

Virtue Epistemology and Epistemic Responsibility

Berit Brogaard

Among externalist accounts of knowledge, virtue epistemology is no doubt one of the most popular (for defenses, see e.g., Sosa, 1980, 2007, 2009; Code, 1987; Montmarquet, 1987; Greco, 1993, 2010; Zagzebski, 1996; Axtell, 1997; Baehr, 2011; Lepock, 2011; Battaly, 2017, 2019; Kidd, 2019; King, 2019; Turri, 2019).

Virtue epistemologies about knowledge (as opposed to other epistemic ends) have traditionally been divided into two camps: virtue reliabilism and virtue responsibilism (Code, 1987).¹ Virtue reliabilism takes knowledge to require true belief that results from the exercise of reliable cognitive faculties or “faculty virtues” (Turri et al., 2019), such as vision, memory, introspection, and reasoning (e.g., Sosa, 1980, 1991, 2007, 2009; Greco, 1993, 1999, 2003; Pritchard, 2019; Turri, 2019). Faculty virtues differ from traditional Aristotelian character virtues in being mostly unreflective skills akin to the skills of athletes (Turri, 2019).

By contrast to virtue reliabilism, virtue responsibilism takes knowledge to require true belief that results from the exercise of character virtues or acts of virtue that imitate the virtuous acts of intellectually virtuous agents (e.g., Code, 1987; Montmarquet, 1987, 1993, 2019; Zagzebski, 1996, 2012, 2019; Axtell, 1997, 2011; Baehr, 2006a, 2006b, 2011). Examples of intellectual character virtues include intellectual humility, epistemic courage, and intellectual perseverance.

Lorraine Code (1987), who coined the term “virtue responsibilism,” proposed an early account of virtue responsibilism requiring that knowledge is true belief that results from epistemically responsible activity. Code’s (1987) account was motivated by sympathies toward knowledge internalism. The latter requires that the basing relation—viz., the connection between the true belief and its ground—is accessible to the agent upon introspection (Kim, 1993). As epistemically responsible activities are accessible to the knower, on Code’s account, her version of virtue responsibilism is a form of knowledge internalism. Similar approaches to

¹ Although this chapter focuses on virtue-theoretical accounts of knowledge, it should be noted that many virtue epistemologists recognize other epistemically valuable ends aside from knowledge (and truth), for instance, understanding, wisdom, personal (intellectual) worth, and intellectual flourishing (e.g., Zagzebski, 1996; Kvanvig, 2003; Riggs, 2003; Baehr, 2011; Brogaard, 2014; Elgin, 2019; Gardiner, 2019; Grimm, 2019).

knowledge have been defended by other advocates of virtue responsibilism, most notably James Montmarquet (1987, 2019). In her *Virtues of the Mind* (1996), however, Linda Zagzebski develops a version of virtue responsibilism that does not require introspective access to the basing relation, making her proposal a form of externalism.

One of the key differences between Zagzebski's (1996) virtue responsibilism and early virtue reliabilist theories is that whereas the latter take intellectual virtues to be reliable cognitive faculties, such as vision, memory, and introspection, Zagzebski construes the intellectual virtues as a subset of the moral virtues, where a virtue, for Zagzebski, is "a deep and enduring acquired excellence of a person, involving a characteristic motivation to produce a certain desired end and reliable success in bringing about that end" (p. 137). For Zagzebski, the difference between the moral and the intellectual virtues comes down to their motivational component. Whereas moral virtues motivate the agent to attempt to bring about morally worthwhile ends, the intellectual virtues motivate the agent to seek to come into cognitive contact with reality, which requires knowledge or higher epistemic goals such as understanding.

Despite the initial focus on faculty virtues among advocates of virtue reliabilism, most defenders of this strand of virtue epistemology have since then acknowledged that character virtues and responsible agency play constitutive roles in the generation (and pursuit) of knowledge (e.g., Sosa, 2007, 2009, 2015, 2019, 2021; Greco, 2003, 2010, 2019). Residual disagreements between advocates of virtue reliabilism and virtue responsibilism remain, however. These disagreements lie primarily in how much weight they think should be assigned to epistemic responsibility in the generation of knowledge and whether they regard the intellectual virtues as motivational. Here, I focus primarily on Zagzebski's (1996) account of virtue responsibilism and John Greco's (2003, 2010) and Ernest Sosa's (2007, 2009, 2021) defenses of virtue reliabilism. I argue that despite their misgivings about aspects of virtue responsibilism, Greco and Sosa are ultimately required to acknowledge that intellectual character virtues involve a substantial truth-motivational component and that knowledge requires a kind of epistemic responsibility that is far more substantive than a causal, naturalistic notion of attribution.

My conclusion is reconciliatory. I argue that once advocates of virtue reliabilism acknowledge that intellectual character virtues involve a significant truth-motivational component, and that knowledge requires a substantive kind of epistemic responsibility, the two strands of virtue epistemology can no longer be understood as essentially different types of virtue epistemology.

The plan for the chapter is as follows. In Sections 1–3, I review Zagzebski's (1996), Greco's (2003), and Sosa's (2021) virtue theories of knowledge and some of the criticism that has been mounted against their proposals. Section 4 focuses on the role played by character virtues in more recent versions of virtue

reliabilism. In Sections 5–6, I begin by outlining Gary Watson’s distinction between two forms of responsibility; I then argue that by construing epistemic responsibility in terms of attributability, in Watson’s sense, Greco can bypass some of the remaining objections to his (2010) virtue account of knowledge. I proceed by showing that Sosa (2021) is compelled to accept that knowing full well requires a truth-motivational component. I conclude by arguing that epistemic responsibility as attributability, in Watson’s sense, commits virtue epistemologists of all stripes to a specific form of contextualism about knowledge.

1. Sosa’s Four Grades of Knowledge

Sosa (1980) was the first to introduce the notion of virtue epistemology into contemporary philosophical literature. While he initially seemed to regard only faculty virtues as constitutive of the generation of knowledge, he has since then acknowledged that character virtues are constitutive of higher grades of knowledge. Here, I will provide a brief overview of his most recent version of virtue reliabilism (Sosa, 2021) and then consider some key objections to virtue reliabilism.

Sosa’s trademark is his idea of grades of knowledge. Following his initial plea for a turn to virtue theory in epistemology (1980), he proceeded to develop a sophisticated hierarchy of different grades of knowledge, beginning with the distinction between *animal* and *reflective* knowledge (2007, 2009).

On Sosa’s account, animal knowledge requires *apt belief*, where a belief is apt just in case it is accurate, or true, and its truth results from an exercise of faculties—such as vision, memory, and reasoning—in conditions where these faculties operate reliably. Although animal knowledge is an epistemically valuable end, Sosa notes that its value is limited by the fact that it does not impose any demands on the believer beyond the unreflective exercise of reliable faculty virtue. A higher grade of knowledge is reflective knowledge, which requires aptly believing that one’s first-order belief is apt. We can also think of reflective knowledge as animal knowledge, plus reliable confidence that one knows.

An even higher grade of knowledge is *fully apt judgement* (or belief), or what Sosa refers to as *reflective knowledge full well*, or just *knowing full well* (Sosa, 2011, 2015). For a judgment to be fully apt, the agent must aptly aim not just at accuracy but at aptness and must succeed through competence. For Sosa, an agent is competent just in case she possesses the relevant skill (e.g., vision), is in a proper shape (e.g., she is awake, sober, alert, wearing her glasses), and is well situated (e.g., the lighting conditions are good, there are no obstacles in the agent’s line of sight). A judgment is fully apt only if its first order aptness derives from the agent’s second-order assessment of her chances of success (2011, p. 11ff.). For Sosa, full aptness thus requires making a good choice about the conditions in which one’s

skills and virtues are reliable, which requires proper risk management. For example, at dusk, judging that the object you see is a car may carry only a small risk of being wrong, in which case, you can know full well that the object you see is a car. Judging that the car is black, by contrast, may carry too high of a risk of being wrong (as dark blue cars easily can look black at dusk); so in this case, Sosa argues, a suspension of judgment is warranted.

The highest grade of knowledge, on Sosa's (2021) account, is securely reflective knowledge (full well). It is only at this level that the safety condition enters the picture. For Sosa, securely reflective knowledge (full well) requires safety of the agent's second-order assessment. More specifically, if the agent might too easily have retained her disposition to judge her first-order belief to be apt without manifesting competence, her reflective knowledge fails to be secure (2021, p. 176).² (The safety condition states, roughly, that in the closest possible worlds where the agent is disposed to judge that she is competent to judge that p , she is competent to judge that p : $J(C(J(p))) \Box \rightarrow C(J(p))$).³

Securely reflective knowledge (full well) rules out knowledge in barn cases, as originally introduced by Alvin Goldman. Here is a close variant of the original barn case: Barney is driving in the countryside and randomly stops in front of a barn. Unbeknownst to him, he is looking at the only real barn in an area spawned with barn facades. The facsimiles are so realistic that if he had stopped in front of any of them, he would have been tricked into thinking that he was looking at a real barn. The standard intuition is that Barney does not know that he is looking at a barn, because he could easily have had the same belief while looking at a facsimile. A standard explanation of why Barney fails to know is that his belief could easily have been false. Intuitions about whether Barney knows that the object he sees is a barn are not ubiquitous, however. John McDowell, for example, seems to think that you can know in unsafe conditions of this kind (1982: 26, n. 39). The mixed intuitions about the barn case seem to be behind Sosa's decision to require safety only at the highest grade of knowledge.

