

# Rational Thinking and Intellectually Virtuous Thinking: Identical, Extensionally Equivalent, or Substantively Different?

Harvey Siegel

Volume 43, Number 2, 2023

URI: <https://id.erudit.org/iderudit/1101535ar>

DOI: <https://doi.org/10.22329/il.v43i2.8007>

[See table of contents](#)

Publisher(s)

Informal Logic

ISSN

0824-2577 (print)

2293-734X (digital)

[Explore this journal](#)

Cite this article

Siegel, H. (2023). Rational Thinking and Intellectually Virtuous Thinking: Identical, Extensionally Equivalent, or Substantively Different? *Informal Logic*, 43(2), 204–223. <https://doi.org/10.22329/il.v43i2.8007>

Article abstract

(1) Is the rational person eo ipso intellectually virtuous? (2) Is the intellectually virtuous person eo ipso rational? In what follows I answer both questions in the negative.

# Rational Thinking and Intellectually Virtuous Thinking: Identical, Extensionally Equivalent, or Substantively Different?

HARVEY SIEGEL

*Department of Philosophy  
University of Miami  
P.O. Box 248054  
Coral Gables, FL 33124  
USA  
hsiegel@miami.edu*

**Abstract:** (1) Is the rational person *eo ipso* intellectually virtuous? (2) Is the intellectually virtuous person *eo ipso* rational? In what follows I answer both questions in the negative.

**Résumé:** (1) La personne rationnelle est-elle *eo ipso* intellectuellement vertueuse? (2) La personne intellectuellement vertueuse est-elle *eo ipso* rationnelle ? Dans ce qui suit, je réponds aux deux questions par la négative.

**Keywords:** critical spirit, critical thinking, dispositions, intellectual virtues, rational thinking

## 1. Introduction

Matt Ferkany, David Godden, and Matt McKeon, in inviting this lecture, set its agenda by posing two questions: (1) Is the rational person *eo ipso* intellectually virtuous? and (2) is the intellectually virtuous person *eo ipso* rational? In what follows, I will answer both questions in the negative. While rational thinking and intellectually virtuous thinking are closely related in several respects, and both adjectives are appropriately applied to and pick out many of the same specific instances or episodes of thinking, I will argue that particular necessary features of virtuous thinking are not necessary features of rational thinking, and consequently that the two are neither identical nor extensionally equivalent. Rather, even

though specific instances or episodes of thinking can be both virtuous and rational, the two are substantively different.

### **What is rational thinking?**

Here I rely on my account of critical thinking, according to which the critical thinker is one who is *appropriately moved by reasons*. While ‘critical thinking’ is not synonymous with ‘rational thinking,’ because the former plays a central role in these discussions, I will use it as an entry into the present discussion.

Key aspects of extant accounts of critical thinking, as currently advocated by contemporary theorists, include (1) the claim that the notion is essentially *normative* in character and (2) the claim that critical thinking involves two distinct components: both (a) *skills* or *abilities* of reason assessment and (b) the *dispositions* to engage in and be guided by such assessments. I will develop these in turn next.

#### *(1) Normativity*

Advocates of efforts to foster critical thinking in schools sometimes conceive of normativity narrowly, in terms of imparting skills that will enable students to function adequately in their jobs, and, in so doing, to be economically productive. More often, however, proponents of the educational aim of critical thinking have in mind a broader view of critical thinking as more or less equivalent to the ideal of rationality. In any case, it is only when understood in this broad way that it can be adequately analyzed and defended (Bailin and Siegel 2003; Siegel 1988, 1997, 2003, 2010, 2017).

So understood, critical thinking is a sort of *good* thinking, so the notion of critical thinking is fundamentally a *normative* one. This distinguishes this understanding of critical thinking from those, common in psychology, that treat the notion as descriptive, identifying and aligning it with particular psychological processes (Bailin et. al. 1999). To characterize a given episode of thinking as ‘critical’ is to judge that it meets relevant epistemic criteria of acceptability and is thus appropriately thought of as good. Most extant philosophical accounts of critical thinking, in addition to Bailin et. al.’s (1999) account, emphasize such criteria. Robert

Ennis, for example, defines critical thinking as “reasonable reflective thinking that is focused on deciding what to believe and do” (1987, p. 10) and offers a detailed list of abilities, skills, and dispositions that thinking must manifest if it is to qualify as critical. Matthew Lipman (1991) defines critical thinking as thinking that facilitates judgment because it relies on criteria, is self-correcting, and is sensitive to context. Richard Paul (1990) analyzes critical thinking in terms of the ability and disposition to critically evaluate beliefs, their underlying assumptions, and the world views in which they are embedded. Other authors, including John McPeck (1981, 1990), similarly emphasize this normative dimension of the concept. My own slogan characterizes the critical thinker as one who is “appropriately moved by reasons” (Siegel 1988, p. 23) and emphasizes the critical thinker’s mastery of epistemic criteria that reasons must meet in order to be rightly judged to be *good* reasons, that is, reasons that increase the justificatory status of beliefs, claims, judgments, and actions. While these authors’ accounts of critical thinking differ in many respects and have their own emphases, they are nevertheless agreed on its essentially normative character.

