

The epistemically virtuous clinician

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Abstract Today, modern Western medicine is facing a quality-of-care crisis that is undermining the patient–physician relationship. In this paper, a notion of the epistemically virtuous clinician is proposed in terms of both the reliabilist and responsibilist versions of virtue epistemology, in order to help address this crisis. To that end, a clinical case study from the literature is first reconstructed. The reliabilist intellectual virtues, including the perceptual and conceptual virtues, are then discussed and applied to the case study. Next, a similar method is employed to examine the responsibilist intellectual virtues, including curiosity, courage, honesty, and humility, and to apply them to the case study. To round out the discussion, the love of knowledge and both theoretical and practical wisdom are explored and applied to the case study. The paper concludes with a brief discussion of how the notion of an epistemically virtuous clinician addresses the quality-of-care crisis, in terms of the connection between ethical and intellectual virtues, and of the notion’s implications for medical education.

Keywords Clinical medicine · Epistemic agent · Intellectual virtues · Quality-of-care · Virtue epistemology

Introduction

Modern Western medicine is facing a crisis. Medical science and technology have produced, during the twentieth century, “miraculous” cures for many diseases such as infectious diseases. And yet patients are dissatisfied with modern medicine. As David Weatherall articulates the problem, “the art of medicine, in particular the ability of doctors to care for their patients as individuals, has been lost in a morass of

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expensive high-technology investigation and treatment....In short, modern scientific medicine is a failure” [1, p. 17]. The crisis is a product of two clashing cultures—the scientific and the humanistic. Patients seek not only scientific or technical cures for or management of their ailments but also humane care. Modern medicine, however, emphasizes cures and management often at the expense of care. This emphasis on the scientific begins with the education of physicians, who are obliged to pass scientific requirements as undergraduates for entrance into medical school. And once in medical school prospective physicians are trained in the science of medicine, which often brackets the patient’s illness experience from clinical consultation. To address the crisis, medical schools and even some undergraduate institutions are instituting medical humanities programs to promote a more humane medicine. To assist in the resolution of this crisis, I propose the notion of an epistemically virtuous clinician.

Recently the role of virtues—which are construed broadly as some type of excellence¹—in the acquisition, acceptance, and transmission of knowledge has gained prominence in philosophy in a sub-discipline called “virtue epistemology” [2–10]. Virtue epistemology is based on traditional virtue theory, especially in ethics, in which actions are evaluated in terms of the agent’s normative character traits exemplified in those actions rather than simply with reference either to the agent’s motives or commitment to duty or to the consequences of the acts themselves. In like manner, virtue epistemologists are interested in the normative or properly functioning epistemic faculties of a person rather than just the knowledge itself or its justification. Intellectual virtues are the innate or “acquired bases of excellent intellectual functioning” [2, p. 60]. Whereas traditional epistemologists focus on the discovery and justification of knowledge in terms of the evidence or methods used to produce it, virtue epistemologists focus on the intellectual virtues of the epistemic agent required to deliver knowledge or the epistemic goods, as well as on the vices that hinder such delivery.²

Intellectual virtues are generally divided into two types [11]. The first pertains to intellectual virtues as reliable or sound sensory or perceptual and cognitive or conceptual faculties, powers, or processes of an epistemic agent. The virtues are necessary for obtaining and ensuring knowledge, given an appropriate intellectual environment or context. They are innate and include, for example, sight or hearing for sensory or perceptual faculties and memory, intuition, inferential reasoning, insight, or introspection for cognitive or conceptual faculties.³ Importantly, they are truth-promoting. This kind of virtue epistemology is generally called “reliabilist”

¹ For example, Roberts and Wood define virtue as “an acquired base of excellent functioning in some generically human sphere of activity that is challenging and important” [2, p. 59].

² According to Roberts and Wood, the epistemic goods represent more than simply the notion of justified true beliefs, if such goods are attainable, but rather a richer or broader notion that includes “warranted true belief, acquaintance, and understanding” [2, p. 33]. In addition, transmission or communication of the epistemic goods from teacher to pupil is an important epistemological issue.

³ Although the faculties are innate, in that such faculties as sight and hearing are not learned per se, this does not mean that their use cannot be developed through training or learning. Thus, the faculty of sight can be sharpened though learning to use it under specific conditions. For example, a clinician can learn to use sight effectively in observing certain clinical signs that are indicative of specific illnesses.

virtue epistemology, since knowledge is based on the reliability of perceptual and conceptual faculties and on the causal role of a reliable belief-producing mechanism.

The second type of intellectual virtue pertains to the virtuous character traits of the epistemic agent. These intellectual virtues are acquired and developed over the agent's lifetime. They include, for example, honesty, courage, open-mindedness, humility, fairness, curiosity, tenacity, and integrity. This kind of virtue epistemology is often called "responsibilist" virtue epistemology, since knowledge is based on an epistemic agent's desire and motivation to know the truth. In large part, the epistemically virtuous agent is responsible for delivering the true epistemic goods (analogous to the responsibility of the ethically virtuous agent to perform right actions), whether those goods are acquaintance or propositional knowledge or understanding.

