

Open-Mindedness: An Epistemic Virtue Motivated by Love of Truth and Understanding

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Epistemic virtue has been regarded as central to the educational process as far back as Plato. One particular epistemic virtue, open-mindedness (OM), has been touted by philosophers of education as a vital characteristic of the educated mind. In defining OM, both epistemologists and philosophers of education have focused on its role in the pursuit of knowledge, and true belief as a component of knowledge. This focus on knowledge (and truth) is to be expected because epistemology has revered knowledge as the primary epistemic good for centuries. However, recent scholarship in epistemology proposes understanding as a central component of the epistemic good. Recognizing the difference between knowledge and understanding and the role of both in the epistemic good leads to an expanded approach to understanding education and to defining the epistemic virtues, including OM. In this essay, I argue that reclaiming the value of understanding leads to an expanded account of OM, which is defined as a virtue motivated by love of both truth and understanding. With this fuller account of OM, many common worries about OM are avoided, and its value is more clearly explained.

In the first section, I begin by briefly considering the relation between truth, knowledge, and understanding. Then, in the second section, I present an account of OM as a virtue in the pursuit of both understanding and knowledge. I situate my account of OM within the previous literature from both philosophy and philosophy of education, and I defend it against potential criticisms.

EPISTEMIC GOODS: TRUTH, KNOWLEDGE, AND UNDERSTANDING

Epistemology investigates our contact with reality. This contact, the epistemic good, can come in a number of forms, including knowledge and understanding. Much of epistemology for the past several centuries has investigated the possibility of certainty and justification of beliefs in response to skeptical questions about our contact with reality.¹ During this period, knowledge maintained its position as the primary epistemic good of interest. Due to this primacy, accounts of the epistemic virtues, including OM, have also focused on how the virtues contribute to knowledge. Recently, however, some epistemologists have been willing to set aside skeptical questions and consider aspects of the epistemic good other than certainty and knowledge.² It is my view that OM is a virtue that aims at both understanding and knowledge. In this section, I will draw on Linda Zagzebski's work on knowledge and understanding, and other recent work on understanding, in order to describe briefly the relation between truth, knowledge, and understanding. My aim here is not to engage in the complex debates regarding the nature of these epistemic goods, but rather to present an account of how they relate to one another that will inform my discussion of OM.

First, note that the nature of truth is contested. Candidates for the bearers of truth include beliefs, sentences, propositions, and utterances.³ Although distinctions exist, all of these potential truth-bearers are representations of reality.⁴ In the literature with which I engage here, truth is a quality applied to beliefs, which are propositional attitudes. For the remainder of this essay, truth refers to true beliefs.

Knowledge is generally thought to be a valuable epistemic good and to be more valuable than true belief. Knowledge requires true belief, in addition to something more that gives the agent credit for the true belief. Philosophical accounts of knowledge attempt to explain this value. Zagzebski provides a particularly compelling account of the value of knowledge that reconciles epistemic and moral virtue by emphasizing the affective components of epistemic virtue. On her view, virtuous *acts* are highly valued because they are “motivated by love of some value.”⁵ She argues that *beliefs* are like *acts*, which leads to her account of knowledge as “true belief credited to the agent because of its place in her motivational structure.”⁶ So knowledge is true belief that is motivated by love of some value. According to Zagzebski, the value that motivates knowledge is love of truth, and the value that motivates *desirable* knowledge is the “love of true beliefs that are components of a good life.”⁷ On this view, the value of knowledge may vary. Knowledge is always valuable because it is motivated by love of truth, but because some truths are better for us than others, knowledge accrues additional value when motivated by love of the best truths, those that are part of a good life.