A word on Sosa's notion of grades of knowledge is in order. Jack Lyons (2013) notes that when Sosa designates a higher grade to reflective knowledge full well than to reflective knowledge, or a higher grade to reflective knowledge than to animal knowledge, he does not simply mean that they are different types of knowledge in the sense that perceptual, testimonial, memorial, inductive knowledge, and so on are different types; rather, reflective knowledge full well is a superior type of knowledge than reflective knowledge, and reflective is a superior type of knowledge than animal knowledge. But, Lyons asks, in what sense are the higher grades of knowledge superior types of knowledge compared to the lower

² In standard barn cases, e.g., the agent lacks securely reflective knowledge.

³ Here and below, " $\phi \Box \rightarrow \psi$ " means: *if it had been the case that ϕ then it would have been the case that ψ .*

grades? Lyons expresses some degree of skepticism that Sosa can answer this question satisfactorily. However, Lyons seems to overlook a straightforward answer to this question, viz., that higher grades of knowledge are superior to lower grades, because they are creditable to the agent to a greater extent. Only securely reflective knowledge (full well) is fully creditable to the agent, Sosa argues, because only knowledge of this grade is free of external-world luck. Credibility, here, is to be understood as a form of epistemic responsibility. We return to the question of how exactly to understand epistemic responsibility below.

Sosa's virtue account of knowledge has—at various stages of its development—been the subject of extensive debate, and critique—both positive and negative. The vast majority of objections to earlier visions of his virtue theory, however, no longer have legs to stand on given Sosa's most recent developments. For example, the main objections to Sosa presented by Duncan Pritchard (2009), Jason Baehr (2011), and many others, are now moot.

In this section, I will consider a lingering criticism that seems to be a potential challenge not only to Sosa's version of virtue reliabilism but also to virtue reliabilism in general. This objection was articulated most clearly by Zagzebski (1996). Zagzebski argues that Sosa's use of the term "virtue" to refer to reliable cognitive faculties, like sight, hearing, and memory, has little to do with the concept of intellectual virtue in traditional virtue theory or contemporary virtue ethics. This problem, she argues, is not specific to Sosa. Other proponents of virtue reliabilism like Greco, she argues, are equally guilty of misapplying the term "virtue" to an agent's cognitive faculties. This application is mistaken, Zagzebski argues, because "virtue," as the term was coined by the Greeks, refers to excellences, not to cognitive faculties. Thus, sight and memory can possess virtue, she argues, but sight and memory are not themselves virtues (cf., Fairweather, 2001). Zagzebski acknowledges that contemporary virtue theorists (ethicists and epistemologists alike) have said remarkably little about the Greeks' intellectual virtues, with the exception of *phronêsis*.⁴ Still, she questions whether a virtue epistemology that construes the cognitive faculties as virtues is even coherent.

While Zagzebski's criticism has been repeated on several occasions, the severity of her criticism has not been addressed. So, before continuing, let me offer my own assessment of her critique. As the notion of intellectual virtue was first coined by Aristotle, let me provide a brief sketch of his account of the intellectual virtues in order to assess Zagzebski's criticism.

Aristotle familiarly distinguishes between the moral virtues (*êthikê arête*, ἠθικὴ ἀρετή) and the intellectual virtues (*dianoêtikê arête*, διανοητικὴ ἀρετή)

⁴ Parry (2020) offers a sketch of the Greeks' conception of *technê* and *epistêmê*. Greco (2002) and Kotsonis (2019) argue that the premise that the reliable perceptual faculties have an epistemic standing of epistemic virtues has Platonic roots. However, Plato's works provide only limited insight into virtue epistemology, as the term "intellectual virtue" (*dianoêtikê arête*) was coined by Aristotle. In Plato, *arête* refers exclusively to moral virtue.

(*EE* 1220a5).⁵ Whereas virtues of character (*êthos*) are dispositional excellences of the non-rational part of the soul, the latter are dispositional excellences of the rational part of the soul (*EE* 1221b28–31). In the *Nicomachean Ethics*, Aristotle designates five dispositional excellences as the “ways in which the soul arrives at truth by affirmation or denial” (*NE* 1139b): a priori/intuitive reason (*noûs, νοῦς*), deductive reason (*epistêmê, ἐπιστήμη*), theoretical wisdom (*sophía, σοφία*), skill (*technê, τέχνη*), and practical wisdom (*phronêsis, φρόνησις*). Just as the moral virtues are dispositions to perform virtuous actions aimed at *eudaimonia*, the intellectual virtues are reliable tendencies, or dispositions, to arrive at the truth in a discipline, such as philosophy, mathematics, or medicine.⁶ But where the moral virtues are learned primarily through habit, the intellectual virtues are acquired primarily through teaching (*NE* 1103a). The chief reason behind this difference in how the moral and the intellectual virtues are acquired is that to be disposed to arrive at the truth in a discipline, you need factual knowledge of the state of the art in the discipline and know-how through practice.⁷ But you can only acquire factual knowledge of the state of the art in a discipline through teaching (by others or by yourself).

Aristotle takes the rational soul to be split into two further parts: the “scientific” (or intuitive) part and the calculative (or deliberative/reasoning) part (*NE* 1139a). The “scientific” part is the seat of *noûs, epistêmê*, and *sophía*, whereas the calculative part is the locus of *technê* and *phronêsis*. *Noûs* is a disposition to intuitively grasp non-demonstrable first principles (e.g., definitions) in areas such as mathematics, metaphysics, and physics (*APo.* II.19, 100b5–17).⁸ *Noûs* is thus the ground of theoretical expert knowledge (or understanding) of the most basic kind, such as the knowledge that a prime is a number divisible only by 1 and itself, that causes precede their effects, or that humans are rational animals.

⁵ *EE* = *Eudemian Ethics*; *NE* = *Nicomachean Ethics*; *Met.* = *Metaphysics*; *APo.* = *Posterior Analytics* (all citations from Barnes, 1984).

⁶ In the *Nicomachean Ethics* and the *Eudemian Ethics*, Aristotle clearly uses these terms to refer to the virtuous dispositions (see note 7) (e.g., *NE* 1103a). However, elsewhere he uses the same terms to refer to the product of the operation of the virtuous dispositions. In the *Posterior Analytics*, for example, he draws a distinction between *epistêmê* and *doxa* (opinion) (*APo.* I.33).

⁷ Setting aside David Lewis’s *Finkish* (1997) dispositions, Aristotle’s first-order intellectual virtues like *noûs, epistêmê*, and *technê* can thus be cast as subjunctive conditionals of the form:

First-order Intellectual Virtue: (S competently deploys her reliable cognitive faculties in conjunction with her discipline-specific know-how and her discipline-specific factual knowledge to acquire knowledge of whether *p*) $\square \rightarrow$ S acquires knowledge of whether *p*.

On a standard (non-Lewisian) possible world interpretation, the subjunctive conditional can be read as follows: in a range of close possible worlds in which S competently deploys her reliable cognitive faculties in conjunction with her discipline-specific know-how and her discipline-specific factual knowledge to acquire knowledge of whether *p*, S acquires knowledge of whether *p*.

⁸ Despite acknowledging that induction does not suffice for establishing epistemic certainty (*APo.* II.5, 91b15–16), Aristotle maintains that we acquire knowledge of first principles via induction (*APo.* II.19, 100b3). But on the orthodox interpretation of Aristotle, it is *noûs* that establishes the epistemic certainty of first principles as we intuitively grasp them (see, e.g., Aydede, 1998; cf., *APo.* II.19, 100b5–17).

Epistēmē is the disposition to derive truths from first principles (*APo.* I.2, 71b9–23),⁹ and is thus the ground of theoretical expert knowledge (or understanding) of a derivative kind, such as understanding that 7 is a prime number because it is divisible only by 1 and 7, that Atticus cannot be the killer, as he only entered the victim’s house after she died, or that humans have a desire to understand, because they are rational animals.

The theoretically wise person also exercises theoretical wisdom, or *sophía*, when aiming at attaining truths in the theoretical disciplines. Although *sophía* comprises *noús* and *epistēmē*, only the theoretically wise person possesses *sophía*. As Aristotle explicitly notes that theoretical expert knowledge can be acquired without *sophía*, it seems that *sophía* must be a kind of meta-competence that guides the theoretically wise person in her theoretical conduct (cf., Baehr, 2014).

