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Is Intellectual Character Growth a Realistic Educational Aim?

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Responsibilist approaches to virtue epistemology examine the epistemic significance of intellectual virtues like curiosity, attentiveness, intellectual humility, open-mindedness, intellectual courage, and intellectual tenacity (Battaly, 2008). On one way of thinking about these traits, they are the deep personal qualities or character traits of a good thinker or learner. Given the intimate connection between intellectual virtues and good thinking and learning, responsibilist virtue epistemology appears ripe for application to educational theory and practice (Baehr, 2016). At a minimum, growth in intellectual virtues seems like a worthy educational aim.

But is this aim realistic? There are at least three objections to thinking that it is. According to the first objection, there is no such thing as intellectual virtue; or, if intellectual virtue exists, it is a very rare phenomenon. This objection is rooted in empirical data from social psychology purporting to show that the activity associated with intellectual virtues either does not exist or is attributable, not to any stable dispositions of intellectual character, but to epistemically insignificant and often trivial situational influences (see e.g. Alfano, 2012). If this is right, the objection goes, then intellectual character growth is a profoundly unrealistic and misguided educational aim. Call this the "situationist objection."

According to a second objection, while intellectual virtues may not be especially rare, it remains unrealistic to think that growth in these qualities can be fostered in an educational setting. Such growth amounts to deep personal change. Given that the intellectual character of most students is substantially formed by the time they enter the classroom, and given the limited role that most teachers can hope to play in the lives of their students, it is unrealistic to think that teachers

can foster the kind of personal transformation central to intellectual character growth. Call this the "transformation objection."

According to a third objection, while it may be possible for teachers to have a significant impact on the intellectual character of their students, doing so would require a major expenditure of scarce educational resources (e.g. public dollars, instructional minutes, and professional development programming). Most schools and teachers possess these resources in very limited quantities. Therefore, while intellectual character growth may be achievable in a narrow range of cases, it is not realistically achievable on a wide scale. Call this the "costliness objection."

In this paper, I defend the enterprise of educating for growth in intellectual virtues against each of these objections. Specifically, I rebut the situationist and transformation objections and attempt to blunt the force of the costliness objection. In doing so, I also adduce some positive support for this enterprise. I conclude that if pursued in the right way, intellectual character growth is a worthy and realistic educational aim—one that justifies rethinking some fundamental educational priorities and practices.

1. Situationist Objection

I begin with a discussion of the situationist objection, which is intended to cast doubt on intellectual character growth as an educational aim on the grounds that intellectual virtues are (largely) a fictitious construct. While most situationist research and arguments to date have targeted *moral* character and virtues (e.g. Harman, 1999; Doris, 1998, 2002), the situationist critique has recently been extended to virtue epistemology (e.g. Alfano, 2012, 2013). As noted above, situationists have argued that most people's supposedly intellectually virtuous activity is better explained by epistemically arbitrary situational factors than by traits like open-mindedness,

intellectual honesty, or intellectual thoroughness. My focus in this section is on two empirical studies that have figured prominently in these arguments. For reasons that will eventually become clear, I divide these studies into three parts. While the scope of my discussion will be limited to these studies, I attempt to compensate for this limitation by introducing several assumptions that favor the situationist position (for a more extensive response to the application of situationism to virtue epistemology, see Baehr, forthcoming).[1]

The pertinent studies are as follows:

CANDLE-1: In a study by Alice Isen and colleagues (1987), participants were given a book of matches, a box of thumbtacks, and a candle. They were asked to attach the candle to the wall in such a way that when the candle is lit, no wax drips on the floor. (The solution: take the tacks out of the box, pin the box to the wall, then place the candle upright in the box.) It does not seem unreasonable to think that completing this task might require a certain kind of intellectual flexibility—indeed a kind which, if internalized and habituated in the right way, could be an intellectual character virtue. The results: only 13% of participants were able to complete the task. However, when the tacks were presented to participants *outside* of the box, thereby making the solution to the puzzle more apparent, the completion rate jumped to 83% (Alfano, 2012, pp. 236-7). On the assumption that solving the former version of the task requires intellectual flexibility but solving the latter version does not, one lesson to be drawn from these findings, per situationism, is that most people lack intellectual flexibility