Understanding has been gaining ground recently as an important component of the epistemic good.⁸ Proponents argue that virtuous epistemic agents do not merely seek true beliefs, but they also want to understand the structural relations between these beliefs. These accounts focus on a particular type of understanding from common usage, objectual understanding (that is, understanding of a subject matter). Although these philosophers present distinct accounts of understanding, they agree on several key ways that objectual understanding contrasts knowledge. First, whereas knowledge is propositional, understanding is not. The object of understanding is a subject matter, or a chunk of reality, rather than a discrete proposition.⁹ Second, understanding accordingly lacks the direct connection to truth that knowledge possesses. Knowledge concerns justified true belief; understanding is concerned with the grasping of the structure of some chunk of reality. Grasping the structure of a subject matter requires appreciating the explanatory relationships between the component parts of the subject matter, one another, and the whole.¹⁰

Third, understanding admits of degrees; knowledge does not. The agent either knows proposition *P* or does not; *P* is either justified or is not. However, the agent may understand subject matter *S* to a greater or lesser extent; explanations may reveal more or less about *S*. Catherine Elgin argues that understanding varies on three dimensions: breadth, depth, and facticity.¹¹ Depth and breadth of understanding are fairly straightforward. Take, for example, the 2012 United States presidential election. Someone with a broad understanding of the election can explain its relation to other parts of American history, whereas someone with a deep understanding of

the election can explain the inner workings of the campaigns, current voting trends, and implications for policy. The role of facticity in understanding, on the other hand, is more controversial. Jonathan Kvanvig argues that understanding requires that propositional beliefs about the subject matter in question be mostly true.¹² Zagzebski, Wayne Riggs, and Elgin, however, argue for less stringent facticity requirements.¹³ They note that explanations frequently involve idealizations that aid understanding. For example, Isaac Newton's theory of gravitation inarguably advanced our understanding of the world, leading to the discovery of Neptune; however, it is not strictly true. Even though Newton's theory was superseded by Einstein's theory of relativity, it is still used today because of its simplicity and sufficient accuracy in many applications. Idealizations of this kind are not strictly true, but they contribute to our grasp of structural relations in the world. However, even with these relaxed facticity requirements, an understanding that contains more truth is more valuable than one with less, all else being equal. That is, if two understandings of *S* have equal explanatory power, the one with a closer relation to the truth is the more valuable one. As a final note on the relation between understanding and truth, improving one's understanding of some subject may reveal false beliefs. Investigating the structure of one's beliefs regarding the presidential election may lead one to reevaluate some rogue beliefs that do not cohere with others in the area. Nevertheless, pursuing understanding is not primarily aimed at producing true beliefs and weeding out false ones, but at grasping the structure of the subject matter.

If understanding is an epistemic good alongside knowledge, then theories of epistemic virtue need to be broadened to incorporate understanding. Riggs explains well:

[I]f we take understanding to be a component of the highest epistemic end, then all the standard intellectual virtues remain, and we can also give a deeper account of why they are valuable. Some are valuable merely because they are aimed at making sure, as best we can, that our beliefs are true. Others are valuable because they are aimed at making sense of our world, or of some part of it in which we have a specific interest. Many are aimed at both, and are thus doubly valuable.¹⁴

Epistemic virtues may contribute to knowledge, understanding, or both. Zagzebski suggests an expansion of her virtue theory to include both knowledge and understanding as the aims of epistemically virtuous agents.¹⁵ Recall that she describes virtuous beliefs as those motivated by love of truth. Expanding this, virtuous explanations may be described as those motivated by love of understanding. Furthermore, virtuous explanations, just as virtuous beliefs, are more desirable if they are components of a good life. Following this account of the epistemic good, epistemic virtues may be motivated by love of truth, knowledge, or both. Those virtues that are motivated by both and are concerned with the good life are especially valuable.

Given this brief discussion of knowledge and understanding and their role in theories of epistemic virtue, I will now turn to one epistemic virtue in particular: open-mindedness. I will argue, counter to previous accounts, that OM is a virtue motivated by love of both truth and understanding.