## (2) *Skills/abilities and dispositions*

While some early treatments of critical thinking defined it only in terms of particular skills—for example, Ennis’s early definition of it as “the correct assessing of statements” (1962, p. 83)—almost all more recent philosophical discussions of it (including Ennis’s more recent discussions) regard critical thinking as involving both (a) *skills or abilities of reason assessment* (henceforth RA) and (b) a cluster of dispositions, habits of mind, and character traits sometimes referred to collectively as the *critical spirit* (henceforth CS) (Siegel 1988). According to the advocates of this broader conception of critical thinking, education should fundamentally aim at fostering in students (a) the ability to reason well, that is, to construct and evaluate various arguments and the reasons/premises and inferences of which they are composed that have been or can be offered in support or criticism of candidate beliefs, judgments, and actions; and (b) the disposition or inclination to be guided by reasons so evaluated, that is, to actually believe, judge, and act in

accordance with the results of such reasoned evaluations. Students (and people generally) are rational, reasonable, or critical thinkers to the extent that they believe, judge, and act on the basis of competently evaluated reasons. Being a critical thinker is thus a matter of degree. To regard critical thinking as a fundamental educational aim or ideal is to hold that fostering students' ability to reason well and the disposition to be guided by the reasoned evaluation of reasons is of central educational importance. These two aspects of the ideal deserve further comment.

*(a) The reason assessment component*

Thinking is critical just to the extent that it manifests and reflects due attention to, concern for, and competence in assessing the probative strength of relevant reasons. In this respect, critical thinking can be understood as the “educational cognate” (Siegel 1988, p. 32) of rationality since both rational thinking and critical thinking are “coextensive with the relevance of reasons” (Scheffler 1965, p. 107). Beliefs, judgments, and actions are rational just to the extent that the believer/judger/actor has good reasons for so believing, judging or acting; consequently, being able to think critically involves the ability to ascertain the epistemic or evidential goodness of candidate reasons. Consequently, a central task involved in educating for critical thinking is that of fostering in students the ability to assess the probative strength of reasons.

Any such account of critical thinking needs to be supplemented by an account of the constitution of good reasons that the proponent of the ideal is obliged to provide. How do we determine the degree to which a proposed reason for some belief, judgment, or action is a good or forceful one? What are the guidelines or principles in accordance with which the goodness of candidate reasons are to be ascertained? What is the nature of such principles? How are they themselves justified? Related questions arise concerning the criteria by which the goodness of candidate reasons is determined. How are these criteria chosen, and who chooses them? How are they themselves justified—and indeed, can they be justified, even in principle, in a non-circular or non-question-begging way? What is the source of their epistemic authority? Are they ‘absolute’ or ‘relative’? Are they really ‘epistemic’ or rather polit-

ical, constituting tools of power and/or oppression? While these questions and others like them sometimes involve moral, social, or political dimensions, they are nevertheless (mainly) epistemological in nature; they call for a general account of the relationship between a putative reason and the belief, judgment, or action for which it is a reason. Such an epistemological account will have to grapple with deep questions concerning the nature of epistemic justification, the relationship between justification and truth (and so the nature of truth), the relativity (or absoluteness) of principles of reason evaluation, and so forth. In this sense, the educational ideals of reason and rationality depend, for their own articulation and justification, on an adequately articulated and defended underlying epistemology. (For further discussion see Bailin 1992, 1995, 1998; Siegel, 1988, 1989, 1997, 1998, 2017. This also supplies a reason for thinking that epistemology should itself be taught in schools (Siegel 2008).)

*(b) The critical spirit*

Having the ability to determine the goodness, or probative force, of candidate reasons for belief, judgment, or action may be necessary, but cannot be sufficient, for critical thinking, since a given thinker may have the ability but not (or not systematically or routinely) use it. Accordingly, most theorists of critical thinking argue that, along with the skill or ability to assess the probative force of reasons, critical thinkers must also have relevant *dispositions*. The primary dispositions are those of valuing good reasoning and its fruits, and of seeking reasons, assessing them, and governing beliefs and actions in accordance with the results of such assessment. In addition, most theorists outline a subset of dispositions or traits that are also necessary for critical thinking, including open-mindedness, fair-mindedness, independent-mindedness, intellectual modesty and humility, an inquiring attitude, and respect for others in group inquiry and deliberation (Bailin et. al., 1999; Hare 1979, 1985). This ‘two-component’ conception of critical thinking—according to which critical thinking encompasses both a reason assessment component and a dispositional, ‘critical spirit’ component—is endorsed by most theorists.