Although virtue epistemology has been used only infrequently to examine epistemological issues in contemporary medicine,⁴ a physician's intellectual virtues—whether reliabilist or responsibilist—are important for the acquisition, acceptance, and transmission of medical knowledge and for clinical reasoning, whether diagnostic, therapeutic, or prognostic.⁵ Not only must a physician's perceptual and conceptual faculties, powers, or processes function properly, but his or her dispositions must be sufficiently responsible to deliver or to warrant accurate diagnosis, an efficacious therapy, or a realistic prognosis. For example, a physician must be intellectually honest in terms of evaluating clinical data and observations and not allow intellectual vices such as bias or prejudice to distort the interpretation of the data and observations.

In this paper I use virtue epistemology, in both its reliabilist and responsibilist versions, to examine the notion of an epistemically virtuous clinician.⁶ To that end, I first reconstruct a clinical case from the literature, in which a gastroenterologist treats a patient sexually assaulted as a teenager.⁷ I next analyze the case in terms of both reliabilist and responsibilist intellectual virtues. Although these virtues are necessary for understanding an epistemically virtuous clinician's actions, a fuller understanding requires an analysis of love of knowledge and of both theoretical and practical wisdom. I conclude with a discussion on the connection between the intellectual and ethical virtues and of the importance of virtue epistemology for medical education, especially for producing humane practitioners, to help address the quality-of-care crisis.

⁴ For example, Duncan Pritchard examined the role of reliabilist virtues in the acquisition of diagnostic knowledge [12]. Another example is Erica Zarkovich and R.E.G. Upshur, who used the ethical virtue of conscientiousness and the intellectual virtue of judiciousness to evaluate evidence-based medicine (EBM) [13]. Edmund Pellegrino critiqued their evaluation, arguing that a more fundamental virtue, which serves better to evaluate the uncertainty of both medical ethics and epistemology and not just the best evidence associated with EBM, is prudence [14].

⁵ Virtue theory has been utilized more to examine the morally or ethically virtuous physician than the epistemically virtuous physician [15].

⁶ I must caution the reader that my purpose in this paper is not to address the debate over the priority of either reliabilist or responsibilist virtue epistemology.

⁷ I must also caution that this case study is not chosen because the clinician is perfect in terms of representing the virtuous epistemic agent but rather because he illustrates sufficiently the intellectual virtues important in the practice of clinical medicine.

Clinical case study

The clinical case study is taken from an essay, entitled “Communion,” published in the series “On Being a Doctor,” from the *Annals of Internal Medicine* [16].⁸ The essay’s author, Richard B. Weinberg, a gastroenterologist at Wake Forest University Baptist Medical Center in North Carolina, recounts a case from his clinical practice. The patient, as Weinberg narrates the first encounter, was his last of the day and was huddled in a corner of the examination room. “She was in her midtwenties,” observed Weinberg, “and she clutched a sheaf of medical records against her chest like a shield” [16, p. 804]. The chief complaint was “chronic abdominal pain,” with onset in her midteens. It was evident from her records that she had been to every gastroenterologist in town, who had run all the right tests and prescribed almost every available medicine—but to no avail. His immediate response was puzzlement over why she had sought him out and he felt impotent to help her.

Weinberg began with the patient’s personal history. Unfortunately, her description of the abdominal pain was so vague that no apparent diagnosis was immediately evident. As he questioned her, however, he was fascinated by her and described her appearance in detail:

She was anxious and withdrawn, but nonetheless she projected a desperate courage, like a cornered animal making a defiant last stand. She kept her gaze directed downward, but every now and then I caught her staring at me intensely, as if searching for something. She wore a drab, bulky sweater and oversized bluejeans, and her unkempt hair fell over her eyes. It struck me that she deliberately had done everything possible to obscure the fact that she was a very attractive young woman [16, p. 804].

Since the patient was so uncomfortable with talking about herself, he moved on to the family history—often the next step in the medical history. Her parents were Italian immigrants and her mother had died when she was young, whereupon she had assumed the domestic chores even though she had an older sister. The patient was a faithful Roman Catholic but did not take Communion. She worked with her father in the family’s bakery business.

Weinberg then informs the reader that although cooking is his hobby, he had never mastered the art of baking. In addition he was always looking for good bakeries, since he was fond of French pastries—especially Napoleons. He asked if the patient knew of a well-known bakery near the medical center, only to be reprimanded that its Napoleons were inferior and unworthy to be fed even to her cat. To Weinberg’s surprise he had elicited from the patient a passionate response for the first time. But it faded as quickly as it came. The physical exam was unrevealing. He diagnosed the problem as irritable bowel syndrome and prescribed an antispasmodic drug that she had yet to take, along with a bland diet. The patient listened but was unresponsive. Weinberg was not optimistic about the therapy he had prescribed but

⁸ The essay was part of a collection of papers on the health problems associated with violence against women [17].

requested that she return within a month, although he did not expect to see her again.

But the next week the patient returned. Again, she was terse in answering Weinberg's questions about her abdominal pain. Frustrated, he engaged her in a topic that he knew she was interested in—Italian pastries, of which she exhibited detailed knowledge. No further mention was made of abdominal pain during the consultation. Again he requested that she return in a month.

After a week, however, the patient returned again for a third consultation. This time Weinberg noticed that she seemed more comfortable but he also observed dark rings under her eyes. He inquired whether she was getting sufficient sleep, to which the patient answered “no.” He asked why, and she answered that it was because she had a recurring nightmare. Weinberg then asked if she could recount it for him.