OPEN-MINDEDNESS IN THE PURSUIT OF UNDERSTANDING AND KNOWLEDGE

OM is widely accepted as an epistemic virtue, as a means of improving our contact with reality. Support for OM is so strong that Riggs claims any theory of epistemic virtue that cannot explain the value of OM is implausible.¹⁶ The concept of OM has been formalized in various ways. In defining what it means to have an open mind, three components of the virtue are relevant: its motivation, the attitude it requires, and the disposition that accompanies this attitude. Thus far, philosophers have agreed that OM is motivated by love of truth, but they have presented differing accounts of the attitude and disposition it requires. Much of the discussion of OM has occurred in the philosophy of education literature. William Hare and Terry McLaughlin have argued for OM as an important educational goal, describing it as a first-order attitude toward a specific proposition that disposes the agent to entertain doubts about its truth.¹⁷ In response to Hare and McLaughlin, Peter Gardner has challenged the value of OM on this first-order propositional account.¹⁸ He has questioned whether having an open-minded attitude toward a proposition *P* is compatible with fully believing *P*. This challenge must be met because any plausible account of OM as an epistemic virtue must allow the agent to be open-minded while also holding strong beliefs.¹⁹

More recently, Jonathan Adler and Riggs have entered the OM debate, focusing on the importance of identifying an open-minded attitude that is compatible with full-fledged belief.²⁰ Adler compellingly argues against OM as a first-order propositional attitude. Belief, itself a first-order propositional attitude, entails full commitment to the truth of the proposition. OM as a first-order propositional attitude that entails openness to doubt is, therefore, logically incompatible with belief. On Adler's alternative account, OM requires a second-order attitude toward one's beliefs as believed, rather than a first-order attitude toward any particular belief.²¹ Riggs supports Adler's second-order account and describes the second-order attitude involved in OM as follows: "To be open-minded is to be aware of one's fallibility as a believer, and to be willing to acknowledge the possibility that anytime one believes something, *it is possible that one is wrong*."²² Both Adler and Riggs agree that OM is grounded in appreciation of one's own *fallibility* as an imperfect believer. By identifying the source of OM as fallibilism rather than a weakened attitude toward a specific belief, Adler and Riggs defend OM as a virtue motivated by a love of truth that is compatible with full belief. Riggs builds upon Adler's thorough discussion of the open-minded attitude by further explicating the dispositional component of OM. He argues that in addition to possessing the second-order open-minded attitude, open-minded agents must be disposed to seek *self-knowledge* about their cognitive strengths and weaknesses and to *self-monitor*.²³ Thus, we can describe the open-minded agent according to Adler and Riggs as one who: (1) is motivated by love of truth; (2) possesses an attitude toward herself as a fallible believer (that is, one whose beliefs may be false); and, (3) is disposed to seek self-knowledge about her cognitive strengths and weaknesses and to self-monitor based on this self-knowledge.

Although I find the reconciliation of OM with full belief on this account convincing, I believe that it does not fully capture OM. In a discussion of indoctrination, Eamonn Callan and Dylan Arena propose that indoctrination produces closed-mindedness (CM) and that CM poses a threat not only to the pursuit of truth but also to the pursuit of understanding.²⁴ Here, I build on Callan and Arena's insightful suggestion and propose that the second-order account of OM needs to be expanded to incorporate an additional motivation, love of understanding. Incorporating this additional motivation also requires modifying the attitude and disposition required. I propose an expanded definition of OM. Broadly speaking, to be open-minded, an agent must be open to the epistemic good. She must be receptive to opportunities to improve her knowledge and understanding. More specifically, on my view, the open-minded agent is defined as one who: (1) is motivated by love of truth and love of understanding; (2) possesses an attitude of intellectual humility; and (3) is disposed to seek self-knowledge about her cognitive strengths and weaknesses, to self-monitor based on this self-knowledge, to give due regard to available evidence and argument when forming and maintaining both beliefs and explanations, and consequently also to exhibit intellectual courage. Let us consider each of these components in turn.

In common usage, individuals who are praised for being open-minded do not simply seek more true beliefs. In addition, they are open to learning about how their beliefs are related to the beliefs of others; in other words, they also seek to improve their understanding. Perhaps this is more evident when considering the vice that opposes OM, closed-mindedness. Accusations of CM apply both to those who cling to false beliefs in the face of opposing evidence and argument (for example, the climate change skeptic denies that humans are contributing to global warming despite overwhelming scientific evidence to the contrary), as well as to those who have virtuously acquired true beliefs but who are unwilling to consider how new evidence and argument might expand their understanding of these beliefs and the subjects of which they are a part (for example, the environmental scientist who truly believes that humans are contributing to global warming and, satisfied with the truth of this belief and the evidence provided by earlier research, is unwilling to consider new studies about global warming that might expand his understanding of the subject). These intuitions about the concept of OM reveal that it is more plausible to define this virtue with regard to truth and understanding rather than truth alone. Furthermore, recall that both love of truth and love of understanding are more valuable when the truths and understandings involved pertain to the good life. That said, the most desirable form of OM is motivated by a love of truth and understanding of components of the good life.