Moving onto the calculative (or deliberative) part of the rational soul (*NE* 1139a5–15), *phronēsis* is the disposition to deliberate about and rationally choose (*prohairesis*, *NE* 1105a28–33, 1113b1–14) which activities to undertake to actualize virtuous ends, for instance, when we are forced to choose one virtuous activity over another. While *phronēsis* is necessary for moral excellence, it is also pivotal to intellectual excellence, particularly *technē*, which leaves increased room for doubt and hence tends to require more deliberation (*NE* 1112a31–b10).

The second calculative virtue, *technē*, is a teleological (or instrumental) tendency to engage in activities aimed at a good that is distinct from the activity itself. Possessing *technē* entails being disposed to reliably generate the *technē*-specific goal (*ergon*) in favorable circumstances. For Aristotle, different kinds of *technē* aim at different goals. For instance, an expert medical doctor’s *technē* in the area of medicine aims at promoting health and alleviating suffering; a cartographer’s *technē* in the area of map drawing aims at bringing about accurate maps; and an architect’s *technē* in the area of design aims at bringing about schematic designs that best represent her ideas or the drawing papers that best represent her ideas while also being maximally useful to engineers and construction workers.

Aristotle likens *technē* to *epistēmē*. The possession of *epistēmē* enables a virtuous agent to perform a deductive inference from first principles (e.g., definitions) to necessary truths. Relatedly, the possession of a *technē* enables a virtuous agent to perform a deductive, inductive, or abductive inference on the basis of observational data, pre-existing technical knowledge and technical know-how (*APo.* I.1,

⁹ *Epistēmē* is often translated as “scientific knowledge.” While literally correct, this translation should be seen in light of Aristotle’s conception of certain scientific truths as necessary truths. However, Aristotle is not consistent on whether scientific truths are necessary truths or highly reliable regularities. For example, in the sixth book of the *Metaphysics*, Aristotle says that *epistēmē* is a disposition to rationally derive truths from regularities of nature (*Met.* 1027a20). Further adding to the difficulties of translation is Aristotle’s use of *epistēmē* to refer to what he elsewhere calls *technē* (e.g., *Met.* 1106b5–15).

71a1–9). Unlike *epistêmê*, however, *technê* does not require that the expert achieves truth or accuracy with absolute certainty. This is because *technê* can involve achieving an end on the basis of warranted but false observational premises and inductive or abductive inference, neither of which is truth-preserving.

Despite clearly distinguishing *technê* and *epistêmê* in the *Nicomachean Ethics*, Aristotle seems to allow for a more porous boundary between *technê* and *epistêmê* in the *Metaphysics*. As Richard Parry (2020) points out, the reason for this seems to be that when the aim of a *technê* is to generate a true, general (or “universal”) judgment, a *technê* is an excellence in the vicinity of an *epistêmê*.

Just as *epistêmê* is the ground of theoretical expert knowledge, *technê* is the ground of practical expert knowledge (or understanding), for instance, a doctor’s knowledge of the cause of symptoms (*Met.* 981a5–15). Say a young boy presents at an expert medical doctor’s office with a high fever and a sore throat. The doctor examines the boy, performs lab tests, and makes an inference to the best explanation on the basis of her pre-existing knowledge of medical facts, her medical know-how, and her clinical findings, and arrives at the true judgment that the boy has strep throat and needs penicillin. The doctor’s expert knowledge thus explains the boy’s symptoms and suggests a cure.

Practical expert knowledge also depends on *phronêsis*, however. This meta-competence, which can only be required through extensive lived experience in the field, guides the intellectually virtuous person’s investigative and deliberative process to a true judgment (cf., Cooper, 1994).

We are now in a position to address the severity of Zagzebski’s objection to virtue reliabilism. Zagzebski’s objection, as you may recall, is that virtue reliabilism’s extension of the intellectual virtues to include cognitive faculties, such as sight, hearing, and memory, has little to do with the concept of intellectual virtue in traditional virtue theory.

As we have just seen, Zagzebski is right that Aristotle did not regard the perceptual faculties as independent intellectual virtues. This is not because he was skeptical of the idea that the senses can be sources of knowledge. Quite on the contrary. Aristotle was a notorious proponent of perceptual knowledge (e.g., *APo.* II.19, 99b22–35). However, in Aristotle’s view, perceptual knowledge of the kind an expert and a novice may share in common is not the goal of virtuous activity. For Aristotle, the perceptual faculties are constitutive of the practical intellectual virtues. For example, a medical expert must exploit her perceptual faculties in order to exercise her *technê*.

As I see it, however, nothing of consequence hinges on whether Sosa chooses to refer to the cognitive faculties as intellectual virtues or as constituents of intellectual virtues. Both *technê* and *phronêsis*, in Aristotle’s sense, seem pivotal to the acquisition of Sosa’s higher grades of knowledge.

2. Greco on Knowledge as Credit for True Belief

In his “Knowledge as Credit for True Belief” (2003), John Greco defends the view that knowledge is cognitive success through ability or competence, for which the knower is responsible and therefore deserves credit. This raises the question of how exactly we are to understand epistemic responsibility, in general, and epistemic credit, in particular.

Greco (2003) provides a partial answer to this question. He takes as his starting point Joel Feinberg’s (1970) account of causal responsibility, which is pivotal to ascriptions of blame. Specifically, when we ascribe blame to *S* for *X*’s occurrence, we imply that *S* figures importantly in a correct causal explanation of why *X* occurred. In other words, attributing blame to *S* implies that *S* is a salient cause of *X*’s occurrence.

One factor that determines salience, Greco argues, is that the thing in question is abnormal or contrary to expectations. For example, we might say that your house burned down because of a short circuit, even though a short circuit can’t start a fire without oxygen, because the short circuit but not the oxygen is abnormal. Another factor that determines salience is our interests and purposes. So, if faulty electrical wiring was a factor in starting the fire, then we may single out the faulty electrical wiring as the cause of the fire because we have an interest in fixing the problem. However, when abnormality and interest conflict, Greco notes, abnormality overrides interest.

Finally, Greco argues, attributing blame to *S* for *X*’s occurrence implies that *X*’s occurrence reveals *S*’s faulty character. Similarly, attributing credit to *S* for *X*’s occurrence implies that *X*’s occurrence reveals *S*’s virtuous character. To say that *X*’s occurrence reveals *S*’s character, Greco argues, is to say that her character is an important (or salient) part of the story of what caused *X* to occur. In light of these considerations, Greco proposes the following constraint on credit:

S deserves credit of kind *K* (e.g., moral or epistemic) for action *A* only if

- (i) *A* has value of kind *K*
- (ii) *A* can be (correctly) ascribed to *S*, and
- (iii) *A* reveals *S*’s *K*-relevant character.

For the case of true belief, this yields the following constraint on credit-worthiness for true belief:

S deserves intellectual (or epistemic) credit for her true belief that *p* only if

- (i) *S* truly believing that *p* has intellectual value,
- (ii) *S* truly believing that *p* can [correctly] be ascribed to *S*, and
- (iii) *S* truly believing that *p* reveals *S*’s reliable faculties.

Recall that, on Greco's account, (iii) is true only if *S*'s reliable cognitive character, or faculties, is the most salient cause of *S* truly believing that *p*. If chance or luck is more salient than *S*'s reliable faculties, then *S* does not deserve credit for her truly believing that *p*. It is worth emphasizing that these conditions present only necessary conditions for credit-worthiness (and for knowledge).

Greco proceeds by showing how the credit constraint on knowledge solves two types of classical epistemological problems: the lottery problem and Gettier problems. The lottery problem is that of explaining the intuition that we don't know that our lottery ticket will lose. Why would we buy one if we did? Greco suggests that we don't know our lottery ticket will lose, because "the very idea of a lottery has the idea of chance built right into it" (p. 124). In other words, the most salient cause of any one ticket winning or losing is chance, not our reliable cognitive faculties.

Greco considers several types of Gettier-style problems. Here is a close variant of one of Greco's cases (and of Gettier's original cases): Felicity sees her co-worker, Nogot, drive a Škoda to work and comes to believe that Nogot owns a Škoda. From this belief, Felicity infers that one of her co-workers owns a Škoda. As it turns out, Nogot was merely renting the Škoda she was driving. However, another co-worker, Havit, does own a Škoda, although Felicity has no grounds for believing this. So, Felicity's belief is true and caused by her reliable faculties (i.e., her vision and reasoning faculties). Yet Felicity clearly does not know that one of her co-workers owns a Škoda.

Greco explains the intuition that Felicity fails to know as follows: Felicity's belief is accidentally true. As Felicity's belief is true because of a coincidence and not because of her reliable cognitive faculties, she fails to know.

Greco explains the standard intuition in the barn case in a similar fashion. The barn case, as you may recall, runs as follows: Barney is driving in the countryside and stops at a random location. As he turns his head, he sees a real barn and forms the belief that the object he sees is a barn. Unknownst to Barney, however, the object he sees is the only real barn in an area spawned with barn facades that are indistinguishable from the real barns when viewed from the road. On the standard intuition, Barney doesn't know that the object he sees is a barn, because had he stopped anywhere else, the object he would have seen would have been a barn facade.

