these positions would eschew this description (albeit for reasons that don't concern us here).⁶

2. TYPES OF VIRTUE EPISTEMOLOGY

It will be helpful to differentiate between types of virtue epistemology along two key axes. The first concerns whether the position's appeal to cognitive skills—i.e., cognitive *virtues*, very loosely and broadly conceived (we will comment on this usage shortly)—is meant to offer a complete account of knowledge. Call *robust virtue epistemology* the view that there is nothing more to knowledge than (roughly) virtuously formed true belief—i.e., expressed in terms of skills, specifically, that knowledge is essentially skilfully formed true belief.⁷ In contrast, call *modest robust virtue epistemology* the view that virtuous true belief is at most a necessary condition of knowledge.⁸ Accordingly, the modest virtue epistemology camp would also include those proponents of virtue epistemology who reject the whole project of analysing knowledge.⁹ We will come back to this distinction in a moment.

A second axis along which we can differentiate types of virtue epistemology concerns how broad the class of cognitive traits is that are allowed to count as virtues. On the one hand, we have *virtue reliabilism* which holds that a wide variety of reliable cognitive traits, such as cognitive skills and faculties, can qualify as virtues in the relevant sense, and thus enable a subject to gain knowledge (or at least satisfy the ability epistemic condition relevant to knowledge anyway).¹⁰ In contrast, *virtue responsibilism* holds that only a restricted class of reliable cognitive traits counts as virtues in the relevant sense, and hence is relevant to the acquisition of knowledge. For example, one might hold that it is only the exercise of the intellectual virtues, in the Aristotelian sense, that enables subjects to gain knowledge.¹¹

What drives the virtue reliabilism/responsibilism distinction tends to be the epistemic externalism/internalism debate regarding knowledge.¹² All virtue epistemologies are claiming to capture the sense in which a subject's knowledge, on account of it being the significant product of cognitive skill, is thereby a cognitively responsible true belief. But they depart from each other in terms of how much they build into this notion of cognitive responsibility, and that relates to where they stand in the epistemic externalism/internalism debate.

Consider first how virtue reliabilism compares to a simple process reliabilism. Both views focus on reliable belief-forming processes, but what sets virtue reliabilism apart from a simple process reliabilism is the idea that it is not any reliable belief-forming process that matters, but rather those cognitive traits that are stable and integrated aspects of the subject's cognitive character.¹³ In short, what matters are the subject's cognitive *skills* (where this category also includes one's innate cognitive skills—i.e., one's cognitive faculties). Mere reliable belief-forming processes, after all, need not have anything to do with the subject's cognitive skills. For example, they can be entirely fleeting belief-forming traits, and hence not represent a subject's cognitive

skills for that reason. Or they can be belief-forming traits that are reliable in ways that are contrary to the subject's cognitive character rather than being a manifestation of it, as in cases of reliable malfunctions, and hence do not represent a subject's cognitive skills for that reason.¹⁴

By focussing on those reliable belief-forming traits that count as cognitive skills, virtue reliabilism is able to directly accommodate the ability platitude. It also enables the view to offer an account of cognitive responsibility. After all, if one's true belief is the product of one's cognitive skills, then there is a clear sense in which one's cognitive success is representative of one's cognitive agency, and hence is something that one can take responsibility for. The contrast is with other kinds of true beliefs that are not due to one's cognitive skills—such as true belief that is the result of guesswork—where one cannot take responsibility for one's cognitive success. Indeed, this contrast will also cover cases of mere reliable true belief too, such as cognitive malfunctions, as these will also be instances where the cognitive responsibility at issue is lacking.