Next, consider the attitude required on an expanded view of OM that incorporates the value of understanding. I suggest that fallibilism is defined too narrowly on Adler's account. In response to Adler's conception of OM, James Spiegel argues that the second-order attitude rooted in fallibilism that Adler identifies as necessary for OM is actually a different virtue, *intellectual humility*.²⁵ On Spiegel's view,

intellectual humility tends to support OM, but OM is properly defined as a first-order attitude toward discrete propositions following Hare.²⁶ Although Spiegel's OM faces the same logical flaws as other first-order attitude accounts outlined above, I believe he is right to identify the connection between Adler's OM and humility. However, rather than telling against the role of fallibilism in OM, this insight identifies an area where the account of the open-minded attitude needs to be expanded. As argued earlier, our epistemic contact with the world comes in multiple forms. We can pursue true beliefs about the world, and we can also pursue understanding of the world. To be intellectually humble, we must recognize the limits of both our knowledge and understanding. This requires appreciating that our beliefs may be false and that our understandings may be deepened, broadened, or more closely connected to the truth. Accordingly, OM requires a second-order attitude of intellectual humility, an attitude toward oneself as a cognitive agent whose knowledge and understanding are not perfect.

Finally, the open-minded attitude of intellectual humility must be accompanied by a number of dispositions that apply to different aspects of an agent's cognitive processes in order for OM to actually materialize. Here, we can build upon Riggs' explication of the open-minded disposition. He writes that to be open-minded, one must be disposed "to seek, and when found, accept, self-knowledge about one's cognitive weaknesses and strengths"²⁷ and to "self-monitor for signs that one is in a domain or situation in which one is likely to be biased."²⁸ The disposition to seek and accept self-knowledge easily encompasses not only self-knowledge about one's strengths and weaknesses as a truth-seeker, but also as an understanding-seeker. Self-monitoring can be similarly expanded. These two dispositions combine to cause the agent to give what Callan refers to as "due regard for relevant evidence and argument" when *forming* and *maintaining* both beliefs and explanations.²⁹

What Riggs fails to recognize though is that both of these dispositions, to seek self-knowledge and to self-monitor, rely on another disposition, to be *intellectually courageous*. Subjecting one's beliefs and understandings to scrutiny is often frightening, especially with regard to the most important elements of knowledge and understanding — those that make up the good life. To recognize one's own fallibility and submit oneself to internal scrutiny requires a willingness to take risks in the pursuit of epistemic goods. This willingness is intellectual courage. OM may require individuals to expose beliefs or explanations that form an important part of their identity to possible revision or expansion. Therefore, in order for an agent to translate the attitude of intellectual humility into dispositions to seek self-knowledge, to self-monitor, and consequently, to give due regard to available evidence and argument, she must also be disposed to be intellectually courageous. The account of OM proposed here emphasizes the close relationship between OM and other epistemic virtues, including intellectual humility and intellectual courage. Rather than being a weakness of the account as Spiegel might counter, acknowledging the connections between these virtues helps further explain the value of OM.

Now let me address a few potential concerns about this expanded account of OM. First, as discussed above, any successful account of OM must be compatible

with full-fledged belief. Adler and Riggs provide strong defenses of this compatibility that apply to the truth-based component of my account, which I will not rehash here. With regard to the understanding-based component of my account, compatibility with full belief is clear. Understanding takes as its object subject matters, not individual beliefs. Improving understanding may involve grasping new aspects of the structure of one's beliefs within the subject matter. It does not prevent one from holding firm beliefs. Second, successful accounts of OM must explain why it is valuable to be open-minded even regarding widely accepted moral beliefs, such as that slavery is wrong. Gardner argues that it is better to be closed-minded in these cases.³⁰ His fear of OM arises from his misconception of OM as requiring doubt. OM does not require that agents doubt that slavery is wrong. Rather it allows them to better understand how the belief that slavery is wrong relates to their other beliefs about morality. By incorporating understanding into OM, its importance even with regard to widely accepted beliefs is more readily apparent.