CANDLE-2: In the same study, a second group of participants was presented with the more challenging, tacks-inside-the-box version of the task, but was also given a "mood enhancer." Specifically, each person was given some candy or shown a brief comedy immediately prior

to being asked to complete the task. Surprisingly, 75% of participants went on to discover the solution, compared with 13% in the control group. The conclusion urged by situationists is that while most people may be disposed to engage in intellectually flexible activity under these conditions, doing so is not an indication of the virtue of intellectual flexibility, for we expect a genuinely virtuous person to engage in virtue-relevant activity without reliance on mood enhancers or similar expedients (Alfano, 2012, p. 236). Put another way, the upshot is that most people are at best intellectually flexible only in a very weak or insignificant sense.

LINES: In a now famous series of experiments conducted in the 1950s, Solomon Asch sought to determine the extent to which group pressure might cause people to deny the clear evidence of their senses. In one such experiment (1963), seven confederates and a single participant were shown a series of line pairs and asked to identify the longer of the two lines. While the answer was always clear to the naked eye, Asch found that when all seven of the confederates answered incorrectly (identifying the shorter line as longer), the lone participant regularly registered agreement. Specifically, he found that while approximately one quarter of participants refused to agree with the majority, roughly a third agreed more often than not, and 50 to 80 percent of participants agreed at least once. Subsequent experiments identified various limitations on these findings (Alfano, 2013, p. 134). For instance, it was discovered that the group effect disappears when the disagreement is anything short of unanimous and when the size of a unanimously dissenting group is sufficiently small. It is also generally agreed that the participants in this sort of experiment do not actually *disbelieve* the evidence of their senses but rather are simply unwilling to *assert* what they believe. These qualifications notwithstanding, there is some plausibility to the situationist suggestion that, when

participants do register agreement with the majority, they fail to demonstrate a kind of intellectual courage called for in the situation.

Before examining the implications of these findings, I want briefly to identify a few (quite generous) assumptions that will guide the remainder of the discussion. Each one is intended to bolster the situationist position and thus to give it the best possible opportunity for success. First, I will assume that the activity targeted by these experiments is indeed characteristic of the virtues in question, such that a failure to engage in this activity is at least prima facie relevant to the question of how widely these virtues are possessed. Second, I will assume that the behavior of the subjects in these experiments is representative of how most people would act under similar conditions. Third, and most importantly, I will assume that similar experiments could be designed for the full range of intellectual virtues and that the results would be comparable and capable of being replicated on a wide scale. Taken together, these assumptions will allow us to generalize on the research in a way that will be helpful for assessing the prospects of the objection at hand. Specifically, if the situationist objection to educating for growth in intellectual virtues is found wanting even *given* these charitable assumptions, this will be a significant finding.

1.1. Levels of Intellectual Virtue

While a completely thorough treatment of CANDLE-1, CANDLE-2, and LINES would take us beyond the scope of this paper, I intend to say enough about these studies to drive a wedge between the empirical data and the situationist conclusion. Specifically, I will argue that the data fail to show that moderate levels of intellectual virtue are rare. This, we will see, is sufficient for

neutralizing the situationist threat to treating intellectual character growth as a realistic educational aim.