She was silent for some time, and then took a deep breath, as if she had made a decision. Then, in a barely audible monotone, she described her dream: She is running, because she must get to confession before the priest leaves. But when she enters the church it is empty, dark, cold. She calls out, but there is no answer. Suddenly, unseen acolytes seize her and drag her to the altar. Her head is pulled back and holy water is forced down her throat to drown her screams. She struggles to raise her head and sees a procession of hooded priests holding long candles headed up the aisle toward her [16, p. 804].

Realizing the obvious implications of this horrid dream, Weinberg asked if she had ever been sexually assaulted. She answered, “Yes.” Weinberg hesitated for a moment as to whether he should continue but her eyes implored him to continue. She then recounted the details of the assault, about a decade earlier, by her older sister's boyfriend.

The patient had never told anyone of the assault, for fear of what its exposure would do to her family. Weinberg was the first person to hear the story that was the reason behind her physical ailment. After he consoled her as best he could and after she had stopped crying, Weinberg advised her to see a psychiatrist or rape counselor. He tried to explain to her that he is a gastroenterologist and that her case is beyond his medical expertise. But she refused to see anyone else, since she did not trust anyone else. “I then understood that having unearthed her dark secret,” acknowledged Weinberg, “I had become responsible for her care” [16, p. 805].

Weinberg and the patient then met on a weekly basis for several months. He mostly listened to her story and to how she tried to exculpate the shame and guilt she felt as outcomes of the assault. Besides not taking Communion, she could not eat initially and then fell into a pattern of bingeing and purging herself at the bakery late at night until her stomach ached and she was exhausted. But nothing seemed to relieve her of the anguish associated with the assault. The consultations prompted Weinberg to read the clinical literature about the relationship between rape and eating disorders but he found little to help him with treating the patient, who was teaching him more about the relationship than the literature. Weinberg also consulted a colleague in the psychiatry department, who assured him that he was doing as good a job as any psychiatrist.

Eventually the patient began to improve. Weinberg noticed that her anxious look was now often replaced with a smile, something he had not seen previously. She gained a little weight and changed her hairstyle. She returned to school and completed a program for a high school diploma. She also informed him that she was receiving communion. The consultations became more infrequent as her improvement continued; finally, after a three-month interval, she appeared one day in the clinic. At first Weinberg did not recognize the patient, “such was the extent of her transformation. She was vibrant, alive. And she looked beautiful—elegantly attired as if for a night on the town. I realized,” he continues, “she had dressed up for me. I also sensed that something was completed, that this was a leave-taking” [16, p. 805].

The patient told Weinberg that she was quitting the bakery and traveling to Italy for the summer, after which she intended to matriculate to college. She had brought him a gift of six Napoleons that she had made, and she thanked him for believing in her. Weinberg, in turn, thanked her for believing in him. After kissing his cheek, she warned him, while leaving, not to eat the pastries all at once since it would not be healthful. He then informs the reader that this case reminded him of an aphorism taught him during his clinical training: clinicians do not choose their patients, rather patients choose their clinicians. Weinberg concludes the essay noting that after the day’s evening dinner, “I opened my present and partook of the communion from the baker’s daughter” [16, p. 805].

The epistemically reliabilist clinician

For reliabilist virtue epistemologists, intellectual virtues are the proper functioning of intellectual faculties, powers, or processes, given an appropriate intellectual environmental context [7, 8]. These faculties pertain to innate sensory or perceptual and cognitive or conceptual skills, which can be developed through training. The perceptual faculties are composed of somatic senses, such as sight or hearing, while the conceptual faculties consist of cognitive processes involved in memory, intuition, inferential reasoning, insight, or introspection.⁹ It is the proper functioning of these perceptual and conceptual faculties that warrant the acquisition, acceptance, and communication of true beliefs and the avoidance of false beliefs, under appropriate environmental conditions.

The reliabilist intellectual virtues, especially as reliable processes, are critical for the acquisition and justification of knowledge. Accordingly, as John Greco articulates reliabilist virtue epistemology: “A belief B(p) is epistemically justified for S if and only if B(p) is the outcome of a sufficiently reliable cognitive process, i.e., a process that is sufficiently truth-conducive” [11, p. 291]. In other words, the reliabilist intellectual virtues as properly functioning perceptual and conceptual faculties warrant beliefs as true since they are sufficiently adequate for discovering a belief’s veracity. In the next two sections, the clinical case study reconstructed above is examined with respect to these reliabilist virtues.

⁹ Of course, perception can be influenced by concepts, which have been shown to determine what a person observes under specific conditions.