The second aspect of the ideal—the disposition or inclination to actually be guided by the results of the reasoned evaluation of reasons—has broader philosophical implications. Here the ideal recommends not just the fostering of skills or abilities of reason assessment, but the fostering of a wide range of attitudes, habits of mind, and character traits thought to be characteristic of the rational or reasonable person (Scheffler 1989, Siegel 1988). This extends the ideal beyond the bounds of the cognitive, for, so understood, the ideal is one of a certain sort of person. In advocating the fostering of particular dispositions, attitudes, and character traits, as well as particular skills and abilities, the proponent of this educational aim denies the legitimacy, or at least the educational relevance, of any sharp distinction between the cognitive and the affective, or the rational and the emotional. The ideal calls for the fostering of certain skills and abilities, *and* for the fostering of a certain sort of character. It is thus a general ideal of a certain sort of person—the sort of person which it is the task of education to help to form. This aspect of the educational ideal of rationality aligns it with the complementary ideal of *autonomy*, since a rational person will, at least ideally, also be an autonomous one, capable of judging for themselves the justifiedness of candidate beliefs and the legitimacy of candidate values.<sup>1</sup>

There are no doubt other aspects of rational thinking that I haven't mentioned here. But I hope this discussion will be sufficient to address the matter of its relationship to intellectually virtuous thinking, to which I turn next.

### **What is intellectually virtuous thinking?**

The depiction of CT just rehearsed overlaps considerably with standard accounts of the intellectual virtues (henceforth IV). In particular, there is substantial overlap between the dispositions, habits of mind, and character traits of the critical spirit and standard lists of intellectual virtues. Are the constituent components of CS simply IVs? Are the two lists identical, or extensionally equivalent? I will argue next that, while the two sets overlap considera-

---

<sup>1</sup> Hitchcock (2021) provides a masterful discussion of the extensive literature on critical thinking.

bly, the standard conception of IV involves more than the constituents of CS, so the two are neither identical nor extensionally equivalent.<sup>2</sup>

Intellectually virtuous thinking is thinking that manifests intellectual virtue: It is thinking that is (some combination of) intellectually modest, intellectually courageous, open-minded, fair-minded, inquisitive, diligent, resourceful, patient, careful, thorough, charitable, and/or generous. This is not a complete list of the IVs, and such thinking may manifest intellectual virtues other than those just listed. Several of these intellectual virtues are also features of the CS, and it is easy to think that the features of the CS just are IVs, and vice versa. But this, I think, is a mistake, as I argue next.

### **Are the intellectual virtues and the critical spirit component of critical thinking equivalent or coextensive?**

Matthew McKeon and Matthew Ferkany helpfully distinguish the “dispositional components of... intellectual virtues” (2023, ms. pp. 1, 17) from their non-dispositional components, which already suggests that CS and IV (and so CT and IV) are neither identical nor extensionally equivalent. Let us grant that the dispositional components of the IVs substantially correspond to the dispositional components of the CS (and so of CT), as Jason Baehr urges: thinking dispositions “are nearly identical to what we are calling

---

<sup>2</sup> It is worth noting that this particular dispute between advocates of CT and advocates of IV is a good example of a philosophical dispute in which much heat is generated by the disputants despite the closeness of their positions. We will see below that the two positions are very close; the outstanding difference, as far as I can see, concerns the status of the ‘motivational,’ ‘affective,’ and ‘behavioral/psychological’ requirements of IV, which I argue are not necessary conditions of CT or of rational thinking more generally. This is a small disagreement amplified by the philosophical tendency to focus on differences and highlight perceived difficulties in the cut and thrust of philosophical disputation. I am as guilty as anyone of this unfortunate tendency and am happy to accept my share of the blame for the excess heat and lack of corresponding light generated in this debate, and hope this exchange contributes to a lower temperature and a brighter vision. (My engagement with the issue began with Jason Baehr’s invitation to speak on the relation of CT and IV at the conference he organized that resulted in his 2016 anthology.)



intellectual virtues” (2015, p. 92) and similarly that such dispositions are “deeply similar to intellectual virtues” (2019, p. 455, note 16). What about the *non*-dispositional components of IVs, which are not part of the dispositional components of CS? These include both the (i) *motivational* component and the (ii) *behavioral/psychological* component of IVs (McKeon and Ferkany 2023, ms. p. 12). Baehr also identifies an (iii) *affective* component (2015, pp. 89-91). As he depicts these, a subject A has a given intellectual virtue V only if A is motivated to exercise V out of a *love of epistemic goods* such as knowledge, truth, or understanding, and A’s exercise of V manifests the psychology characteristic of V, again out of a love of epistemic goods (Baehr 2013, pp. 248-9).<sup>3</sup> He proposes the “Motivational Principle (MP): A subject S possesses an intellectual virtue V only if S’s possession of V is rooted in a ‘love’ of epistemic goods” (Baehr 2016, p. 87). As Baehr summarizes his account: “My proposal, then, is that *an intellectual virtue is a character trait that contributes to its possessor’s personal intellectual worth on account of its involving a positive psychological orientation toward epistemic goods*” (Baehr 2011, p. 102, emphasis in original).