For virtue reliabilism, our concern for cognitive responsibility—especially as regards the kind of cognitive responsibility at issue when it comes to knowledge—is captured by this very broad notion that is in play here. I say broad because it is also relatively undemanding from an intellectual perspective. On this view, a subject might be simply, and unreflectively, manifesting her cognitive skills in circumstances relative to which they are apt and thereby come to have cognitively responsibly true belief (and thereby be in the market for knowledge). In particular, there is no essential reason why the subject should be in a position to offer good reflectively accessible reasons in support of her belief—i.e., a *justification*, as it is normally understood—which is what an epistemic internalist would characteristically demand of a knowing subject.

This is where the contrast between virtue reliabilism and virtue responsibilism comes in, since the latter will insist on a much more demanding conception of cognitive responsibility, one more in keeping with standard forms of epistemic internalism. In particular, they will insist that the relevant notion of cognitive responsibility—at least as it pertains to knowledge anyway—is one that involves a manifestation of cognitive skills in such a manner that the subject is able to offer justifications for their beliefs. In effect, then, they are restricting the way in which cognitive skills can give rise to knowledge, in that they will insist that a mere unreflective exercise of cognitive skill does not suffice for cognitive responsibility (of the relevant kind), and hence does not suffice for knowledge either, *contra* virtue reliabilism.

It will be helpful in this regard to focus on an especially demanding version of virtue responsibilism that insists that it is only intellectual virtues—such as being conscientious or observant—that can generate knowledge.¹⁵ Intellectual virtues are here to be understood along broadly Aristotelian lines, and hence to be contrasted with mere cognitive skills, just as virtues more generally are often contrasted with skills. For example, virtues (and hence intellectual virtues)

are acquired and maintained in distinctive ways via emulation of the virtuous combined with a process of habituation so that the target dispositions become second nature. This ensures that intellectual virtues are essentially reflective cognitive traits, in that one needs to engage in relevant reflection in order to acquire them in the first place and then maintain them thereafter. Indeed, in the case of intellectual virtues even once the target dispositions have become second nature reflection will still be required (perhaps in contrast to virtues more generally). How, for example, could someone manifest conscientiousness in a purely unreflective manner? Skills, on the other hand, can be innate, as cognitive faculties are, or can be acquired in entirely unreflective ways. It's also not necessary to cognitive skills that they require any activity on the part of the subject in order to be maintained—one's faculties, for example, may work perfectly fine without one doing anything (consciously anyway) to ensure their proper function.

There are other differences between virtues and skills, and thus between intellectual virtues and cognitive skills, but the foregoing should suffice to demonstrate that the former is a much more demanding notion.¹⁶ In particular, the notion of cognitive responsibility in play when it comes to the manifestation of intellectual virtues is much more sophisticated than that at issue in virtue reliabilism, and hence much more restrictive as a result. Manifestations of the intellectual virtues essentially involve specifically reflective cognitive skills in ways that are unlike the exercise of mere (unreflective) cognitive skills. They thus bring with them a level of cognitive ownership on the part of the subject that is not demanded by the exercise of mere cognitive skills. This means that there is a very different, and more demanding, notion of cognitive responsibility in play. In short, if knowledge demands the manifestation of intellectual virtue then it will not be enough for knowledge that one's cognitive success be attributable to one's cognitive skills, and thereby one's cognitive character. Instead, one's cognitive success should be attributable to one's reflective employment of one's cognitive skills (e.g., as in the manifestation of an intellectual virtue).

3. ROBUST VIRTUE EPISTEMOLOGY

These two ways of distinguishing types of virtue epistemology are completely independent of one another, in that where one stands as regards one of these axes does not determine where one stands as regards the other. For example, one might be a robust virtue responsibilist or a modest virtue responsibilist, or one might be a robust virtue reliabilist or a modest virtue reliabilist.¹⁷ With that in mind, we will now evaluate the merits of robust virtue epistemology while bracketing whether that view should be further allied to virtue reliabilism or virtue responsibilism.