Perceptual virtues

The perceptual virtues consist of properly functioning somatic senses, especially sight and hearing. These virtues are tied to the epistemic agent's embodiment, as Charles Taliaferro so ably describes them: "A materially embodied human person feels with his skin, sees with his eyes, hears with his ears, smells with his nose, and tastes with his mouth" [18, p. 116]. They are the faculties or powers that allow an epistemically virtuous agent to perceive the world. "In a word," claims Thomas Reid, "perception is most properly applied to the evidence which we have of external objects by our senses" [19, p. 10].¹⁰ The perceptual virtues are innate skills, which can be developed through training, and permit access to the physical world.¹¹ Without these skills an epistemic agent cannot obtain the necessary sensory evidence or experience to formulate ideas or notions about the world, especially through the conceptual intellectual virtues. Sight or vision plays a predominant or unique role, as compared to the other perceptual virtues.¹²

Weinberg's sensory faculties, especially sight or vision, were properly functioning during consultations with the patient and served as a mechanism of belief-formation under appropriate conditions (i.e., his medical training and years of clinical experience) to assist in the production of an accurate diagnosis of the patient's disease etiology.¹³ He was keenly observant of the patient's overall appearance during the initial consultation and this served to stimulate other intellectual virtues, especially the intellectual virtues associated with the conceptual faculties and intellectual curiosity. For example, he initially observed that the patient was unkempt even though she was very attractive. This observation did not cause Weinberg to dismiss the patient but rather aroused his intellectual curiosity about the patient and served to stimulate further questions that led to revealing the origin of the patient's gastrointestinal problem.

Of course, probably the most important observation to that end, during the third consultation, was the clinical sign of dark rings under the patient's eyes. The observation of this sign allowed Weinberg access into what was responsible for the patient's physical symptom of chronic abdominal pain. It also served to engage the intellectual virtues associated with his conceptual powers, especially the inference

¹⁰ Reid also recognizes that perceptions are related to conceptions through prior beliefs [19].

¹¹ It is important to note that the perceptual virtues can be divided into the physical and the mental. The physical perceptual virtues are part of the process that does not necessarily involve conscious awareness, while the mental perceptual virtues do. In other words, the physical dimension of the perceptual virtues gives epistemic agents contact with the world, while the mental dimension allows such agents to mediate consciously that contact.

¹² "The unique distinction of sight," claims Hans Jonas, "consists in what we may provisionally call the *image*-performance, where 'image' implies these three characteristics: (1) *simultaneity* in the presentation of the manifold, (2) *neutralization* of the causality of sense-affection, (3) *distance* in the spatial and mental senses" [20, p. 136]. The consequence of sight's uniqueness is that the mind often goes where sight leads [20, p. 152]. Of course other senses, like hearing or touch, also function to lead the mind but sight is considered predominant or preeminent.

¹³ These conditions can also include environmental factors like adequate lighting or appropriate observation distance (not too far or close).

he made in terms of interpreting the patient's nightmare as sexual assault.¹⁴ It is interesting to note that Weinberg's observation of the dark rings under the patient's eyes did not occur until the third consultation. One would assume that the rings were present at earlier consultations, since the patient's nightmare was recurring, and that Weinberg missed them because his observation powers *vis-à-vis* this clinical sign were diminished due to the limitations of his medical specialization as a gastroenterologist. In other words, he would not think to look for clinical signs other than those associated with his specialty. But once he stepped back from that specialty, he was able to pick up on this sign.

Conceptual virtues

The conceptual virtues consist of the properly functioning cognitive faculties. Just as the perceptual virtues allow epistemic agents to perceive the world, so the conceptual virtues allow them to think about or to conceive it, i.e., to form concepts, ideas, or notions about the perceived world. As Reid writes: "To think a thing, and to have a thought of it...to conceive a thing, and to have a conception, notion, or idea of it, are phrases perfectly synonymous" [19, p. 174]. The conceptual virtues are also innate skills, which can be developed through training; but rather than giving the epistemic agent direct access to the physical world, they permit indirect access through theories about it or access to a conceptual world that may not be tethered to the physical world. The conceptual virtues include faculties such as memory, intuition, inferential reasoning, insight, or introspection. Memory and inferential reasoning are two of the more important conceptual virtues. Properly functioning memory is the process of recollecting or recalling the relevant information necessary for conceiving the world, while properly functioning inferential reasoning is the process of drawing a valid conclusion—deductively, inductively, or abductively—also essential for conceiving the world.

Weinberg exhibited many of the intellectual virtues associated with properly functioning conceptual faculties and powers. For example, his accurate memory of the first clinical consultation with the patient served him well during the second consultation. By remembering that the patient was responsive to a discussion on baking he was able to engage the patient in a "successful" consultation. It was successful because the patient began to trust Weinberg as a person and more importantly as a clinician. This was critical since it paid off epistemically in the third consultation when the patient decided to recount her nightmare to Weinberg. Of course, as noted above, Weinberg displayed insightful analysis of her recurring nightmare by inferring that the patient had been sexually assaulted.¹⁵ He also

¹⁴ Weinberg also exhibited intellectual (in)sight when he observed that the patient's physical appearance was transforming before his eyes.

¹⁵ It is interesting to note that Weinberg failed to ask any questions about or to make any clinical inference from the patient's refraining to take Communion, even though she was a faithful Catholic. As Augustine noted centuries earlier, if the faithful are able to partake in Communion they do unless they have not repented of mortal sin. Here we see a failure of the Weinberg's inferential powers in the first consultation. Of course, this might not be a failure of his conceptual virtues per se but rather ignorance of Roman Catholicism and its practices.

exhibited keen intuition into the natural end of the clinical relationship. The patient's healing was complete, as evident from her transformed physical appearance after months of consultations, and there was no need to prolong the relationship.