If Baehr is right that CS dispositions are “deeply similar” and “nearly identical” to IVs, it is hard to see what IVs add to the two-component account of CT sketched above, other than the non-dispositional components of IVs just mentioned, which I’ve suggested are not required components of CT. If we set aside these three non-dispositional components of IVs, what’s left are the dispositions characteristic of the CS. That is, if we think (as I do) that CT dispositions can be manifested even in the absence of the motivational, affective, and behavioral/psychological components of the IVs—because the motivation needn’t be that which Baehr identifies, and because it is unclear that IVs have ‘characteristic affects’ or ‘psychologies’—then the two sets of dispositions over-

---

<sup>3</sup> As Baehr also puts it, “intellectual virtues flow from and are grounded in a firm and intelligent love of epistemic goods” (2013, p. 250). I have registered my doubt, following Catherine Elgin, that particular intellectual virtues have ‘a characteristic psychology’ (Siegel 2016). I will not repeat my reasons for so doubting it here.

lap more or less completely. So why insist on the non-dispositional components? I've argued elsewhere (Siegel 2016) that they are unnecessary, and that instances of thinking can and should count as instances of CT even without those components: S's thinking is critical if it satisfies both the RA and CS components of CT, even though it is (for example) motivated out of a sense of epistemic duty, that of following the dictates of evidence, and even though it is not motivated out of a love of epistemic goods, or indeed is not motivated by anything more than idle curiosity. I'm not opposed to such love, of course, and would be happy if education instilled such a love in students. Nevertheless, that love, and those non-dispositional components of IV, are unnecessary for the proper characterization and exercise of CT.

Fans of the IVs will insist that they *are* necessary for the characterization and exercise of the IVs. But since those motivational, affective, and behavioral/psychological components are not necessary for thinking to count as CT, if they are indeed necessary for the exercise of the IVs, then fostering the IVs is not required for fostering CT. Those components of the IVs are not necessary for the fostering of CT, but the remaining components—that is, the dispositional ones—are. They are captured by, indeed partly constitutive of, the CS. So we are left with the original two-component conception of CT: the reason assessment component and the critical spirit.

We can either regard the non-dispositional components of the IVs as necessary components of CT or not so regard them. I opt for the latter, since thinking can be critical even though motivated by something other than a love of epistemic goods, and with a range of affects and psychologies. Those who opt for the former must explain why that allegedly virtuous motivation is necessary for the exercise of CT, or why we should opt for regarding the primary epistemic aim of education as the fostering of the IVs *rather than* CT.

In any case, the main question here is this: supposing, as all parties agree, that the dispositional components of IVs are required for possession and exercise of IVs, why are the non-dispositional components also required? It seems clear that they are required only if we're committed to a particular (Aristotelian?) theoretical

account of the IVs, according to which the non-dispositional components are necessary for their possession. I do not argue here that such an account is wrong, though I have my doubts. Rather, I think that these components are unnecessary, and unduly complicate our efforts to establish either CT or IV as the main epistemic aim of education (Siegel 2016). (McKeon and Ferkany (2023) reject the idea that just one of these has that status and argue instead for a combined CT + IV epistemic aim. I am sympathetic, and address their view on this below.)

Particular cases, both real and imagined, make it clear that CS and IV are not only not identical; they needn't be and often are not extensionally equivalent. Nor are exercises of CT and IV. Consider the following case:

*Meat:* Jack, Jill, and Josh are all worried about the future of the planet. They have each studied the relevant scientific literature. Jack and Jill have concluded that they should stop eating meat because raising cattle for food significantly increases the amount of methane, a harmful greenhouse gas, in the atmosphere. Jack's reasoning is motivated by his love of epistemic goods, while Jill's reasoning is rather motivated by her desire to align her beliefs and actions with her evidence. This desire was instilled during her early upbringing; both her parents and her early teachers consistently emphasized her epistemic duty to so align her beliefs and actions. At university she studied epistemology and judged the arguments for epistemological deontology<sup>4</sup> to be strong; she is both a philosophical and a practicing epistemic deontologist. Josh is not motivated by either a love of epistemic goods or a desire to do his epistemic duty; having eaten meat all his life, he fully intends to continue to do so, but is simply curious as to what the fuss is all about. He acknowledges that, given the evidence concerning bovine production of methane, he ought to stop eating meat, but he is unmoved by that reason. He reflects the view once overheard in a debate about vegetarian-

---

<sup>4</sup> That is (very roughly): she thinks, on the basis of those arguments, that epistemic justification is mainly a matter of doing one's epistemic duty. There is obviously much more to say about this than I can say here.

ism: ‘my commitment to not eat meat stops at the pepperoni.’