Greco explains the intuition that Barney fails to know as follows: Barney is lucky that he stopped in front of a real barn rather than a barn facade. As Barney's luck is at least as salient a cause of Barney's believing truly as Barney's visual faculties, Barney fails to know that the object he sees is a barn.

Sosa (2003, 2007), Greco (2009), and Wayne Riggs (2009) argue that the credit thesis—the idea that knowledge implies credit for true belief—also provides a solution to the value problem, viz., the problem of explaining why knowledge is more valuable than mere true belief (Zagzebski, 1996, p. 259ff.; 2003). Knowledge

is more valuable than mere true belief, they argue, because we deserve credit for knowing but not for truly believing without knowing.

The credit thesis has received its fair share of criticism (e.g., Kvanvig, 2003; Pritchard, 2005, 2008a, 2008b, 2009; Lackey, 2007, 2009; Turri et al., 2019). Jennifer Lackey (2007) provides two counterexamples to the credit thesis. In one of her counterexamples, Morris just arrived at the train station in Chicago and wants to get to the Sears Tower. He asks the first adult passerby he encounters for directions. The passerby, who knows the city very well, tells Morris that the tower is two blocks east of the station, and Morris acquires the corresponding true belief. In the envisaged case, it seems that Morris gains knowledge on the basis of testimony. Yet, Lackey argues, the most salient cause in the story of how Morris acquired his true belief is the passerby's testimony, not the tourist's cognitive faculties. Lackey argues on the basis of this and other cases, that the credit thesis, as defended by Greco (2003), must be rejected.¹⁰

Sosa (2007, p. 95) responds to Lackey that Morris still deserves partial credit for his true belief, because the only reason he forms a true belief on the basis of the testimony of the passerby is that he has testimonial competence, allowing him to automatically detect whether the passerby is reliable. In a similar vein, Greco (2007) replies that even though Morris contributed less than the passerby to his cognitive success, he still deserves credit for his cooperative contribution.

Riggs (2009) responds that we need to distinguish between two senses of "credibility": attributability and praiseworthiness, and that, on his version of the credit thesis (defended in Riggs, 2007, 2014), your knowing that *p* requires that your true belief that *p* be *attributable* to you as an agent, not that you be praiseworthy for it (I hasten to note that Greco's [2003] notion of credit-worthiness as *requiring* causal responsibility is compatible with both of Riggs' notions of credit-worthiness).¹¹ Circumstantial luck, Riggs (2009) notes, undercuts attributability. If you form a true belief as a matter of luck, then the true belief is not attributable to you as a cognitive agent. Praiseworthiness, by contrast, is not undermined merely by luck, but also by success attained too easily. If a grandmother plays chess with her nine-year-old son, and plays to win, she can do so effortlessly. Her winning over her son is attributable to her, but she is not

¹⁰ Lackey's other counterexample is that of innate knowledge, which does not require even the exercise of epistemic virtue. This objection is thus a potential counterexample to virtue epistemology of all stripes. An extreme case of innate knowledge is that possessed by Donald Davidson's (1987) Swampman: a molecule for molecule duplicate of Davidson who comes into existence as the result of a fortuitous strike of lightning. Swampman knows everything Davidson knows from the get go, but this knowledge is not the result of exercising intellectual virtue. I am inclined to deny that Swampman possesses knowledge. However, see Greco (2010, p. 84f.) for a different reply.

¹¹ Riggs ultimately construes S as deserving credit for a result E in terms of E's not being lucky for S, where E is lucky for S iff (a) E is (too far) out of S's control, and (b) S did not successfully exploit E for some purpose, and (c) E is significant to S (or would be significant, were S to be availed of the relevant facts) (Riggs, 2014). Riggs' notion of credit is thus similar to Watson's (1996, 2004, 2012) notion of attributability. I turn to Watson below.

praiseworthy for having won, because winning required so little effort for her. By distinguishing between attributability and praiseworthiness, Riggs argues, we can thus account for how you can deserve credit for forming a true belief, even if you didn't have to put in much effort. You deserve credit for knowing, Riggs continues, because when you know, your true belief is attributable to you (and hence is free of external-world luck). How much effort it took for you to achieve your true belief has no bearing on whether you deserve credit for that belief in the attributability sense of "credit"—which is the sense relevant to knowledge. Riggs further notes that if Lackey (2007) is right that Morris might easily have asked an unreliable rather than a reliable passerby, then Morris is lucky that his belief is true. But luck blocks attributability. So, Riggs continues, if Morris was lucky that he acquired a true belief, then he fails to know.

Lackey (2009) presents a dilemma for virtue reliabilism: either Barney knows that the object he sees is a barn in fake barn county, or he does not. On the first horn of the dilemma, virtue reliabilism is deprived of one of its alleged advantages, viz., that it can handle Gettier-style cases. On the second horn, Barney does not know that the object he sees is a barn. But Barney's true belief that the object he sees is a barn is caused by his reliable faculties. So, even if his reliable faculties are not the most salient cause of his belief being true, he deserves partial credit for this. So, in spite of deserving partial credit for his belief being true (and partially getting lucky that he didn't stop in front of a barn facade), Barney fails to know.¹² By analogy, Morris fails to know despite deserving partial credit for his belief being true (and partially getting lucky that he didn't encounter an unreliable passerby). But, Lackey argues, denying that we can gain knowledge through testimony runs counter to intuition. As both horns of the dilemma have unwelcome consequences, the credit thesis is false.

A natural response to Lackey (2009) is to reiterate Riggs' (2009) point that if Morris might easily have encountered an unreliable testifier, then he doesn't know. Denying that Morris knows in this case is compatible with holding that in most cases in which we ask a stranger for directions, we don't just ask a random person but select someone who looks reliable based on various covert cues to a person's reliability (Brogaard, 2016). On this suggestion, obtaining a true belief based on testimony is disanalogous to obtaining a true belief in the barn case, because it's only in the barn case that you get lucky that your belief is true.

In *Achieving Knowledge* (2010), Greco proposes a solution to Lackey's (2009) dilemma along these lines (pp. 81–2). However, as I will argue below, Greco's explanation of why we can deserve credit for a true belief that is effortlessly acquired is redundant, because this conclusion follows directly from his (2010) responsibility constraint on knowledge.

¹² See also Pritchard (2009), who argues that Sosa cannot explain why Barney lacks knowledge.

3. Zagzebski's Virtue Responsibilism

In *Virtues of the Mind* (1996: 259ff.), Linda Zagzebski develops a dual-aspect virtue account of knowledge. Drawing on Michael Slote's (1995) distinction between agent-based and teleological, or good-based, virtue theories (cf., Slote, 1983, 1992, 2001, 2019), Zagzebski distinguishes between virtue theories that ground their conception of the virtues in a prior conception of the good, like Aristotelian eudaimonism, and virtue theories that take the virtuous motives of an agent to be fundamental. Whereas the former kind of virtue theories take the virtuousness of a person to consist in their reliable ability to use practical wisdom (*phronēsis*) to determine which action would be most suitable in the situation, the latter kind of virtue theories regard the virtuous person as guided by her inherently good motives and reject the idea that the virtuousness of a person is explained by her reliable dispositions.

The virtue epistemology advanced by Zagzebski (1996) combines aspects of both types of virtue theories. While she holds that the epistemic virtues are truth-conducive, she also requires that knowers be inherently motivated to attain knowledge (or wisdom or understanding). This dual-aspect theory has the advantage over "pure" virtue theories in that it provides an account of knowledge both as something we can realistically aim at and as something for which we can take epistemic responsibility, or credit.

Zagzebski's definition of knowledge rests on the concept of an act of intellectual virtue. To a first approximation, an act of intellectual virtue is an act that is virtuously motivated, reliable, and successful in reaching its aim through its reliability and its virtuous motivation. An act of intellectual virtue expresses the motivational component characteristic of the relevant virtue(s) and elicits the virtue's ultimate aim of knowledge through its immediate aim, where its immediate aim is to operate in a way that is knowledge-conducive. For example, the aim of intellectual open-mindedness is to make us receptive to new ideas even when they conflict with our own in order to gain knowledge, and the aim of epistemic thoroughness is to make us thoroughly examine evidence and counter-evidence pertaining to our hypothesis or question in order to attain knowledge.

This preliminary gloss on the notion of an act of intellectual virtue, Zagzebski notes, cannot ultimately figure in a definition of knowledge, as it presupposes the concept of knowledge. However, Zagzebski argues, knowledge can be defined without circularity as follows (let a V-motivation be a constituent of a specific virtue or set of virtues V) (p. 270):

S knows that *p* just in case:

(i) S possesses a V-motivation to believe truly, where a V-motivation is a disposition to have a corresponding virtuous motive (e.g., a delight in discovering the truth).

- (ii) S successfully attains a true belief that p as a result of performing an act motivated by the virtuous motive.
- (ii) S's act is one a person with intellectual virtue V would (probably) do in the same circumstances.