The epistemically responsibilist clinician

For responsibilist virtue epistemologists, intellectual virtues are the character traits that are necessary for the best or excellent use of the epistemic faculties [2, 9]. These virtues consist of traits such as curiosity, courage, generosity, honesty, humility, and tenacity. Typically, epistemic agents—who exhibit intellectual virtues—are warranted in the acquisition, acceptance, and transmission of beliefs (although some virtue epistemologists do not consider the justification of belief to be the most or only appropriate goal for epistemic agents).¹⁶

Responsibilist virtue epistemologists claim that the intellectual virtues are acquired habits rather than innate skills. Indeed, Robert Roberts and Jay Wood go so far as to describe these virtues as habits of the “heart” and argue that these virtues must mature over the lifetime of an epistemically virtuous agent [2]. Importantly, these virtues also include a notion of the will in motivating such an agent in delivering the epistemic goods, with the virtues functioning in both a truth-conducive and truth-desiring manner. Consequently, to a large extent, the epistemic agent is responsible for delivering the truth. To that extent, the agent is to avoid the intellectual vices that hinder the epistemic goods or the truth. Just as the reliabilist virtues are critical for the epistemically virtuous clinician so are the responsibilist virtues, to which we now turn with respect to the reconstructed clinical case. To that end, the intellectual virtues of curiosity, courage, honesty, and humility are employed.

Intellectual curiosity

The intellectual virtue of curiosity is an epistemic agent's desire or disposition to investigate or explore what is intellectually interesting but unknown to the agent. It does not allow the agent to avoid or turn away from the unknown but it motivates his or her attraction to or willingness to engage it until the unknown becomes known, even possibly at great cost to the agent. It also involves epistemic openness or receptivity to the unknown and does not close it off as being unknowable or mysterious. Although the epistemically virtuous agent may admit that there are mysteries that cannot be exhaustively known, and as such must be respected, the epistemically curious agent forges ahead and examines the boundaries of the unknown or mysterious so what is truly knowable can be known. Intellectual curiosity does not allow the agent to be satisfied with the status quo of epistemic

¹⁶ Virtue epistemologists, like Roberts and Wood, claim that the goal of virtue epistemology is not simply justified true belief, although such belief is important, but the maturation of a robust epistemic agent [2].

goods; rather, it drives him or her to extend those goods in terms of epistemic goals. “Merely having at one’s disposal a plethora of true beliefs,” notes Wayne Riggs, “does not satisfy our natural curiosity about *why* things are the way they are” [21, p. 221].¹⁷ The epistemically curious agent thrives in a world of the unknown and he or she, if also epistemically benevolent, strives to know it for the benefit of all.

Weinberg exhibited intellectual curiosity during clinical consultations with the patient. First, he was curious as to why the patient, who was rather attractive, dressed in an unkempt and unattractive fashion. His curiosity prompted him to ask additional questions of the patient in order to understand her better, not simply as a patient *qua* clinical object but as a patient *qua* person. Hence, he refrained from the patient’s personal history in the first clinical consultation and moved on to the family history to obtain information of the patient in a larger social context, information that eventually paid off in later consultations in terms of making an accurate diagnosis. In addition, he was curious about the dark rings under the patient’s eyes, which prompted him to inquire about them. Once he was assured that they represented an important clue to something in the patient’s life, i.e., sexual assault, he then exhibited further curiosity about the latter event. Weinberg also exhibited intellectual curiosity in trying to understand better the relationship between sexual assault and gastrointestinal problems. His curiosity motivated him to read up on the relationship in order to treat the patient.

Intellectual courage

The intellectual virtue of courage mimics closely its ethical cousin. Just as an ethically courageous agent does not shrink from doing what is right simply because of personal danger, so an epistemically courageous agent does not shrink from believing what is true or from communicating it. For instance, when such an agent is in danger of being ostracized by an epistemic community for proposing novel beliefs that may challenge the community’s consensus beliefs or dogmas, the epistemically courageous agent does not cower before the fear that threatens to disrupt his or her cognitive functioning.¹⁸ The agent, on the other hand, is not intellectually reckless. According to Roberts and Wood intellectual virtues generally come in pairs, which for courage often includes caution [2]. Caution as an intellectual virtue is a proper fear of epistemic danger, which keeps the epistemic agent from acting recklessly. “In general,” claim Roberts and Wood, “courage and caution enable us to find our way among the threats, real and apparent, that we encounter in the course of our practices, sometimes circumventing these threats, sometimes facing them, and sometimes paying their price” [2, p. 216]. Without courage and caution, an epistemic agent could either acquiesce in pressure and fear

¹⁷ Intellectual curiosity involves a strong drive or desire to know. According to Neil Cooper, it “is the capacity and the willingness to be interested and involved, even obsessed, with the object of inquiry” [22, p. 461].

¹⁸ Intellectual courage often involves leaving an epistemic comfort zones to forge new notions of reality. “Serious exploring of ideas,” notes Thomas Rivers of this virtue, “risks shattering our preconceived notions, our images of the world” [23, p. 251].

to conform to epistemic beliefs or dogmas that he or she believes are false, or propose reckless ideas that hinder acquiring or communicating the epistemic goods.