A silly example, perhaps. But if it is true that the evidence supports what might be called the ‘anti-cow movement,’ and if it is true that Jill’s motivation can be correctly characterized without reference to her love of epistemic goods, which love she does not have)—surely it’s possible to take oneself to be obliged to align one’s beliefs and actions to one’s evidence without any further reference to a love of epistemic goods—then Jill’s thinking is correctly characterized as manifesting CT but not IV. On the other hand, Josh’s thinking does not count as an instance of either CT or IV, because it fails to satisfy the dispositional demands of CS/IV—he fails to align his actions with the reasons that should guide them, and he has no disposition to do so. (We might also want to convict him of *akrasia*, since he takes himself to have good reason, provided by the evidence regarding methane’s detrimental contribution to climate change, to reduce or eliminate his consumption of meat, yet he does not act in a way that reflects his assessment of the evidence he has considered.) His beliefs and actions fail to manifest the CS, and the dispositional components of the relevant IVs as well. In short: Jack’s thinking satisfies the requirements of both CT and IV. Jill’s thinking satisfies the requirements of CT as well as the dispositional components of the IVs, but not the non-dispositional components, since her thinking is not guided or motivated by a love of epistemic goods. Josh’s thinking satisfies the requirements of neither CT nor IV. Jill’s case makes clear that CT and IV are not extensionally equivalent: cases of the one need not also be cases of the other.

**Does possessing an IV require “having a corresponding CT skill set”?** (McKeon and Ferkany 2023, ms. pp. 1, 16)

Is the exercise of an IV dependent on epistemically critical, rational, or cogent thinking?

Defenders of the IVs, including McKeon and Ferkany, argue that it is:

... good thinking in the characterological sense requires good thinking in the epistemological/logical sense (echoing Baehr 2013). Hence, educating for intellectual virtue requires educating for critical thinking (2023, p. 11).

This indeed echoes Baehr, who argues that:

...if possessing an intellectual virtue involves being disposed to engage in a certain sort of cognitive activity that one has good reason [to] think will be useful for achieving one's epistemic ends, it follows that, in addition to the motivational component just identified, intellectual virtues also have a *competence* and a *rationality* component (Baehr 2013, p. 250, emphases Baehr's; see Baehr 2019, pp. 450-452).

Is this true? Is it possible to think well in the first sense without thinking well in the second sense? This depends on how 'good thinking in the characterological sense' is understood. Does it include just the CS/IV dispositions, or does it include also the non-dispositional (motivational, affective, and behavioral/psychological) components of the IVs, which are not required constituents of the CS?

Since I have long championed educating for critical thinking, I am happy that advocates of the IVs, including Baehr, McKeon, and Ferkany, regard CT as *required* for IV, in that one cannot possess or exercise a given IV without also having the RA abilities and CS dispositions required for its proper exercise. Since all parties to the debate see CT as an essential epistemic aim of education, this particular debate appears to be settled in favor of CT. It cannot be that the primary epistemic aim of education is IV *rather than* CT, since the possession of the former, according to its advocates, requires that of the latter.

But it is worth remembering that, in addition to the unclarity just noted concerning 'good thinking in the characterological sense,' it is perfectly possible to think well characterologically while not thinking well epistemologically/logically. For example, I may be well disposed to take seriously viewpoints other than my own, yet be terrible at doing it—I'm disposed to do so, and try my best, but fail, due to cognitive, imaginative, or other limitations.

The same can be said of other dispositions and IVs, such as seeking evidence, weighing conflicting evidence fairly, evaluating reasons in accordance with epistemic criteria, and so on. In all these cases, our dispositions may be pure, but our execution poor from the epistemic point of view. So I am as yet unwilling to grant McKeon and Ferkany's claim that "good thinking in the characterological sense requires good thinking in the epistemological/logical sense." If it entails that a possessor of a given CT/IV disposition cannot fail to exercise it in an epistemically high quality way, then I disagree, since such a possessor can indeed fail. Baehr, McKeon, and Ferkany may be right that possession and exercise of the IVs require RA competence, but not that possession and exercise of CS dispositions require such competence, because those dispositions can be exercised poorly, epistemically speaking.