Note that on this definition, knowledge does not require that one actually possess the virtue in question. Acts of intellectual virtue merely require that one have the motivational component of that virtue (e.g., a disposition to take delight in discovering the truth), and that one act in the way a virtuous person would (probably) act in the same circumstances. So, agents can have knowledge before they have the entrenched habit that allows them to be generally reliable in bringing about the virtuous end.

Zagzebski's definition allows for the unreflective acquisition of knowledge on the basis of reliable cognitive faculties, such as perception, memory, and introspection. As unreflective perceptual, memorial, and introspective knowledge cannot be attained through character virtues alone but requires the operation of the relevant cognitive faculties, Zagzebski's virtue theory thus grants that both cognitive faculties and character virtues can play a constitutive role in the achievement of knowledge.

Zagzebski's virtue theory also accommodates our intuition that young children and animals can attain knowledge on the basis of reliable cognitive faculties. Although virtuous people sometimes question beliefs based on perception and memory, they maintain a presumption of truth in such cases, unless they have good reason not to, as maintaining such a presumption is a virtuous attitude. So, any creature whose exercise of the cognitive faculties is sufficiently similar to that of an intellectually virtuous person can attain unreflective knowledge, at least in circumstances where virtuous people would not question their beliefs. Zagzebski acknowledges that individuals who would not question their beliefs, had they had reason to do so, are counterfactually different from intellectually virtuous people. Unreflective knowledge achieved by a counterfactually unreflective individual, she argues, is a lower grade of knowledge. Zagzebski thus acknowledges that there are different grades of knowledge. While lower grades of knowledge do not require possessing the reflective capacities of virtuous agents, higher grades of knowledge do require such capacities.

One advantage of Zagzebski's account is that it provides a solution to one of the most fundamental problems facing character-based virtue epistemologies, which is that of explaining the connection between character virtues and knowledge (cf., Reed, 2001). Intuitively, someone who has not acquired any of the character virtues relevant to acquiring knowledge could arguably still come to possess knowledge based on reliable cognitive faculties, such as vision, audition, and memory. By requiring only that a believer perform a suitable act of virtue but not that she have the virtues, Zagzebski manages to show why character virtues are

essential to knowledge, even though a believer can attain knowledge without possessing any character virtues.

Zagzebski's virtue responsibilism has been the subject of criticism from virtue reliabilist camps. Thus, Greco (2000, 2002) rejects the idea that Aristotle's account of the moral virtues can serve as an adequate model for the intellectual virtues. In support of this claim, he argues (1) that unlike the moral virtues, the virtues that ground knowledge can take the form of reliable cognitive faculties and thus need not rise to the level of "excellence," in Aristotle's sense, and (2) that they don't need to include a strong motivational component.

Zagzebski's (1996) criticism of virtue reliabilism rests on the premise that virtue reliabilism mistakenly has elevated the cognitive faculties to the level of intellectual virtues. However, Greco argues, this claim rests on the mistaken premise that Aristotle is the main authority on the nature of intellectual virtues. Greco rejects this premise. The intellectual virtues, he argues, were given different treatments even by the Greeks. He cites Plato as an example of a Greek thinker who attributes the status of virtue to the perceptual faculties, citing a quote from Plato's *Republic*, where Plato claims that sight is the virtue of the eyes and hearing the virtue of the ears. A similar view, Greco argues, was defended by St. Thomas Aquinas.

In response, Zagzebski could concede to Greco that the cognitive faculties are among the intellectual virtues. But there is no reason for her to do so. As Zagzebski grants that we can acquire perceptual knowledge without possessing the intellectual virtues as long as we are appropriately motivated and perform an act of virtue that is sufficiently similar to that of a virtuous person, she is already acknowledging that reliable cognitive faculties can be a source of perceptual knowledge. What she is disputing is that the cognitive faculties can properly be regarded as intellectual virtues. Aristotle, too, hesitated to regard an unreflective exercise of the cognitive faculties as a human excellence. However, in defense of Greco, it should be noted that Zagzebski herself neglects to treat Aristotle as an authority on intellectual virtues. (After all, Zagzebski's account of the intellectual virtues is modeled on Aristotle's moral virtues, not his intellectual virtues.)

Let's turn now to Greco's (2002) argument against the idea that intellectual virtues must include a strong motivational component in order for them to serve as an adequate ground of knowledge. Greco thinks that this claim is too strong. To make this point, he invites us to consider an example of simple perceptual knowledge in which you are crossing the street in good light. You look to your left and see a large truck move quickly toward you. In the envisaged case, Greco (2002, p. 296) argues, it would seem that you know that there is a truck moving toward you, even if you lack control over your cognitive faculties and lack any motivation to be open-minded, careful, or the like.

Greco's argument does not carry much weight, however. First off, Zagzebski (1996) doesn't require knowers to possess voluntary control over the belief-formation process. Nor does she require that knowers always be motivated to be open-minded,

careful, or the like. It is true that she takes knowledge to require virtuous motivation. But, for Zagzebski, virtuous motivation is a disposition to possess a virtuous motive that serves to initiate and direct the act of virtue to its ultimate end. A virtuous motive, in its simple form, is a desire to discover the truth about a given subject matter. In Greco's (2002) example, however, you *do* have a desire of this sort. That is, you have a desire to discover the truth about whether cars are coming toward you. If you did not have a desire of this kind, you would have no incentive to look to your left, pay attention to the traffic, or even keep your eyes open.

To be sure, we often depend on our visual faculties to navigate the world without any executive control over what we are doing. Suppose that you are driving on the highway on your way home from work. At some point, you expertly maneuver the car in such a way as to take the correct exit to get off the highway, but you do so without any conscious awareness. In the envisaged case, your unreflective skilled action is guided by your vision for action rather than your vision for perception (Brogaard, 2012, 2020). But vision for action does not by itself make information available to executive brain areas. Yet engagement of executive brain areas is required for various executive cognitive activities, such as top-down selective attention, belief formation, and episodic memory formation. Because the information that enables you to maneuver your car expertly without any conscious awareness is unavailable to executive brain areas, you are not in a position to form a cognitive attitude about what you are doing. So, while you do know which exit to take and how to take it on the basis of your entrenched habit of driving home from work, you fail to know *that* you are taking the exit. In this case, you do indeed lack a desire to discover the truth about what you are doing. After all, you take the same route home from work every day. You just need to get home, you don't need to cognitively track how you get there. In cases like this, where we do lack a desire to discover the truth about a subject matter, we also lack knowledge. So, Greco's (2002) argument against Zagzebski's claim that knowledge requires virtuous motivation is ultimately unsuccessful.

4. Virtue Reliabilism and the Character Virtues

Despite assigning only a marginal role to character virtues in earlier works, in more recent works advocates of virtue reliabilism agree that character virtues can be essential to knowledge acquisition. In *Achieving Knowledge* (2010, p. 156ff.), Greco argues that knowledge "requires both responsibility in one's cognitive conduct and reliability in achieving one's epistemic ends" (p. 43). Let us take an agent's being "in C" to refer to that agent's being in a specific environment (e.g., in fake barn county or in normal barn county) and in specific circumstances (e.g., in daylight, with no sand in the eyes, with a sober mind). Greco's two constraints on knowledge can then be glossed as follows (pp. 43, 77):

Reliabilism: S's belief that p is objectively reliable in C if and only if S's belief that p in C results from intellectual dispositions that reliably produce a true belief that p across a range of close possible worlds in which S is in C.

Responsibility: S is epistemically responsible for her true belief that p if and only if S's belief that p is properly motivated; if and only if S's true belief that p results from intellectual dispositions which S manifests when she is motivated to believe the truth.

To see how the reliability condition works, let's consider Barney's epistemic status in two different environments, viz., real barn county where there are no barn facades and fake barn county where there is only one real barn in an area spawned with barn facades. In both cases, we will assume that Barney is in conditions suitable for seeing, and that he exercises his cognitive faculties properly. When Barney stops at a random location in real barn county, his belief that the large wooden structure he sees is a barn is objectively reliable, in Greco's (2010) sense, because in most of the close worlds in which he stops at a random location in real barn county, his belief that the large wooden structure he sees is a barn is true. However, when Barney stops at a random location in fake barn county (which in the actual world is where the only real barn happens to be), Barney's belief that the large wooden structure he sees is a barn is not objectively reliable, because in most of the possible worlds in which he stops at a random location in fake barn county, his belief is false.

Greco acknowledges that his version of virtue reliabilism, like all forms of reliabilism, faces a potential threat presented by the generality problem. On Greco's virtue theory, the generality problem arises, because there are several ways that we can specify which ability the agent exercises (e.g., the ability to form the true belief that the seen object is a barn vs. the ability to form the true belief that the seen object is a large wooden structure) and several ways that we can specify the believer's environment (e.g., the area right around the real barn or all of fake barn county). As a solution to the generality problem, Greco adopts a contextualist theory of knowledge that is reminiscent of Mark Heller's (1995). But where Heller takes knowledge to vary with the speaker's context, Greco takes it to vary with the interests and purposes operative in what he calls the "practical reasoning context." Greco does not explain what he means by "the practical reasoning context," but offers a couple of examples by way of illustration: "So, for example, if we are trying to decide what we should do, the parameters are set by our practical reasoning concerns. If we are trying to decide what S should do, the parameters are set by her practical reasoning concerns, etc." (p. 79).¹³

¹³ One wonders whose context matters, in Greco's view, if we are not engaging in practical reasoning (i.e., if we are not deciding what we or someone else should do), but we are just trying to figure out whether someone knows. Greco does not say.