Another potential concern about the expanded account of OM involves whether it fits common usage of the term. The value of an account of any epistemic virtue is undermined if it does not resemble any common conceptions of the virtue. The expanded account of OM is an improvement in this regard upon previous accounts that focused solely on truth and knowledge. In ordinary discourse, neither of the following statements is unusual:

- “He is open-minded about U.S. foreign policy.”
- “He’s confident that electric-powered vehicles will never be as affordable as gas-powered vehicles. But he’s an open-minded person and is willing to be proven wrong.”³¹

In the first case, the individual is open to improving his understanding of a subject matter, U.S. foreign policy. In the second case, he is open to revising his belief should its truth come into question. The expanded account of OM can accommodate both of these usages. Moreover, incorporating two vital epistemic aims (knowledge and understanding) into the account of OM helps explain why it is so widely valued as an epistemic virtue.

Finally, a primary aspect of education is learning when to trust epistemic authority. A plausible account of OM must make space for epistemic authority. An individual with epistemic authority can provide others with reasons for belief and/or with explanations regarding a subject matter. Thus, the role of epistemic authorities is twofold. Zagzebski describes this well:

When we want an expert about a problem, we consult a person who has understanding of the subject matter, since such a person is likely to be a reliable problem solver. A reliable problem solver ordinarily will also be a reliable source of propositional information, but her reliability is not limited to being a reliable truth-bearer.... [W]hat enables her to figure out the solution to the problem is her understanding of a complex chunk of the world, not simply her knowledge or true beliefs about that portion of the world.³²

By focusing on the importance of improving understanding, in addition to acquiring true beliefs, the importance of epistemic authority is heightened. As agents in the world, individuals encounter each other. Although OM is a self-regarding virtue, it

has implications for the agent's interactions with others. Because the open-minded agent is disposed to seek self-knowledge about her epistemic weaknesses, to self-monitor to identify instances in which she is on weak epistemic footing, and to give due regard to available information in these instances, she will be open to epistemic authority as an important source of information and strive to be an accurate judge of other's epistemic authority.

CONCLUSION

Open-mindedness has long been touted by virtue theorists as a central epistemic virtue and by philosophers of education as a vital characteristic of the educated mind. I have argued here that OM has been defined too narrowly in the past. Earlier definitions focused solely on its connection to the pursuit of knowledge and truth. Drawing on recent developments in epistemology that have reclaimed understanding as a central epistemic good, I propose that OM is best understood as a virtue that is motivated by both love of truth and love of understanding. I also identify the connection between OM and several other epistemic virtues, recognizing that intellectual virtues are often interdependent. This expanded account of OM helps explain why it is such a vital educational value. Educators are tasked with increasing both the knowledge and understanding of their students. Encouraging OM is indispensable to this task. Recognizing the educational value of OM raises a range of pedagogical questions, including how teachers can best model OM for their students, what kind of curriculum is most conducive to providing students with opportunities to develop OM, and how OM might be measured or assessed. Part of my aim in this essay has been to establish that any proposed pedagogy of OM must recognize the importance of promoting a love of understanding, not only knowledge, in students.

1. For a review of the shifts in epistemology between skeptical and askeptical periods, see Linda Zagzebski, "Recovering Understanding," in *Knowledge, Truth, and Duty: Essays on Epistemic Justification, Responsibility, and Virtue*, ed. Matthias Steup (Oxford: Oxford University Press, 2001).

2. Ibid.

3. Michael Glanzberg, "Truth," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta (Spring 2009), <http://plato.stanford.edu/archives/spr2009/entries/truth/>.