Weinberg exhibited the intellectual virtues of courage and caution during clinical consultations with the patient. He demonstrated authentic intellectual courage when he found out that the patient was sexually assaulted. Although he hesitated for a moment, certainly because he was aware of the implications of additional inquiry, he realized that the courageous act—not just with respect to the ethical but particularly in terms of making an accurate clinical diagnosis—would be to inquire about the assault and thereby to actualize its epistemic potential.¹⁹ As Weinberg acknowledged later, he recognized that he was responsible for the care of the patient once he had uncovered the reason behind her chronic abdominal pain. Only an authentic intellectual courageous act could genuinely help the patient. At the same time he was cautious about continuing with the case, once he learned of the sexual assault. Intellectual caution, the flip side of intellectual courage, kept Weinberg from acting recklessly clinically. He told the patient that he was a gastroenterologist, not a psychiatrist or rape counselor, and that her case was outside his clinical expertise. Realizing his clinical limitations, he was cautious not to overstep specialty boundaries, and even sought the opinion of a colleague in the psychiatry department and read the clinical literature on the relationship between rape and eating disorders.

Intellectual honesty

The intellectual virtue of honesty is a disposition to be straightforward or forthright, i.e. intellectually upright, in acquiring and accepting, as well as communicating and transmitting, epistemic goods like knowledge or truth. In other words, the epistemically honest agent is frank or candid about what is known or believed.²⁰ This entails that such an agent is fastidious in ensuring that what is known is, to the best of his or her ability, what is believed to be true. Linda Zagzebski says the intellectually honest agent “respects [the truth] and does her best to find it out, to preserve it, and to communicate it in a way that permits the hearer to believe the truth justifiably and with understanding” [9, p. 158]. In other words, she does not fall prey to “immaculate perception” [23, p. 254]. Intellectual honesty is often defined in negative terms, as “a disposition or dispositions such that notwithstanding contrary to incentives, the agent refuses, in respect of assertion or other means of communication, to gain an unfair advantage, to indulge laziness diminishing the quality of the impression left or to indulge in exaggeration” [25, p. 218].²¹ The vice opposed to intellectual honesty is intellectual dishonesty, where the epistemically

¹⁹ It is well known among physicians that patients who are victims of abuse can be difficult and frustrating to treat [24].

²⁰ “Intellectual honesty,” as Louis Guenin articulates it, “assures that forthrightness dominates, delivering candor when it counts” [25, p. 218].

²¹ Pellegrino and Thomasma define intellectual honesty, with respect to medical practice, also in negative terms as “the habitual disposition not to deceive, or to move positively to reveal what we know and do not know about the clinical situation—the diagnosis, treatment, prognosis, and so on” [15, pp. 25–26].

dishonest agent lies or cheats in an attempt to distort the truth or the known and to deceive other epistemic agents.

Weinberg relied on intellectual honesty on a number of occasions to deliver an accurate clinical diagnosis and effective therapy. First, he was honest with himself in terms of the initial consultation in that he was not optimistic about her return for further consultations. Weinberg was also honest with the patient (as well as with himself)—once she told him of the sexual assault—in that he did not deceive her (or himself) into believing that he knew how to provide an effective therapy. His intellectual honesty, in terms of his limitations concerning the relationship between sexual assault and gastrointestinal problems, also served to motivate him to consult the professional literature and a psychiatrist colleague. Throughout the clinical consultations with the patient he was forthright about his abilities and inabilities, as well as his knowledge and ignorance, “when it counts.” This last qualifier is important because Weinberg did not tell the patient everything he believed about her case, especially when his belief was speculative and might hinder her recovery; rather, he shared with the patient what he was thinking when he had good reason to believe sharing it would help in the patient’s healing. Importantly, Weinberg did not deceive himself about the significance of the relationship between the patient’s sexual assault and her presenting symptom. Because he exhibited intellectual honesty, he took special care to ensure that he could help the patient therapeutically.

Intellectual humility

The intellectual virtue of humility is a disposition to make an unpretentious or a realistic assessment of one’s knowledge and intellectual faculties or powers. Intellectual humility is defined, in part, in negative terms as not ascribing to oneself more intellectual excellence than one actually possesses. It is the epistemic agent’s capacity to realize that he or she does not know everything and can thereby benefit through instructions from others (even patients). As such, intellectual humility contrasts with intellectual vices such as pride and arrogance. “As the opposite of intellectual arrogance,” according to Roberts and Wood, “humility is a disposition not to make unwarranted intellectual entitlement claims on the basis of one’s (supposed) superiority, out of either a concern for self-exaltation, or some other vicious concern, or no vicious concern at all” [2, pp. 250–251]. Finally, the epistemically humble agent is willing to acknowledge that he or she makes mistakes *vis-à-vis* the epistemic goods and can change his or her mind concerning them.

Weinberg certainly exhibited intellectual humility, which definitely contributed to his ability to treat the patient effectively. First, he was humbled epistemically by the patient’s seeking him out even though she had seen almost every other gastroenterologist in town. What more could he possibly know to help treat the patient than what the other gastroenterologists knew? Weinberg was intellectually humble in admitting that he was unsure how helpful he could be for her, especially in terms of relieving her chronic abdominal pain, and that he was not an expert in terms of psychiatry or rape counseling. Most importantly, however, he was intellectually humble often by simply listening to the patient during their many consultation sessions and thereby being taught by her. He did not dismiss her

because she was unkempt but attributed to her a worth that elicited his best clinical practice. He also exhibited epistemic humility in abandoning the initial diagnosis of irritable bowel syndrome. Moreover, Weinberg did not exhibit the intellectual vice of arrogance in which he thought or acted that he knew the best course of therapeutic action; rather, he sought the advice of a colleague in the psychiatry department and gathered information from the clinical literature. Weinberg's epistemic humility certainly made possible clinical success in terms not only of finding the cause of the patient's illness but also of providing efficacious treatment.