We may begin by identifying a conspicuous ambiguity in the situationist thesis. Situationists take the data in question to show that most people lack intellectual virtues. However, intellectual virtues can be possessed in *degrees*. A person can be more or less open-minded, intellectually honest, or intellectually tenacious. This raises the question of how, more precisely, the situationist thesis is supposed to be understood. Is the idea that few people are intellectually virtuous to any extent at all? Or merely that few are maximally or fully intellectually virtuous? The difference is important. If the research shows merely that maximal or full intellectual virtue is rare, this does little to undermine the idea that intellectual character growth is a viable educational aim. It leaves wide open the possibility that something like moderate or even robust intellectual virtue can be fostered on a wide scale. Therefore, to pinpoint the force of the situationist argument, it will be helpful to draw some distinctions between different levels of intellectual virtue. I propose to do so in terms of the following three criteria:

> *Scope*: For a given person S and virtue V, does S engage in V-relevant activity across a wide *range* of V-relevant contexts?
>
> *Frequency*: For a given person S and virtue V, how *frequently* does S engage in V-relevant activity?
>
> *Motivation*: To what extent is S's V-relevant activity robustly *epistemically* motivated?

The foregoing questions point to three main dimensions on account of which a person can possess an intellectual virtue to a greater or lesser degree. The concepts of scope and frequency should be clear enough: a person who engages in open-minded intellectual activity frequently and across a wide range of situations that call for this activity will be more open-minded than a person who does so only occasionally or within a narrow range of contexts. The concept of "robust epistemic motivation," however, requires some clarification. In keeping with how several virtue responsibilists conceive of the motivational dimension of intellectual virtues, I propose that S's V-relevant activity is robustly epistemically motivated only if (a) it is motivated by an epistemic good as such and this motivation (b) is strong enough to cause the activity and (c) does not depend on any epistemically arbitrary situational influences. Condition (a) is rooted in the idea that intellectual virtues have an element of *intrinsic* motivation—that an intellectually virtuous person has some concern for truth or knowledge *as such* (i.e. her intellectually virtuous activity is not motivated solely by a concern with non-epistemic ends). It does not follow, however, that activity manifesting an intellectual virtue must be motivated *strictly* by a concern with epistemic goods as such. An intellectually virtuous person can care about epistemic goods for other reasons as well (Baehr, 2011, Ch. 6; Zagzebski, 1996). This raises the question of how strong the intrinsic motivational element must be in order to count as "robust" in the relevant sense. Condition (b) addresses this issue by stipulating that it must be strong enough to cause the activity in question. Finally, condition (c) requires that the motivation not be dependent on any epistemically arbitrary factors, including minor tweaks in the person's environment or the ingestion of a mood enhancer. Where the motivation is this fragile or contingent, it is insufficiently robust to manifest intellectual virtue.

Relying on these criteria, we are now in a position to mark a distinction between "full virtue" and "moderate virtue":

Full virtue (FV): S is fully virtuous in respect of V only if: (a) S engages in V-relevant activity across *all* (or nearly all) V-relevant contexts; (b) in all (or nearly all) V-relevant contexts, S *always* (or nearly always) engages in V-relevant activity when doing so is called for; and (c) in all (or nearly all) V-relevant contexts, S's V-relevant activity is *always* (or nearly always) robustly epistemically motivated.

Moderate virtue (MV): S is moderately virtuous in respect of V only if: (a) S engages in V-relevant activity across *several* V-relevant contexts; (b) in several V-relevant contexts, S *regularly* engages in V-relevant activity when doing so is called for; and (c) in several V-relevant contexts, S's V-relevant activity is *regularly* robustly epistemically motivated.

The characterization of MV makes use of terms like "several" and "regularly." While somewhat imprecise, what these terms are intended to pick out should be sufficiently clear for present purposes.

I turn now to consider the implications of CANDLE-1, CANDLE-2, and LINES for our understanding of how widely FV and MV are possessed. I begin by considering what the research suggests regarding the satisfaction of the scope and frequency conditions of FV and MV. I then turn to consider its implications for the satisfaction of the motivational conditions for FV and MV.