One principal motivation for robust virtue epistemology comes from the idea that knowledge is a particular kind of achievement, a claim that brings with it a distinctive account of the relationship between knowledge and skill.¹⁸ In order to see this, consider what achievements in general involve, taking the case of an archer's achievement at hitting the target as an illustration. Achievements demand success, but mere success does not suffice—it is not enough for an achievement that the archer hits the target through dumb luck. In particular, achievements demand relevant skill, in this case the skills relevant to archery. Interestingly, however, the mere conjunction of success and the exercise of the relevant skill does not suffice for an achievement. This is because one can easily 'gettierize' such a conjunction, by making the success completely independent of the exercise of skill. So, for example, imagine that the archer skilfully fires the arrow, and that it also hits the target, but that while in flight it is caught by a dog who promptly deposits the arrow in the target. We thus have success and the exercise of relevant skill, but clearly no achievement.

What needs to be added to success and skill in order to get an achievement? Well, at a rough first pass, it seems that what is required is a success that is *because of* one's exercise of the relevant skill, in the sense that one's success is attributable to that exercise of skill. Expressed in sloganizing form, achievements seem to be successes that are because of skill. What's lacking in the archer case just considered is that while there is both success and the manifestation of the relevant skill, the former is not attributable to the latter (but is rather due to the intervention of the helpful dog).

The reason why this is relevant to robust virtue epistemology is that it suggests a fascinating way of thinking about knowledge as a specifically cognitive kind of achievement. That is, knowledge is cognitive achievement, and is thus to be understood as being cognitive successes (i.e., true belief) that is because of cognitive skill. Such a proposal is amenable to robust virtue epistemology precisely because it analyses knowledge exclusively in terms of cognitive skills. The way in which robust virtue epistemology deals with Gettier-style cases should be clear from the toy archery example just offered. Where such cases go awry, according to robust virtue epistemology, is that while one has cognitive success (true belief) and the exercise of relevant cognitive skill, the former is not attributable to, and thus not because of, the latter. So, for example, skilfully examining an instrument that is (unbeknownst to one) broken and nonetheless thereby gaining a true belief would be an instance where there is the conjunction of cognitive success and relevant cognitive skill. But since the epistemic luck in play ensures that the former is not because of the latter, it follows that it does not count as an instance of knowledge according to robust virtue epistemology, since it is not a cognitive achievement.

That knowledge is on this view merely the sub-species of an important broader category is clearly an advantage of the proposal. Indeed, this aspect of the position brings with it a notable benefit in that one is now in a position to account for the distinctive value that is often attributed to knowledge by appealing to the value of achievements more generally. Achievements, after all, do seem to have a special kind of value, of a kind that is lacking in mere successes that fall short of achievements (including gettierized successes). If that's right, then it would hardly be surprising if knowledge, *qua* cognitive achievement, should inherit this distinctive kind of value.¹⁹

Despite the attractions of the view, it also faces some fairly serious problems. One concern that I want to focus on here is whether robust virtue epistemology can adequately accommodate the anti-luck platitude. I noted above that the ability and anti-luck platitudes seem to come apart in both directions, but I only gave an example of a true belief that satisfied the anti-luck platitude while failing to amount to knowledge because it failed to satisfy the ability platitude (i.e., the case where one's true belief is guaranteed to be true, but in a way that has nothing to do with one's exercise of cognitive skill). The more interesting question right now, however, is how the two platitudes might come apart in the other direction, such that there are true beliefs that satisfy the ability platitude while failing to amount to knowledge because they don't satisfy the anti-luck platitude.

With the ability platitude construed very broadly, the obvious cases that spring to mind in this regard are Gettier-style cases. After all, the subject is manifesting relevant cognitive skill in forming their true belief, but she fails to acquire knowledge nonetheless because of the epistemic luck involved. But the proponent of robust virtue epistemology can argue that what is really being demanded by the ability platitude is not just the exercise of relevant cognitive skill, but more specifically that one's cognitive success is attributable to that exercise of relevant cognitive skill. And that does appear to be lacking in Gettier-style cases, as we noted above, which is why robust virtue epistemology can seem like such an appealing theory of knowledge.