The epistemically virtuous clinician

Both the reliabilist and responsibilist intellectual virtues are necessary for explicating the nature of the epistemically virtuous agent; however, they are insufficient per se. Two other notions are also required to comprehend such an agent. The first is love of knowledge, which is the passionate or intense desire to know the truth. It is the basic or foundational intellectual virtue in which all the other intellectual virtues, both reliabilist and responsibilist, are embedded so as to empower the epistemic agent to accomplish the task of acquiring, accepting, and communicating the epistemic goods. The second notion is wisdom, both in its theoretical and practical dimensions. Wisdom is not so much an intellectual virtue, although it is certainly an excellence, as it is the culmination or goal of the epistemically virtuous life. It is the ultimate epistemic good, as it were, not simply as knowledge or even as truth but as embodied knowledge or truth in an epistemic life well lived. It is the chief characteristic that defines the epistemically virtuous agent. In this section, both of these notions are discussed, along with their application to the reconstructed clinical case.

Love of knowledge

Love of knowledge is a passionate desire to know the truth. It goes beyond mere intellectual curiosity in that it is the basic intellectual virtue in which all the other intellectual virtues are embedded or through which all the other virtues are connected to each other; and, as such it serves to cement the other intellectual virtues together or to motivate them so that all the virtues function properly. It is also scaffolding that provides the structure needed to frame the other intellectual virtues, in order to get at the truth and not to be simply satisfied with inferior epistemic goods—such as platitudes or clichés. It also motivates and empowers the epistemic agent to achieve the task of acquiring, accepting, and communicating genuine or authentic rather than disingenuous or inauthentic epistemic goods. Roberts and Wood define love of knowledge as “a disposition to take an interest in information, understanding, and direct epistemic contact with reality, to enjoy intellectual activities as such, to be excited by the prospect of learning, and so to engage in actions that aim at the acquisition, maintenance, transmission, and application of knowledge” [2, p. 73]. The vice opposed to love of knowledge is indifference to knowledge, or epistemic apathy. The epistemically indifferent agent

is willing to accept inferior epistemic goods, such as truisms, rather than superior goods, such as truth.

Weinberg certainly exhibited a genuine love of knowledge. He was passionate about determining what was wrong with the patient, which allowed him to mobilize the intellectual virtues—both reliabilist and responsibilist—for making an accurate diagnosis and for providing an effective therapy. For example, he was not satisfied with or apathetic about his lack of knowledge over the relationship between rape and eating disorders and sought out other authoritative sources—such as a colleague in psychiatry and the professional clinical literature on the relationship—to ensure that he could assist in the patient’s healing. This love of knowledge allowed Weinberg to marshal and connect the various intellectual virtues to achieve genuine insight into the patient’s illness. For example, his passion for helping the patient allowed him to overcome an earlier inaccurate diagnosis of irritable bowel syndrome and an ineffective therapy of an antispasmodic drug and a bland diet. His keen and well-trained observational skills enhanced his inferential powers, along with the intellectual courage to forge ahead when the intellectual landscape looked threatening in terms of his professional comfort zone as a gastroenterologist. Finally, he was certainly not indifferent or apathetic to the clinical challenge that the patient presented but met it head on to help the patient heal.

Theoretical and practical wisdom

Love of knowledge is not the aim or *telos* for the epistemically virtuous agent; rather that aim is wisdom, both in terms of its theoretical and practical dimensions. Theoretical wisdom is the ability to choose wisely and judiciously among competing theories or worldviews. This kind of wisdom represents utilization of the intellectual virtues in terms of abstract knowing. As such, it has important ramifications for practical wisdom, which represents the wise and judicious application of the fruits of theoretical wisdom to decisions about actions or commitments in specific, concrete situations. As Roberts and Wood argue, practical wisdom is “the power of good perception and judgment that an agent needs to exemplify the particular intellectual virtues in the contexts of intellectual practices” [2, p. 324]. For example, the worldview an epistemic agent chooses may open up particular avenues for approaching a specific situation but it may also close off other avenues. The epistemically virtuous agent must choose wisely in terms of the theoretical in order to deliver the necessary epistemic goods with respect to the practical. Finally, practical wisdom involves more than correct knowledge but also the right (i.e., the ethical or moral) application of that knowledge to a specific, if not difficult, situation.

Weinberg, as an epistemically virtuous clinician, exhibited both theoretical and practical wisdom, to help the patient clinically. First, he chose wisely in terms of the theory or worldview in which he practiced clinical medicine. Although he operated in terms of the current biomedical model rather than a complementary or an alternative medical model, he did not restrict himself to that model in his professional practice. Rather, he was open to humanizing the biomedical model and thereby stepping outside his professional comfort zone of gastroenterology to

engage a theoretically challenging model of humanized biomedicine [26]. Such wise clinical practice paid big theoretical dividends with respect to the patient's prognosis and allowed Weinberg to act wisely in a practical manner. For example, his initial diagnosis and therapy recommendation were well within the clinical standard of gastroenterology given the patient's early medical history. But he did not limit himself to that standard, which had important practical ramifications. Rather than ignore certain clinical signs—like the dark rings under the eyes—he pursued them, which provided a more accurate medical history.²² Also, operating outside the conventional model for gastroenterology allowed Weinberg to listen to the patient narrate her illness story—again, such clinical practice for a gastroenterologist is uncommon given the biomedical model.