So far, so good. Reliability, however, is only one half of Greco's definition of knowledge. The other half is epistemic responsibility. Despite the centrality of the notion, however, Greco only explicitly invokes it when considering Laurence Bonjour's (1980) clairvoyant cases, which Bonjour originally intended as objections to externalism. Bonjour's *Samantha* and *Maud* cases run as follows:

Samantha: Samantha believes herself to have the power of clairvoyance, though she has no reasons for or against this belief. One day she comes to believe, for no apparent reason, that the President is in New York City. She maintains this belief, appealing to her alleged clairvoyant power, even though she is at the same time aware of a massive amount of apparently cogent evidence, consisting of news reports, press releases, allegedly live television pictures, etc., indicating that the President is at that time in Washington, DC. Now the President is in fact in New York City, the evidence to the contrary being part of a massive official hoax in the face of an assassination threat. Moreover, Samantha does in fact have completely reliable clairvoyant power, under the conditions that were then satisfied, and her belief about the President did result from the operation of that power.

Maud: Maud believes herself to have the power of clairvoyance, though she has no reason for this belief. She maintains her belief despite being inundated by her embarrassed friends and relatives with massive quantities of apparently cogent scientific evidence that no such power is possible. One day Maud comes to believe, for no apparent reason, that the President is in New York City, and she maintains this belief, despite the lack of any independent evidence, appealing to her alleged clairvoyant power. Now in fact the President is in New York City, and Maud does, under the conditions then satisfied, have completely reliable clairvoyant power. Moreover, her belief about the President did result from the operation of that power.

In the first case, Samantha believes that the President is in NYC as a result of a highly reliable process. Yet she has misleading evidence against her belief that the President is in NYC. So, it would seem that Samantha fails to know that the President is in NYC. In the second case, Maud likewise believes that the President is in NYC as the result of a highly reliable process. Yet she has misleading evidence against her belief that she has reliable clairvoyance and hence indirectly against her belief that the President is in NYC.

Reliabilists have traditionally proposed to deal with such cases by adding a *no-defeater* condition to their account. But, Greco argues, classical reliabilists then face a dilemma: either they maintain that knowledge only requires taking *reliable* (or non-misleading) counterevidence in one's possession into account, or they maintain that knowledge requires taking all counterevidence in one's possession into account, regardless of whether it is reliable. If they take the first horn of the

dilemma, then they fail to accommodate our intuitions that if an agent does not have reason to discount counterevidence available to her, then she ought to take account of it, even if (unbeknownst to her) it is unreliable (or misleading). If they take the second horn of the dilemma, however, then they introduce an internalist component into an otherwise externalist account, which Greco argues is theoretically incoherent. So, no matter which horn they take, advocates of classical reliabilism face unwelcome consequences.

Greco's alternative proposal is to invoke his epistemic responsibility constraint on knowledge: although Samantha and Maud believe that the President is in NYC as a result of exercising their reliable clairvoyant powers, it is epistemically irresponsible of them to ignore counterevidence they have no reason to believe is misleading. On Greco's account, Samantha and Maud thus fail to know because they fail to exhibit epistemic responsibility in their cognitive conduct.

Sosa's (2015, 2019, 2021) notion of knowing full well—one of the more recent additions to this virtue epistemology—also requires epistemic responsibility on the part of the believer. According to Sosa, knowing full well requires making a good choice about the conditions in which one's skills and virtues are reliable, which, in turn, requires proper risk management. But assessing risk in order to make a good choice is not just a matter of employing reliable cognitive faculties. To make good risk assessments, you must also possess character virtues that rule out negligent and reckless assessments and choices. As he puts it:

One is negligent or reckless epistemically in making a certain judgment if and only if one fails to take properly into account the risk of failure in one's attempt to affirm aptly, the attempt that constitutes one's judgment. There is a character trait of epistemic conscientiousness, which is a competence to avoid epistemic negligence and recklessness. And the exercise of this character trait is crucial to the attainment of a competent enough assessment of one's SSS conditions relevant to a given question that one ponders. And this second-order assessment will be crucial to one's determining aptly (through sufficient competence) whether one's conditions are suitable for making a judgment on that pondered question. . . . So, one's conscientiousness has a crucial role to play in the competence one must exercise in determining aptly whether to affirm. It therefore has a crucial and constitutive role to play in the epistemic agent's attainment of apt judgment. (2019, p. 24; cf., 2021, p. 62, note 35)

So, if it is getting dark, and you have no good reason to think that you can reliably determine the color of objects in these viewing conditions, rushing to form the judgment that the car you saw was black rather than suspending judgment is epistemically negligent or reckless. Of course, it could so happen that your visual faculty does function reliably in this particular instance. If this is so, then your judgment qualifies as animal knowledge, but absent good reason to believe that

you can reliably determine the color of objects in these viewing conditions, you fail to exercise epistemic conscientiousness, which disqualifies you from knowing full well.

On their more recent proposals, Greco and Sosa thus both admit that character virtues such as epistemic responsibility and epistemic conscientiousness can play a constitutive role in knowledge acquisition. This would seem to narrow the gap between virtue reliabilism and virtue responsibilism. The question remains, however, what sort of concept of epistemic responsibility lies at the core of the two approaches, and whether their concepts of epistemic responsibility are sufficiently robust to do the work virtue epistemologists want it to do. To shed light on this question, let's turn to Gary Watson's (1996, 2004, 2012) distinction between responsibility as attributability and responsibility as accountability.

5. Two Faces of Responsibility

Watson's (1996) distinction between two kinds of responsibility takes as its starting point Susan Wolf's (1990) criticism of what she refers to as the *superficial notion of responsibility*. When we take an individual to be responsible for an event in this superficial sense, Wolf argues, we underscore that that individual plays some significant role in the causal chain that led to the event. Wolf contrasts the superficial sense of responsibility with the deep sense of responsibility:

When we say that an individual is responsible for an event in the superficial sense, we identify the individual as playing a causal role that, relative to the interests and expectations provided by the context, is of special importance to the explanation of that event. And when we praise or blame an individual in the superficial sense, we acknowledge that the individual has good or bad qualities, or has performed good or bad acts. But when we hold an individual . . . responsible for some event [in the deep sense], we are doing more than identifying her particularly crucial role in the causal series that brings about the event in question. We are regarding her as a fit subject for credit or discredit on the basis of the role she plays. (1990, pp. 40–1)

Wolf's deep sense of responsibility is connected with what she calls *deep praise* and *deep blame*, and involves an ability to revise your strategies and ends as you obtain a greater understanding of which ends are worth achieving by public standards and which strategies are most likely to get you there.¹⁴ So, on Wolf's account, Riggs' grandmaster is responsible for winning over her son only in the

¹⁴ Wolf (1990) is primarily interested in moral responsibility, but, as I will argue below, responsibility in all its senses applies outside the moral realm as well.

superficial sense. This is because a grandmaster's winning over a chess novice is not a worthy goal. By contrast, if the son spends years studying chess moves and playing against his mother, the grandmaster, and finally beats her at the age of twelve, he is deeply responsible and deeply praiseworthy for his achievement. Riggs' notion of credit as praiseworthiness is thus akin to Wolf's deep sense of responsibility. As we will see, however, his notion of credit as attributability is closer to Watson's notion of responsibility as attributability than it is to Wolf's superficial sense of responsibility.

Watson (1996) agrees with Wolf (1990) that a merely causal notion of responsibility is too shallow to capture anything worthy of being called responsibility. As he puts it: "[T]he defects of the [merely causal notion of responsibility] are conspicuous. It obscures the relevant distinctions between animals and human beings, between persons and automata, between voluntary conduct and operant conditioning, between structural defects and virtues" (1996, p. 233). However, Watson argues, Wolf misinterprets the real-self views of responsibility as proposing a purely causal notion of responsibility. According to Watson, real-self views—or what he calls *self-disclosure views*—take responsibility to be a significant relation between behavior and a "real self." Responsibility, on these views, is not purely causal but "executive and expressive" and tied to agency (1996, p. 233).

It is responsibility, in this executive and expressive sense, that Watson refers to as *responsibility as attributability*, or just *attributability*. For conduct to be attributable to an agent, Watson argues, it must express the agent's own evaluative commitments—i.e., her commitments to specific values—which requires adopting certain ends as her own (cf., Doris, 2015). When an agent's conduct flows from her commitments and therefore is attributable to her, it is her own in the sense of expressing her practical identity.