The problem, however, is that it is fairly straightforward to formulate scenarios where even this stronger conception of the ability platitude is satisfied and yet there is sufficient epistemic luck in play that the true belief in question doesn't seem to amount to knowledge. One way of doing this is by making a distinction between two ways in which a success (cognitive or otherwise) can be lucky. Consider our archer again. In the scenario depicted above where the helpful dog seizes the arrow in flight and places it in the target, what we have is *intervening luck*, in that something actually gets in between the success and the exercise of skill and thereby ensures that the former isn't attributable to the latter (but rather to the intervention of the dog). Intervening luck is clearly incompatible with achievements, as we noted above. Its epistemic variant, *intervening epistemic luck*, is also clearly incompatible with knowledge, as it is the kind of epistemic luck that is standardly

found in Gettier-style cases. For example, skilfully forming a belief that there is a sheep in the field by looking at the sheep-shaped object, and happening on a true belief on account of the real sheep hidden from view behind the sheep-shaped object that one is looking at, would fit the bill as a case of intervening epistemic luck.²⁰

But there is a different kind of luck that is relevant here that is not of the intervening kind. Imagine our archer scenario but now remove the dog and have the archer skilfully hitting the target unimpeded. The twist in the tale, however, is there are (unbeknownst to the subject) wind machines set up to knock the arrow off-target but which narrowly failed to activate at the very last moment. Had they activated, then the archer would not have hit the target. Crucially, what could have easily happened (but didn't) doesn't seem to undermine the subject's achievement. This is important because the success in this scenario does appear to be lucky—i.e., a success that could very easily have been a failure, given how it was brought about. Rather than the luck concerning something that actually intervenes between the exercise of skill and the success, this luck is rather to do with features of the environment itself. Accordingly, it is known as *environmental luck*.

Just as intervening luck has an epistemic variant, there is also *environmental epistemic luck*. Like intervening epistemic luck, environmental epistemic luck is also a form of veritic epistemic luck, in the sense that it involves a belief that is only true as a matter of luck, given how it is formed. Whereas intervening epistemic luck concerns something getting between the subject's exercise of cognitive skill and her cognitive success, and so breaking the explanatory connection between the two that way, environmental epistemic luck concerns broader features of the environment, particularly the modal environment, which nonetheless ensure that the belief is veritically lucky.²¹ The barn façade case is often thought to be illustrative in this regard, in that we have a subject whose veritically lucky true belief is not due to a failure to perceive a genuine barn, but rather relates to the fact that in this particular environment what looks like a barn is not a good guide to whether it is a barn.²² Such cases are held, given the veritic epistemic luck involved, to not be genuine cases of knowledge. And yet, since environmental luck is compatible with achievements, they should be genuine cases of cognitive achievement. That is, in the barn façade case one should be willing to grant that the subject's cognitive success is attributable to her exercise of cognitive skill.

How one should respond to barn façade cases is an increasingly controversial issue. In particular, several commentators have argued that we should treat the subject as having knowledge in this case, even despite the veritic epistemic luck involved. Accordingly, one could stick to the robust virtue epistemology line and treat this case as both being a cognitive achievement and an instance of knowledge.²³ With this in mind, it will be useful to focus instead on a different kind of

scenario, which will help us to sharpen up the issues regarding environmental epistemic luck and its relationship to knowledge and cognitive achievements.

Consider the following *epistemic twin earth* case.²⁴ Imagine two agents who are microphysical duplicates, with causal histories that are also identical in every relevant respect, one on earth, and one on twin earth. Both agents occupy identical causal environments, in that the objects and properties that they are presently causally interacting with, and which are giving rise to their sensory experiences, are the same. It is also true of both agents that their ‘normal’ environments are the same, in that the kinds of objects and properties that they would normally causally interact with (but which they might not be presently causally interacting with) are the same. Both subjects now form the same true belief on the same basis, say that there is a barn in the field because they are presented with the same perceptual experience as of a barn.