McKeon and Ferkany hold, along with advocates of CT, that "good thinking in the epistemological sense requires possessing at least the dispositional components of intellectual virtues" (2023, pp. 11-12, 17). But as noted, these dispositional components of IVs just are the dispositions partly constitutive of the CS. For that reason, regarding them as constituents of good thinking, as McKeon and Ferkany do, does nothing to show that IVs add anything to the epistemological/logical and characterological characterization of good thinking over and above that offered in the two-component characterization of CT.

If McKeon and Ferkany are right that good thinking requires both the RA and CS components of CT, fans of CT should be pleased. If they are wrong, that may harm the case for regarding the fostering of the IVs as an important epistemic aim of education, but it wouldn't harm the case for regarding the fostering of CT in that way. So again, fans of CT should be pleased. It appears that all parties agree that CT is a basic epistemic aim of education. The remaining question is whether it stands alone on that exalted level, or whether IV is also such an aim. I address this question below.<sup>5</sup>

---

<sup>5</sup> McKeon and Ferkany (2023) argue that exercising CT skills well requires possession of the "dispositional components of corresponding intellectual virtues" (pp. 12, 17 ff.). On this point too all sides are agreed. As argued

## Must we choose between CT and IV?

McKeon and Ferkany ask why we should think that CT and IV are competing epistemic aims of education, and argue that we should not regard them as such. They defend a “combined IV + CT approach to the primary epistemic aim of ed” (2023, p. 2): “[w]e don’t see why educating for intellectual virtue and educating for critical thinking are *competing* epistemic aims of education.” (p. 9, emphasis in original).<sup>6</sup>

I have some sympathy for this suggestion. Arguably, we needn’t choose. While I have argued that CT and IV are neither identical nor extensionally equivalent, I have not suggested that they are incompatible or that only one of them can reign as the primary or ultimate epistemic aim of education. McKeon and Ferkany argue for treating them as essentially inseparable, in that one cannot think critically without the regulatory assistance of the IVs: “To lay our cards on the table, ...[CT ability] is regulated by intellectual virtues such as curiosity, fair-mindedness, sincerity, intellectual courage, open-mindedness, and intellectual humility” (2023, p. 27). I like this idea. But these regulatory aids are just the dispositional components of IVs, rather than full-blown IVs that include their non-dispositional components. If the claim is that the

---

throughout, and as all sides seem to agree, the ‘dispositional components of corresponding intellectual virtues’ just are the CS dispositions, nearly enough.

<sup>6</sup> McKeon and Ferkany (2023) suggest, correctly, that Baehr is a pluralist regarding the primary epistemic aims of education (p. 3). But Baehr does explicitly regard IV as the “more suitable educational aim” (2019, p. 447, see p 454 and *passim*). Here Baehr writes as if my view of CT consists only of the reason assessment component, leaving out CS altogether. This is a serious distortion, as my view from the beginning has been that the RA and CS components of CT are individually necessary and only jointly sufficient, which Baehr acknowledges in the same paper (2019, p. 448) but seemingly forgets by its final pages. His characterization of my view, according to which “‘reason assessment’ is *the defining activity of critical thinking*” (p. 454, emphasis added), is simply incorrect. The CS, which covers all the things Baehr here says my account leaves out, has been there throughout.

Despite this distortion, I am grateful to Baehr for his invitation to get involved in the IV world, and for his close attention to my views. Some of his other criticisms of those views in his 2019 are challenging and worth more attention than I can give them here.

dispositional components of IVs aid and regulate CT, we're agreed. But as noted, these dispositional components of IVs are just the dispositions that are constitutive of the CS. So those components of the IVs don't add anything to the two-component conception of CT.

The question is whether we should opt for:

- A. a combined CT + IV aim, in which IV is itself understood as being composed of two components, the dispositional and non-dispositional components, that is, (1) CT + (2) dispositional components of IV + (3) non-dispositional components of IV

or

- B. a combined CT + IV aim, understood as including the dispositional but not the non-dispositional components of IV, that is, (1) CT + (2) dispositional components of IV.

I have suggested that it is unduly demanding and unnecessarily complicating to opt for A rather than B (Siegel 2016). If so, we should opt for B: CT + the dispositional components of IV. But the latter dispositional components are just the CS. This option amounts to opting for the two-component conception of CT: RA + CS. In arguing for option B, I am arguing for regarding the primary epistemic aim of education as consisting in CT abilities (the RA component of CT) + CT dispositions (the CS component of CT). The alternative, option A, consists of option B + the non-dispositional components of IV. Why add the non-dispositional components? What do they add? Why is it preferable to add them?