Conclusion

Although the biomedical model has contributed greatly to the technical advances in modern health care, it has also been criticized for allowing patients to be treated in an inhumane fashion or as objects rather than as persons. For example, patients often complain that physicians do not connect with them at a personal level.²³ This has led to what some call a quality-of-care crisis in modern medicine [26]. Various efforts, especially ethical training of the physician, have been employed to remedy the situation—but with varying degrees of success. The development and promotion of the notion of an epistemically virtuous clinician, as attempted herein, represents an effort to assist in addressing the crisis. Important to that effort are not only the intellectual virtues but also the ethical ones, for the two types of virtues are connected in such a way that the proper functioning of one is not possible sometimes without the proper functioning of the other.²⁴

The presently reconstructed clinical case illustrates the connection between ethical and epistemological virtues.²⁵ For example, Weinberg realized at one point

²² The patient had been seen by other gastroenterologists, who may or may not have observed the dark rings, and if they had observed them, chose for one reason or another not to enquire about the patient's sleeping pattern. Dark rings under the eyes may not be a clinically significant sign for gastroenterologists to enquire about given the clinical boundaries of biomedical model for gastroenterology. Only someone, like Weinberg, operating outside those boundaries and on a more humanized version of the model, might inquire.

²³ Alfred Tauber gives an apt example of inhumane care in which an oncologist summarily discharged a patient suffering from pancreatic cancer from the hospital, with these words: "My dear lady, I am sorry to say that you have cancer of the pancreas. There is nothing we can do for you. You will simply have to get used to the idea that you will die soon. I'm not sure when, but if I were you, I would put my things in order. You will be discharged tomorrow" [27, pp. 119–120]. After that the oncologist, along with an entourage, abruptly left the patient.

²⁴ As Rivers points out, at a fundamental level, being a good person and being a good knower go hand-in-hand and the virtues, both ethical and epistemic, play an important role in connecting the two [23]. He illustrates the connection between the two with the dangers associated with unlocking the secrets of the atom or DNA. Intellectual curiosity must be tempered with ethical responsibility.

²⁵ Vrinda Dalmiya proposes a "care-based epistemology" in which care is the fundamental virtue that connects all other virtues, whether epistemic or ethical [28]. Thus, the epistemic agent cares not only in terms of delivering the epistemic goods but also with respect to the person to whom the goods are

that having discovered that the patient had been sexually assaulted he was duty-bound, not only by an ethical obligation but also by an epistemological one, to perform the appropriate ethical actions but also to deliver the clinical epistemic goods. To that end, for example, he required intellectual courage to proceed not only with questioning the patient concerning the assault but also with treatment when there was little help from professional colleagues or literature. At the same time, he also exhibited ethical courage to take on the case and to see it to the end.²⁶ In addition, he needed to utilize both intellectual and ethical caution so as not to promise more than he could deliver.

The notion of an epistemically virtuous clinician has important implications for medical education, especially given the quality-of-care crisis facing modern Western medicine. A great number of resources are brought to bear on training physicians, beginning early in their professional career, in order to make them technically competent. For example, entrance into medical school requires specific science courses while a more rounded education is often left unspecified.²⁷ Few, if any, resources are available to equip physicians with the skills necessary to address the existentially and ethically challenging issues that face them daily in the clinic or hospital. Although medical humanities courses represent an attempt to instill and nurture humane care within prospective physicians, it is often too little and too late in the curriculum [31]. The question arises how best to incorporate training in ethical and intellectual virtues into the pre-medical or medical curriculum. The answer to that question is going to require a major reorientation in the vision of medical educators, a vision that is endorsed not only from the top-down by medical administrators but is also supported more importantly from the bottom-up by epistemically virtuous clinicians.

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Footnote 25 continued

delivered and the ethical context in which they are delivered. In this way, care functions to connect both the epistemic and the ethical. Weinberg certainly exhibited this care virtue by not only caring about the clinical epistemic goods but also by taking care to see that the goods were therapeutically efficacious.

²⁶ Caution must also be exercised in taking on the patient in the first place, given the potentially large number of patients who may demand more intense health care attention. In response to a letter to the editor of the journal where Weinberg's essay was originally published and which questioned whether physicians have enough time to spend on every patient needing such attention [29], Weinberg writes: "The intense relationship described in my article does not imply that a physician must serve as a personal counselor for every patient.... Occasionally, however, the needs of a patient call us to commit ourselves beyond screening questions, beyond referrals, beyond the convenient or the comfortable. The main point of my article," he goes on to stress, "is that such intervention is not to be feared. What I really learned was that to "...own the problem, fix it, be responsible..." can provide one of the most exquisite joys of our profession" [30, p. 427].

²⁷ Granted, the unspecified nature of a well rounded education may allow students to tailor their education to their specific needs; however, some larger goals and the enumeration of criteria for achieving those goals cannot hurt in trying to ensure that physicians have some resources in addressing challenging issues that confront modern clinical practice.

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