Here is the twist in the tale: the subjects differ in their modal environments. In particular, while for the agent on earth there is no close possible world where she forms the target belief and believes falsely, for the agent on twin earth there is a close possible world where she forms the target belief and believes falsely (presumably because in close possible worlds, but not in the actual world, there are barn facades in her immediate environment). Accordingly, it will follow that while the agent on earth’s true belief will not be subject to veritic luck, her counterpart on twin earth’s true belief will be veritically lucky (since it will be subject to environmental epistemic luck).

Note that there is nothing in how we have set up this scenario that excludes this divergence in the modal facts regarding the two agents and their beliefs in the respective propositions. Crucially, however, we have kept everything fixed regarding these two agents to ensure that they cannot differ in terms of their manifestation of agency, and in particular their exercise of cognitive skills. Indeed, if anything we have kept more factors fixed than could possibly influence the subjects’ manifestation of agency. In any case, if it’s true that there can be no difference between the two subjects in terms of their manifestation of agency, then it follows that whether or not a belief is veritically lucky is not to be understood entirely in terms of such a manifestation. Moreover, insofar as one grants that knowledge is incompatible with veritic epistemic luck, then it also follows that we cannot analyse knowledge entirely in terms of true belief that manifests the subject’s cognitive agency (and thus skill), as robust virtue epistemology proposes.

4. ANTI-LUCK VIRTUE EPISTEMOLOGY

Epistemic twin earth cases help us to sharpen the problem posed by environmental epistemic luck to robust virtue epistemology. Inevitably, however, in doing so they also make it clearer how one might go about rejecting such an objection. In particular, once it is clear that veritic epistemic luck can come apart from manifestations of cognitive agency in this manner, then it becomes naturally tempting to question whether knowledge is incompatible with veritic epistemic luck as hitherto supposed.²⁵

Rather than take this route, however, I want to close by briefly considering how one might *embrace* the result canvassed, while staying within the virtue epistemology framework. In particular, recall that we have motivated the idea that the anti-luck and ability platitudes are imposing distinct (albeit overlapping) constraints on a theory of knowledge, such that no level of luck-exclusion or cognitive skill manifestation in the relevant senses would suffice by itself for knowledge. This suggests a conception of knowledge which answers to two constraints. Elsewhere I have described the position that fits the bill in this regard as *anti-luck virtue epistemology*, which is a type of modest virtue epistemology.²⁶ In outline, this holds that knowledge is to be understood as a safe (non-lucky) cognitive success which is significantly attributable to one's manifestation of relevant cognitive skill (and thus one's cognitive agency).²⁷

Notice that the explanatory relationship in play in this account of knowledge is both in a sense stronger than that demanded by robust virtue epistemology and also in a sense weaker too. The former, because it is a relation that obtains between one's *safe* cognitive success and one's cognitive agency, rather than just being between one's cognitive success and one's cognitive agency. Anti-luck virtue epistemology is thus not to be understood as the conjunction of an anti-luck and an ability condition on knowledge, as such a view would be easily Gettierizable, and wouldn't in any case capture the interconnected way in which the ability and anti-luck intuitions function. The latter, because it is not demanded that one's safe cognitive success should be primarily attributable to one's manifestation of relevant cognitive agency, but only that it should be significantly attributable (i.e., such that one's manifestation of relevant cognitive agency is an important, but not necessarily the overarching, component of a causal explanation of one's safe cognitive success). This allows us to accommodate cases of knowledge where the subject's cognitive agency is not the primary element in explaining her safe cognitive success, where other factors, such as the epistemically friendly nature of the environment, also carry an explanatory burden. In the right kind of conditions, for example, one can gain testimonial knowledge simply by asking a knowledgeable informant. In such cases, one's safe cognitive success will be at least partly attributable to one's manifestation of relevant cognitive skill (e.g., one wouldn't ask anyone,

or believe anything one is told, after all), but it won't be primarily attributable to it. Nonetheless, this can suffice for knowledge on this view, as one's cognitive agency is playing a significant explanatory role in bringing about one's safe cognitive success.