4. Ibid.

5. Linda Zagzebski, "The Search for the Source of Epistemic Good," *Metaphilosophy* 34, no. 1/2 (2003): 17.

6. Ibid., 24.

7. Ibid.

8. For discussions of understanding, see Catherine Elgin, "Is Understanding Factive?," in *Epistemic Value*, eds. Adrian Haddock, Alan Millar, and Duncan Pritchard (Oxford: Oxford University Press, 2009); Jonathan Kvanvig, *The Value of Knowledge and the Pursuit of Understanding* (Cambridge, UK: Cambridge University Press, 2003); Jonathan Kvanvig, "The Value of Understanding," in *Epistemic Value*, eds. Adrian Haddock, Alan Millar, and Duncan Pritchard; Wayne D. Riggs, "Understanding 'Virtue' and the Virtue of Understanding," in *Intellectual Virtue: Perspectives from Ethics and Epistemology*, eds. Michael DePaul and Linda Zagzebski (Oxford: Oxford University Press, 2003); and Zagzebski, "Recovering Understanding."

9. Kvanvig, *The Value of Knowledge and the Pursuit of Understanding*, breaks with the others and discusses both objectual understanding and propositional understanding.
10. Zagzebski, "Recovering Understanding," and Riggs, "Understanding 'Virtue,'" focus primarily on explanatory relationships. Kvanvig, in *The Value of Knowledge and the Pursuit of Understanding* and "Value of Understanding," has a broader focus that includes explanatory relationships, as well as other structural relationships within the subject matter, including logical and probabilistic relationships.
11. Elgin, "Is Understanding Factive?"
12. Kvanvig, *The Value of Knowledge and the Pursuit of Understanding*, 191.
13. Zagzebski, "Recovering Understanding," 244; Riggs, "Understanding 'Virtue,'" 218–219; and Elgin, "Is Understanding Factive?"
14. Riggs, "Understanding 'Virtue,'" 224.
15. Zagzebski, "Recovering Understanding," 248.
16. Riggs, "Understanding 'Virtue,'" 206.
17. William Hare, *Open-Mindedness and Education* (Montreal: McGill-Queen's University Press, 1979); William Hare and Terry McLaughlin, "Four Anxieties about Open-Mindedness: Reassuring Peter Gardner," *Journal of Philosophy of Education* 32, no. 2 (1998): 283–292.
18. Peter Gardner, "Should We Teach Children to Be Open-Minded? Or, Is the Pope Open-Minded about the Existence of God?," *Journal of Philosophy of Education* 27, no. 1 (1993): 39–43; and Gardner, "Four Anxieties and a Reassurance: Hare and McLaughlin on Being Open-Minded," *Journal of Philosophy of Education* 30, no. 2 (1996): 271–276.
19. In his recent work on virtue epistemology, Jason Baehr has entered the discussion of OM. His account follows Hare: he defines OM as motivated by goal of truth and as directed toward discrete propositions. Jason Baehr, *The Inquiring Mind: On Intellectual Virtues and Virtue Epistemology* (Oxford: Oxford University Press, 2011).
20. Jonathan Adler, "Reconciling Open-Mindedness and Belief," *Theory and Research in Education* 2, no. 2 (2004): 127–142; Wayne Riggs, "Open-Mindedness," *Metaphilosophy* 41, no. 1/2 (2010): 172–188.
21. Adler, "Reconciling Open-Mindedness and Belief," 130.
22. Riggs, "Open-Mindedness," 180 (emphasis in original).
23. *Ibid.*, 183.
24. Eamonn Callan and Dylan Arena, "Indoctrination," in *Oxford Handbook of Philosophy of Education*, ed. Harvey Siegel (Oxford: Oxford University Press, 2009), 116–118.
25. James S. Spiegel, "Open-Mindedness and Intellectual Humility," *Theory and Research in Education* 10, no. 1 (2012): 27–38.
26. *Ibid.*, 35.
27. Riggs, "Open-Mindedness," 182.
28. *Ibid.*, 183.
29. Eamonn Callan, "McLaughlin on Parental Rights," *Journal of Philosophy of Education* 19, no. 1 (2006): 115.
30. Gardner, "Four Anxieties," 273.
31. Spiegel, "Open-Mindedness and Intellectual Humility," 30.
32. Zagzebski, "Recovering Understanding," 245.