### **How should we teach for CS or IV?**

McKeon and Ferkany argue, in opposition to Kotzee, Carter, and Siegel (2021), that CT defenders have to use exemplarist methods to teach CT dispositions (2023, pp. 17-21). That is, they argue that CT requires CS/IV dispositions, and teaching for those disposi-



tions requires “exemplarist methods” (p. 17). Why should we think that exercising CT skills requires “*exemplarist/role-modelling pedagogy*” (p. 22, emphasis in original)? Supposing that that is true (is it?), how do you get from that to ‘we must impart not just those dispositions, but full blown IVs, including the motivational, affective, and behavioral/psychological components’? I don’t see how.<sup>7</sup>

I don’t want to make too much of this. Speaking for myself, not for Kotzee or Carter: I have long defended CS as a necessary component of CT; I have never said much about how to teach for it. My view has always been that we should endeavor to impart the dispositions, habits of mind, and character traits constitutive of CS, along with the skills and abilities of the RA component of CT, as best we can, using whatever permissible methods empirical research reveals to be effective. How best to teach for anything, once moral requirements and prohibitions are taken into account, is largely an empirical question. Philosophy has little to contribute to the effectiveness question, other than by way of the articulation and justification of the just-mentioned moral requirements and prohibitions. If it is true that exemplarist methods are necessary, or

---

<sup>7</sup> Using the example of the virtue ‘intellectual carefulness,’ McKeon and Ferkany urge that “being good at reason assessment requires being disposed to appropriately exercise metastrategic and metacognitive competencies above some minimal threshold. Plausibly, these dispositions are included in the *behavioral/psychological* component of the virtue *intellectual carefulness*. Accordingly, to train students to be good at searching for and assessing reasons for belief or actions we must inculcate dispositions necessary for having the virtue of *intellectual carefulness*” (2023, pp. 20-1, emphases in original). Aren’t these dispositions also among the CS dispositions? If so, again, what is added by noting that they are also among the dispositions included in the non-dispositional, behavioral/psychological component of that virtue? McKeon and Ferkany make the parallel point concerning the dispositions “essential to the *behavioral/psychological* component of the virtue of *intellectual open-mindedness*” (2023, p. 21, emphases theirs). My reply is the same: aren’t these dispositions also among those included in the CS? If so, what is added by noting that they are also among the dispositions included in the supposedly non-dispositional behavioral/psychological component of that virtue? And in any case, why think that exemplarist methods are the only, or the best, way to inculcate those dispositions?

most effective, for inculcating the CS, and so the dispositional components of the IVs, so be it.

McKeon and Ferkany (2023) are keen to show that the ‘pedagogical challenge’ to the IV approach advanced in Kotzee, Carter and Siegel (2021) applies equally to the CT approach, since both require the inculcation of the dispositions, habits of mind, and character traits constitutive of the CS (2023, pp. 21-29). Perhaps they are right about this; I cannot speak for Kotzee and Carter here. They further urge that the pedagogical challenge can be met, if at all, only by the exemplarist methods that are central to the IV approach. But even if they are right about this, what it shows is not that the fostering of the IVs is a primary epistemic aim of education, but rather that the exemplarist methods the IV approach favors are the preferred ways of developing the relevant dispositions. Why should the CT advocate object to this?

Finally, I must note that this is something of a side issue. The debate concerning the epistemic aims of education concerns what those aims *are*—why they’re rightly thought of as primary epistemic aims of education, and what priority relations might obtain among them—not how to teach for them. The latter is a worthy and important target of research, of course. But it is not what drives the debate between advocates of CT and advocates of IV.

## Conclusion

We began with two posed questions: (1) Is the rational person *eo ipso* intellectually virtuous? and (2) is the intellectually virtuous person *eo ipso* rational? The answers I’ve defended are ‘no’ and ‘no.’ The answer to (1) is ‘no’ because a person can think, believe, and act rationally, and in that sense be a rational person, without satisfying the motivational, affective, and behavioral/psychological requirements of intellectual virtuousness. The answer to (2) is ‘no’ because the intellectually virtuous person, in exercising a particular virtue, may fail to meet the reason assessment component of CT and in that way fail to be a rational person. That is, such a person may reason virtuously but poorly, epistemically speaking. If instead we think that exercising a virtue *requires* epistemically high quality thinking, then the ‘yes’ answer is forced

as a matter of definition: virtuous thinking *just is* epistemically high quality thinking (along with its other necessary conditions). But this obscures the fact that thinking can be and often is characterologically virtuous but epistemically deficient. If we keep this fact before us, the answer to (2) is ‘no.’

**Acknowledgements:** This paper was presented as a McCracken Distinguished Lecture at Michigan State University in February 2023. I am grateful to Matt Ferkany, David Godden, and Matt McKeon for the invitation, to them and my fellow lecturer, Jason Baehr for their incisive questions and spirited discussion on the occasion, and to David Godden for his efforts to arrange both the event and publication in *Informal Logic*.