With the anti-luck condition built into the proposal on account of the safety condition, the kinds of scenarios that trade on veritic luck will be immediately dealt with, including cases of environmental epistemic luck. Moreover, with the virtue condition included we can also handle scenarios where the subject's belief is guaranteed to be true, given how it was formed, but where this has nothing to do with her manifestation of cognitive skill. On this view, such cases will not amount to knowledge, just as intuition predicts. Anti-luck virtue epistemology thus has the resources to account for how knowledge demands both the avoidance of high levels of epistemic luck (and thus epistemic risk) and the manifestation of significant levels of relevant cognitive skill, where these are demands that sometimes come apart (in both directions).²⁸

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NOTES

- ¹ I will be focussing on propositional knowledge, specifically. That other forms of knowledge, and ability knowledge in particular, demand skill is also a common motif of contemporary epistemology. For further discussion of the relationship between skill and knowledge, including know-how, see Pavese (2016a; 2016b).
- ² I say ‘one reason’, because in cases like this where there are no cognitive skills in play the lack of knowledge can also be explained by the intuition that knowledge excludes luck. This point will become clearer in a moment.
- ³ See, for example, Pritchard (2012).
- ⁴ See Pritchard (2005) for a systematic defence of this platitude. For a dissenting voice, see Hetherington (2013), which is in turn a response to Pritchard (2013).
- ⁵ I present cases of this kind, and discuss their epistemological implications, in Pritchard, Millar & Haddock (2010, ch. 3) and Pritchard (2012).
- ⁶ For example, the kind of proper functionalist position defended by Plantinga (1993b) would plausibly count as a virtue epistemology according to the description just offered, though Plantinga himself has distanced his view from this terminology. In particular, he has claimed that any adequate virtue epistemology would need to be supplemented with an account of cognitive proper function, which would make virtue epistemology a variant on proper functionalism rather than *vice versa*. For more on this point, see Plantinga (1993c).
- ⁷ For some of the key defences of robust virtue epistemology (bearing in mind, of course, that there are important differences of detail within these proposals), see Sosa (1991; 2007; 2009; 2011; 2015), Zagzebski (1996; 1999), and Greco (2003; 2007; 2009a; 2009b; 2012).
- ⁸ I articulate and explore this distinction between modest and robust virtue epistemology—or as I sometimes express it, ‘pure’ and ‘impure’ virtue epistemology—in Pritchard (2009b, chs. 3-4). See also Pritchard (2009c; 2012) and Pritchard, Millar & Haddock (2010, chs. 2-4).
- ⁹ For some defences of modest virtue epistemology, see Code (1987), Kvanvig (1992), Montmarquet (1993), Greco (1999; 2000), Hookway (2003), and Roberts & Wood (2007).
- ¹⁰ See Greco (1999), Goldman (1992) and Plantinga (1993b) for examples of virtue reliabilism (though note that this is not a label that they would necessarily apply to their own views).
- ¹¹ This view is defended by Zagzebski (1996), for example. For some other defences of virtue responsibilism, see Code (1987), Kvanvig (1992), Montmarquet (1993), Hookway (2003), and Roberts & Wood (2007). Note that there are also positions that arguably do not comfortably fall into either camp. Sosa’s (e.g., 2007; 2009; 2015) position, for example, seems to incorporate both virtue reliabilist and virtue responsibilist features. For a helpful early articulation of the distinction between virtue reliabilism and virtue responsibilism, see Axtell (1997). For more on the notion of an intellectual virtue, see Battaly (2014).
- ¹² The literature on this debate is now vast. For a useful recent overview of the main contours of this literature, see Pappas (2014).