Conduct attributable to an agent carries normative weight, Watson argues, because exemplary and faulty conduct manifests the agent's character, which makes her an eligible target of questions about her conduct. That is, an agent is answerable for conduct attributable to her. As Watson puts it, "attributability in this sense is a kind of responsibility. In virtue of [her character], the individual is an agent in a strong sense, an author of her conduct, and is in an important sense answerable for what she does" (1996, p. 229).

Attributions of exemplary or faulty conduct to agents can form the basis of what Watson calls "aretaic appraisals." The latter attribute virtues and vices to agents on the basis of the agent's habitual, exemplary or faulty conduct, as in:

- (1) Kobe Bryant was a remarkably talented player who was admirably devoted to the game, his fans, and his daughter.
- (2) Ruth Barcan Marcus was an eminent and magnanimous teacher and an extraordinary philosopher whose brilliance, splendor, and originality remain unmatched today.

- (3) Ted Bundy was a heartless, evil monster, incapable of empathy or remorse, who was masquerading as an ambitious law student with clear boyfriend material in order to abduct, torture, and murder young women.

(1) attributes athletic and parental virtues to Kobe Bryant; (2) attributes intellectual virtues to Ruth Barcan Marcus; and (3) attributes moral vices to Ted Bundy.

Watson (1996) contrasts responsibility as attributability with *responsibility as accountability*, or just *accountability*. Whereas an agent is responsible for the ends she adopts as her own, on Watson's account, she is not accountable to other people for adopting certain ends and not others, as long as her choices don't harm others. To be accountable to another person, Watson argues, your conduct must harm the other person by violating their rights or by violating a demand made by the other person. However, such a demand must be legitimate, which means that the other person must have the authority to make it, for instance, by virtue of being your superior at a workplace. When we are subjected to illegitimate demands, we are not accountable for not complying with it. If, for example, a hijacker demands that one of his captives keep the others in line, the captive isn't responsible to anyone for failing to comply with this demand, as the hijacker isn't entitled to make it.

Watson adds an additional constraint on accountability: to be accountable for harming, or wronging, another person by violating her rights or failing to comply with a legitimate demand, you must have had a fair opportunity to avoid being subject to the duty or demand in the first place and, once you have become the subject of the duty or demand, you must have a fair opportunity to comply with it (1996, p. 237). Watson imposes the fair opportunity constraint on accountability because when you are held accountable for a violation of a right or legitimate demand, you are eligible to unwelcome reactive attitudes, such as blame, resentment, and indignation (cf., Strawson, [1962] 1982) and other sanctions. Yet, Watson thinks it would be unjust to expose people to sanctions or unwelcome reactive attitudes unless they have had a fair opportunity to avoid incurring them. Watson's view thus controversially implies that constitutional luck (e.g., an abusive childhood) can excuse a wrongdoer from accountability rather than merely excusing her from sanctions or unwelcome reactive attitudes.

So, where does epistemic responsibility fit into this picture? The answer is: it depends. Just as we can violate other people's rights by morally harming them, we can also violate other people's rights by epistemically harming them. An act of epistemic injustice, for example, vitiates a person's rights by attributing less credibility to her as a knower on the basis of her perceived group membership (on the epistemic harms of epistemic injustice, see, e.g., Fricker, 2003, 2007; Medina, 2011, 2012, 2013). A person who vitiates another person's epistemic rights is epistemically accountable for doing so. However, our focus in this chapter is on epistemic successes and failures, specifically successes and failures in the

endeavor to achieve knowledge. So, the notion of epistemic responsibility that is relevant here is responsibility as attributability.

I should note that there are some rather compelling arguments for thinking that attributability or answerability is the only notion of responsibility we need (Scanlon, 2008, 2013; Smith, 2012, 2015; Talbert, 2017). However, this issue need not concern us here, as we are not concerned with epistemic harms or the vitiating of other people's epistemic rights, but rather with the conditions under which an agent is responsible for attaining or failing to attain a true (or apt) belief.

6. Knowledge and Epistemic Responsibility

As we have seen, Greco's (2010) and Sosa's (2019, 2021) more recent virtue theories acknowledge that intellectual character virtues and epistemically responsible agency play constitutive roles in the pursuit and achievement of knowledge. Residual disagreements between advocates of virtue reliabilism and virtue responsibilism remain, however. These disagreements lie primarily in how much weight the parties think should be assigned to epistemic responsibility for the generation of knowledge and whether they regard the intellectual character virtues as motivational.

On Zagzebski's (1996) account, an agent receives credit for acquiring knowledge because knowledge is generated through the operation of the agent's virtuous motives and activities (p. 270). A virtuous motive, for Zagzebski, is an emotion or feeling characteristic of a specific virtue that directs the act of virtue in its particular direction toward its ultimate moral or epistemic end (e.g., knowledge):

A "motive" in the sense relevant to an inquiry into virtue is an *emotion or feeling that initiates and directs action towards an end*. Motives are connected with virtues in that virtuous persons tend to have certain emotions that then lead them to want to change the world or themselves in certain ways. (1996, p. 131)

So, the just person is someone who is motivated by a sense of justice to treat others equitably, and the empathic person is someone who is motivated by empathy to alleviate the suffering of others. Similarly, an open-minded person is motivated out of delight in discovering new truths even when they conflict with current beliefs in order to gain knowledge. In most cases, virtuous motives operate in the background without attracting our conscious attention to them. While we can become consciously aware of motives, Zagzebski argues, the motivational components of the virtues are trait-like dispositions to be moved by the corresponding virtuous motives.

Zagzebski's motivational constraint on knowledge helps secure that acts of intellectual virtue express the agent's fundamental evaluative orientation. This,

in turn, makes knowledge acquisition attributable, and hence creditable, to the knower, even when the knower does not herself possess the relevant intellectual character virtues but performs an act that imitates that of an intellectually virtuous person.

Greco (2010), as you may recall, takes knowledge to require both responsibility in the believer's cognitive conduct and reliability in achieving her epistemic ends. In Greco's view, S's belief that *p* is epistemically responsible just in case S's belief "results from intellectual dispositions that S manifests when S is motivated to believe the truth" (p. 154). As noted earlier, while Greco takes epistemic responsibility to be a requirement for all instances of knowledge, he only invokes epistemic responsibility when addressing BonJour's clairvoyant cases. As James Montmarquet points out, however, this raises the question of "how one restricts such a fundamental notion as epistemic responsibility to this apparently limited role" (2019, p. 40).

The restricted role Greco assigns to epistemic responsibility, however, is merely a contingent feature of his actual exposition of his position. Thus, it should not be taken to reflect that epistemic responsibility matters only to certain kinds of knowledge. One place where Greco could have made his responsibility constraint do more work is in his response to Lackey's (2007) concern about the credit thesis. Lackey's (2007) main objection is (roughly) that in simple cases of testimonial knowledge, the knower does not seem to deserve much credit, as the knower hardly puts in any effort in such cases. In his response to Lackey, Greco (2010) likens the simple testimonial case to that of a soccer player who dribbles the ball all the way from the other end of the field and passes it to a second player who then scores a goal. The second player deserves credit, Greco argues, even if the first player did most of the hard work. Similarly, as long as the hearer is a reliable receiver of testimony (e.g., by reliably selecting a reliable person to ask), the hearer deserves credit for knowing. But Greco, then, "concedes" that "in these cases and others we must rely on our intuitions about when S's abilities are 'importantly enough' involved in an explanation of success... [but] we have no precise or systematic understanding of the rules governing explanatory salience" (p. 83). I am not sure why Greco here returns to his (2003) idea that if an agent deserves credit for her true belief, then the agent must be an explanatorily salient cause of her believing truly. Be that as it may. If we render Greco's epistemic responsibility constraint in terms of attributability (in Watson's sense), this blocks Lackey's (2007) worry. When rendered in terms of attributability, Greco's epistemic responsibility constraint can be glossed as follows:

Responsibility as Attributability: S is attributably responsible for her true belief that *p* if and only if S's true belief that *p* results from intellectual dispositions which S exercises because she holds (even if only implicitly) that doing so is a reliable way of acquiring a true belief.

If knowledge entails that the knower deserves credit for her true belief, and credit is understood as attributability rather than accountability, then whether an agent deserves credit for her believing truly has no bearing on how easy or hard it was for her to acquire her true belief. Nor does it have any bearing on whether the agent is an explanatorily salient cause of her believing truly. What matters to whether Morris deserves credit for his true belief is that this belief resulted from his disposition to ask strangers for directions, and that he exercises this disposition because he holds (even if only implicitly) that doing so is a reliable way of acquiring a true belief. To be sure, to say that Morris deserves credit for his true belief that *p* is *not* to say that he knows that *p*, as attributability is necessary but not sufficient for knowledge. In order for Morris' true belief to rise to the level of knowledge, it would also need to meet Greco's reliability constraint.

Greco's responsibility constraint does not block Lackey's (2009) objection to virtue reliabilism, however, as the crux of her concern here turns on likening the luck involved in believing truly on the basis of a stranger's testimony to the luck involved in believing truly that the seen object is a barn at a random location in fake barn county. But, here, Greco can deploy his reliability requirement, repeated here from above (*C* is the circumstance or situation):

Reliability Constraint: S's belief that *p* is objectively reliable in *C* if and only if S's belief that *p* in *C* results from intellectual dispositions that reliably produce a true belief that *p* across a range of close possible worlds in which S is in *C*.