## References

- Baehr, Jason. 2011. *The inquiring mind: On intellectual virtue and virtue epistemology*. Oxford: Oxford University Press.
- . 2013. Educating for intellectual virtues: From theory to practice. *Journal of Philosophy of Education* 47(2): 248-262.
- . 2015. The four dimensions of an intellectual virtue. In *Moral and intellectual virtues in Western and Chinese philosophy: The turn toward virtue*, eds. Chienkuo Mi, Michael Slote and Ernest Sosa, 86-98. NY: Routledge.
- ed. 2016. *Educating the intellectual virtues: Essays in applied virtue epistemology*. New York: Routledge
- . 2019. Intellectual virtues, critical thinking, and the aims of education. In *Routledge handbook of social epistemology*, eds. Miranda Fricker, Peter J. Graham, David Henderson and Nikolaj J.L.L. Pedersen, 447-456. NY: Routledge.
- Bailin, Sharon. 1992. Culture, democracy and the university. *Interchange* 23(1): 63-69.
- . 1995. Is critical thinking biased? Clarifications and implications. *Educational Theory* 45(2): 191-197.
- . 1998. Education, knowledge and critical thinking. In *Education, knowledge and truth: Beyond the postmodern impasse*, ed. D. Carr, 204-220. London: Routledge.

- Bailin, Sharon, Robbie Case, Jerrold R. Coombs and LeRoi B. Daniels. 1999. Conceptualizing critical thinking. *Journal of Curriculum Studies* 31(3): 285-302.
- Bailin, Sharon and Harvey Siegel. 2003. Critical thinking. In *The Blackwell guide to the philosophy of education*, eds. N. Blake, P. Smeyers, R. Smith and P. Standish, 181-193. Oxford: Blackwell.
- Ennis, Robert H. 1962. A concept of critical thinking. *Harvard Educational Review* 32(1): 81-111.
- 1987. A taxonomy of critical thinking dispositions and abilities. In *Teaching for thinking*, eds. J. Baron and R. Sternberg, 9-26. NY: W. H. Freeman.
- Hare, William. 1979. *Open-mindedness and education*. Kingston: McGill-Queen's University Press.
- 1985. *In defense of open-mindedness*. Kingston: McGill-Queen's University Press.
- Hitchcock, David. 2021. Critical thinking. In *The Stanford encyclopedia of philosophy* (winter 2022 edition), eds. Edward N. Zalta and Uri Nodelman. URL accessed 5 February 2023: <<https://plato.stanford.edu/archives/win2022/entries/critical-thinking/>>.
- Kotzee, Ben, J. Adam Carter, and Harvey Siegel. 2021. Educating for intellectual virtue: A critique from action guidance. *Episteme* 18(2): 177-199.
- Lipman, Matthew. 1991. *Thinking in education*. Cambridge: Cambridge University Press.
- McKeon, Matthew, and Matthew Ferkany. 2023. Action guidance and educating for intellectual virtue: A response to Kotzee, Carter and Siegel. *Episteme* (forthcoming).
- McPeck, John E. 1981. *Critical thinking and education*. NY: St. Martin's Press.
- 1990. *Teaching critical thinking*. NY: Routledge.
- Paul, Richard. 1990. *Critical thinking: What every person needs to survive in a rapidly changing world*, ed. A. J. A. Binker. Rohnert Park, CA: Center for Critical Thinking and Moral Critique, Sonoma State University
- Scheffler, Israel. 1965. *Conditions of knowledge*. Chicago, IL: Scott, Foresman and Company.

- 1989. *Reason and teaching*. Indianapolis: Hackett. First published 1973
- Siegel, Harvey. 1988. *Educating reason: Rationality, critical thinking, and education*. London: Routledge
- 1989. Epistemology, critical thinking, and critical thinking pedagogy. *Argumentation* 3(2): 127-140.
- 1997. *Rationality redeemed?: Further dialogues on an educational Ideal*. New York: Routledge
- 1998. Knowledge, truth and education. In *Education, knowledge and truth: Beyond the postmodern impasse*, ed. David Carr, 19-36. London: Routledge.
- 2003. Cultivating reason. In *A Companion to the philosophy of education*, ed. Randall Curren, 305-317. Oxford: Blackwell.
- 2008. Why teach epistemology in schools? In *Philosophy in schools*, eds. C. Wistanley and M. Hand, 78-84. London: Continuum.
- 2010. Critical thinking. In *International encyclopedia of education*, 3<sup>rd</sup> ed., volume 6, eds. P. Peterson, E. Baker and B. McGaw, 141-145. Oxford: Elsevier.
- 2016. Critical thinking and the intellectual virtues. In *Educating the intellectual virtues: Essays in applied virtue epistemology*, ed. J. Baehr, 95-112. New York: Routledge.
- 2017. *Education's epistemology: Rationality, diversity, and critical thinking*. New York: Oxford University Press.