- ¹³ For a very clear expression of this way of thinking of how virtue reliabilism represents a refinement of simple process reliabilism, see Greco (1999).
- ¹⁴ Plantinga (1993a, 195-98 & 205-07) offers a famous example in this regard concerning a brain lesion which reliably leads the subject to believe that she has a brain lesion.
- ¹⁵ Such a proposal is most associated with the neo-Aristotelian epistemology defended by Zagzebski (1996; 1999).
- ¹⁶ For example, there is an axiological aspect to the virtues, on account of how they are held to play a constitutive role in a life of flourishing, unlike mere skills. Relatedly, while it may be sensible to no longer maintain a skill that one no longer needs, it would represent a failing of character to neglect the maintenance of one’s virtues.
- ¹⁷ Indeed, there are proposals in the literature that fall under all four headings. For example, Zagzebski (1996) defends a version of robust virtue responsibilism while Hookway (2003) defends a modest form of virtue responsibilism. Along the other axis, in earlier work Greco (2000) defended a modest form of virtue reliabilism, before in later work (e.g., Greco 2009a) adopting a robust variant of the view.
- ¹⁸ For the clearest expression of this way of thinking about robust virtue epistemology, see Greco (2009a).
- ¹⁹ For further discussion of this axiological aspect of robust virtue epistemology, see Greco (2009c). One challenge to the plausibility of this claim is that it isn’t clear that our ordinary notion of achievement—at least where this concerns the kind of thing that is of distinctive value to us anyway—is best understood as merely success that is because of one’s skill. After all, there are all kinds of trivial, easy and pointless successes that would fulfil these criteria that we wouldn’t naturally think of as achievements. But notice that a beefed-up conception of achievements isn’t going to suit the purposes of robust virtue epistemology, since knowledge doesn’t seem to demand achievement in this sense (and, relatedly, knowledge can certainly be trivial, easy or pointless while being *bona fide* knowledge nonetheless). For more on this point, and on the notion of an achievement more generally, see Pritchard (2010; 2012) and Pritchard, Millar & Haddock (2010, chs. 2-4). For further discussion of the topic of epistemic value more generally, see Pritchard (2007b) and Carter, Pritchard & Turri (2018).
- ²⁰ This scenario is adapted from a famous case offered by Chisholm (e.g., 1977, 105).
- ²¹ I developed the distinction between intervening and environmental epistemic luck, and its implications for virtue epistemology, in a number of places. See, especially, Pritchard (2009a, chs. 3-4; 2009b; 2012) and Pritchard, Millar & Haddock (2010, chs. 2-4).

²² The barn façade case is originally due to Goldman (1976), who credits it in turn to Carl Ginet.

²³ See especially Sosa (2007, ch. 5). See Pritchard (2009a) for a critical discussion of Sosa's proposal in this regard.

²⁴ As first described in Kallestrup & Pritchard (2014) with the explicit intention of refining the challenge that environmental epistemic luck poses to robust virtue epistemology. See also Pritchard (2016).

²⁵ In Pritchard (2015b; 2016b; 2017a; *forthcoming*) I have argued that shifting our focus from luck to the closely related notion of risk can help us see what would be problematic about this strategy, in that it commits one to holding that knowledge can be compatible with very high levels of epistemic risk, of a kind that we would normally never tolerate. See also endnote 26.

²⁶ Actually, these days I prefer the title *anti-risk virtue epistemology*, though the reasons for the change in title are not relevant here. See Pritchard (2015b; 2016b; 2017a; *forthcoming*). See also endnote 25.

²⁷ For more on the idea that the anti-luck condition on knowledge should be understood in terms of a safety principle, see Sainsbury (1997), Sosa (1999), Williamson (2000), and Pritchard (2002, 2005a, 2007a; 2015a).

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