If Morris is a reliable receiver of testimony (e.g., by selecting reliable testifiers), then in most of the close possible worlds where Morris acquired a belief on the basis of testimony from a stranger, his belief is true. So, by Greco's reliability constraint, Morris' believing truly on the basis of the testimony of a stranger is reliable, whereas Barney's believing truly in fake barn country is not.

Let us turn now to Sosa's (2019, 2021) epistemic responsibility constraint on knowing full well. According to Sosa, a cognitive success is attributable to the believer as her own doing only if the success is due to her aim and her competence and not to luck (2021, p. 146). Only securely reflective knowledge, Sosa (2021) argues, rules out luck that may otherwise be credit-reducing (p. 170). So, only securely reflective knowledge is fully attributable to the agent. However, he adds, a cognitive success can be sufficiently attributable to the believer for all practical purposes. So, "what distinguishes belief that rises to the level of knowledge" is that "it is belief whose success is significantly creditable (attributable) to the believer, one for which the believer is attributably responsible as their own doing, and not just something that comes about by (agent-external) luck" (p. 175).

Although Sosa grants that the agent must exercise the character virtue of epistemic conscientiousness in order for her to make a proper assessment

of the risk of being wrong, which is required for her to know full well, he denies that knowing full well requires being motivated to believe the truth. Thus, he writes:

Some believe the possession of a “character virtue” to require motivation by intrinsic love of truth. But the virtues whose exercise is constitutive of knowledge—the gnoseological—require not love but competence. Loving motivation is irrelevant to theory of knowledge, or gnoseology; nor is it relevant to theory of inquiry, or pursuit of knowledge. Knowledge can be pursued not at all for its own sake but only for its technological payoff. (2019, p. 21)

I agree with Sosa that knowledge need not be pursued for its own sake but can be pursued merely as a means to some other good. Insofar as loving something requires caring about it for its own sake, loving the truth requires caring about the truth for its own sake, but you can be motivated to believe the truth without caring about the truth for its own sake.

There are two reasons to think that Sosa is compelled to endorse the view that knowing full well requires motivation to believe the truth and not just competence, as he alleges. One reason to think that he is committed to the view that knowing full well requires virtuous motivation is that he holds that when an agent knows full well, the epistemic success is attributable to the believer. Indeed, Sosa specifically contrasts responsibility as attributability and responsibility as accountability, arguing that when an agent knows full well, her knowledge is attributable to her. However, as we have seen, for an end to be attributable to an agent, the agent must have adopted the end as her own. But now, if an agent truly believes that p but is not motivated to believe the truth, it follows that she does not have a desire to discover whether p ; she doesn't really care about whether p or not- p , or perhaps she secretly hopes that not- p . But if an agent with this epistemic (“anti- p ”) orientation truly believes p , we can hardly say of her that she has adopted the end of believing the truth as her own. But if she has not adopted this end as her own, then her fully apt belief is not *attributable* to her, contrary to what Sosa says.

A second reason to think that Sosa is compelled to endorse the view that knowing full well requires being motivated to believe the truth is that there is no way to make sense of character virtues in the absence of a motivational component. To see this, let us briefly consider Aristotle's moral character virtues. According to Aristotle, to possess a moral virtue is not simply a matter of reliably behaving in a certain way. Honesty, for example, isn't simply reliable truth-telling but telling the truth for the right reasons. Telling the truth because you fear getting caught if you lie, or revealing secrets for the sake of your own amusement are not actions motivated by honesty. The same goes for the other virtues, for instance, good temper and generosity. As Aristotle puts it:

Any one can get angry—that is easy—or give or spend money; but to do this to the right person, to the right extent, at the right time, with the right motive, and in the right way, that is not for everyone, nor is it easy. (NE 1109a27)

To possess a moral virtue thus requires being motivated to perform the actions the situation calls for (EN 1109a26–30, 1109b14–16). Consider Sosa’s (2019) case of a pilot—let’s call him *Ken*. Ken is supposed to visually check that the plane’s gas tank is full prior to take-off but forgets to do so. Yet he proceeds to maneuver the plane competently through a storm to a safe landing at the intended destination. In the envisaged case, it’s Ken’s moral responsibility to check that the tank is full before take-off, which is to say that the situation morally requires that Ken perform this particular act. As he fails to do so, Sosa argues, his performance is morally negligent, and this moral negligence subtracts from the moral credit he would otherwise have received for piloting the plane competently through a storm to a safe landing (cf., Smith, 2017; Talbert, 2017).

If we model intellectual character virtues on the moral character virtues, as Sosa suggests, then possessing the intellectual virtue of conscientiousness requires being motivated to perform the acts required to minimize the risk of judging falsely. Consider another pilot, called *Harry*. Harry and his co-pilot know that to minimize the risk of error, they are both supposed to visually check that the tank is full before take-off, but Harry is in a hurry and asks his co-pilot whether the tank is full. The co-pilot confirms, and Harry judges on the basis of his co-pilot’s testimony that the tank is full. The tank is indeed full, and Harry and his co-pilot proceed to maneuver the plane competently through a storm to a safe landing at the intended destination. As Harry believes truly on the basis of (reliable) testimony, he has knowledge of the lowest grade (animal knowledge) that the tank is full. But his reckless disregard for minimizing the risk of falsely judging that the tank is full prevents Harry from knowing full well that the tank is full. Knowing full well, in this case, would have required caring about minimizing the risk of judging falsely, but caring about minimizing the risk of judging falsely implies *caring about* judging or believing truly. Thus, Sosa is required to admit that to know full well, the agent must be motivated to believe or judge truly.

This takes us to our final point, which is that knowing full well, in Sosa’s sense, is context-sensitive. Specifically, knowing full well is sensitive to how low of a risk of judging falsely is required by the situation. Sosa is explicit about the contextual variance of moral (or prudential) negligence. Thus, he invites us to compare his first pilot case (the “Ken case”) to a second case of a pilot. Let’s call her *Barbie*. Unlike Ken, Barbie is not in charge of checking that the tank is full. Instead, it is someone else’s assigned moral responsibility of long standing to do so. Just like Ken, Barbie does not check that the tank is full before take-off, and like Ken, she proceeds to maneuver the plane competently through a storm to a safe landing at

the intended destination. Unlike Ken's performance, however, Barbie's performance is not morally negligent.

Now, let's compare the case of Harry to a fourth case of a pilot, *Sally*, who also intends to pilot a plane to a specific destination. Here, it is the co-pilot's assigned responsibility to visually check that the tank is full. All the pilot has to do is ask her co-pilot to confirm that she visually checked that the tank is full. Before take-off, Sally asks her co-pilot whether she has visually checked that the tank is full. Her co-pilot confirms, and Sally judges on the basis of her co-pilot's testimony that the tank is full. The tank is indeed full, and Sally and her co-pilot proceed to maneuver the plane skillfully through a storm to a safe landing at the intended destination. Unlike Harry, Sally doesn't neglect to carry out her responsibilities. So, in spite of the fact that Harry and Sally have exactly the same evidence for their judgment that the tank is full (i.e., evidence based on the testimony of the co-pilot), Sally knows full well that that tank is full, whereas Harry does not know this full well.

Of course, if Zagzebski (1996) and Greco (2010) agree with me that epistemic responsibility for knowledge is best rendered as responsibility as attributability, roughly in Watson's sense, then they are equally committed to this type of context-sensitivity of knowledge. If they happen not to agree with me that epistemic responsibility for knowledge is best rendered as responsibility as attributability, roughly in Watson's sense, then they owe us an explanation of how they propose to understand epistemic responsibility for knowledge in such a way as to avoid this type of contextualism about knowledge.

7. Conclusion

Virtue epistemologies about knowledge have traditionally been split into two camps: virtue reliabilism and virtue responsibilism. Initially, what set virtue responsibilism apart from virtue reliabilism was that virtue responsibilism took character virtues and responsible agency to be necessary to the pursuit and achievement of knowledge, whereas virtue reliabilism took reliable cognitive faculties but not character virtues or responsible agency to be constitutive of the pursuit and achievement of knowledge. Most proponents of virtue reliabilism have since then acknowledged that character virtues and responsible agency play constitutive roles in the generation of knowledge. Residual disagreements remain regarding how much weight the parties think should be assigned to epistemic responsibility in the generation of knowledge and whether intellectual virtues are inherently motivational. In this chapter, I have focused on Zagzebski's (1996) virtue responsibilism and Greco's (2003, 2010) and Sosa's (2007, 2009, 2019, 2021) virtue reliabilism. I have argued that despite Greco and Sosa's misgivings about virtue responsibilism, they are ultimately required to accept that character

virtues are inherently motivational and that epistemic responsibility plays a more substantive role than a naturalistic, causal notion of attribution.¹⁵

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