1.2. Scope and Frequency Conditions

The results of CANDLE-1 and LINES (which I will address first) support the claim that in certain relevant contexts most people fail to engage in certain forms of intellectually flexible or intellectually courageous activity. For, again, most of the participants fail to engage in the targeted

virtue-relevant activity. Thus they also support thinking that most people fail to *always* (or nearly always) engage in intellectually flexible or intellectually courageous activity across *all* (or nearly all) relevant contexts, that is, that most people fail to satisfy the scope and frequency conditions for FV. In light of this conclusion, and given the various assumptions noted above, we may conclude (perhaps unsurprisingly) that most people lack FV.

Do CANDLE-1 and LINES also support thinking that most people fail to satisfy the scope and frequency conditions for MV? This is much less clear. Again, CANDLE-1 and LINES show that in *certain* relevant contexts, most people fail to engage in *certain* forms of intellectually flexible or intellectually courageous activity. This, however, is entirely consistent with any or all of the following:

(i) In the contexts in question, most people regularly engage in *other* forms of intellectually flexible and intellectually courageous activity.

(ii) In several other relevant *contexts*, most people regularly engage in the targeted forms of intellectually flexible and intellectually courageous activity.

(iii) In several other relevant contexts, most people regularly engage in *other* forms of intellectually flexible and intellectually courageous activity.

If (i), (ii), or (iii) were probable, this fact would constitute considerable support for the claim that most people in fact *satisfy* the scope and frequency conditions for MV. My aim here is not to substantiate (i) – (iii). However, I do wish to show that these possibilities are not especially remote

or far-fetched. This by itself will be enough to block the inference from the shortcomings of the participants in CANDLE-1 and LINES to the conclusion that they or others *lack* MV.

In support of (i), there is reason to think that while most participants in CANDLE-1 and LINES fail to manifest certain aspects of intellectual flexibility or intellectual courage, they succeed at manifesting other aspects of these virtues. In LINES, for instance, most of the participants assert their belief in the face of unanimous opposition when the opposition is comprised of a sufficiently small number of people and in the face of majority opposition that is anything less than unanimous. It seems implausible to think that courage is required for voicing dissent when faced with unanimous opposition of a certain size but not when that opposition is of a slightly smaller size or when it is of the same size but just shy of unanimous. To be sure, the former scenario is likely to require more intellectual courage or intellectual courage of a more challenging or impressive variety. However, it hardly follows that voicing opposition in the latter scenarios manifests no intellectual courage at all. (For a related point, see Sabini and Silver, 2005, and Adams 2006, p. 129, Ch. 9.)

A similar point holds in connection with CANDLE-1. Recall that most of the participants successfully completed the candle task when the tacks were presented outside of the box. It is at least an open question whether in doing so they might have manifested some intellectual flexibility. While we might expect a maximally intellectually flexible person to be able to complete the more challenging version of the task, why deny that a lesser degree or variety of intellectual flexibility might be manifested in the completion of the less challenging version? At a minimum, these possibilities should give us pause about taking either CANDLE-1 or LINES to show that most people fail to satisfy the scope or frequency conditions for MV.[2]

In further support of (i), it is important to note that many participants may have manifested the virtues in question even in their *failure* to engage in the targeted virtue-relevant activity. For instance, surely the majority of participants in CANDLE-1 who failed to complete the candle task

when they were presented with the tacks inside the box did not sit idle and thoughtless for the duration of the experiment. Rather, we may assume that many of them thought hard about a possible solution. And it is not implausible to think that at least some of this mental activity might have manifested intellectual flexibility—even if not enough or of the right sort to arrive at the solution (see King, 2014, for a similar point). In other words, it may be that a number of the subjects in CANDLE-I engage in intellectually flexible cognitive activity in their (ultimately unsuccessful) *attempts* to complete the task. Similarly, it is reported that many of the subjects in LINES who verbally denied the evidence of their senses nevertheless expressed considerable discomfort or regret at having done so. Such discomfort might also be a form or be evidence of low-level virtue-relevant activity (for similar arguments, see Webber, 2006, p. 204, Kamtekar 2004, p. 473, Sabini and Silver, 2005, pp. 554-5, and Swanton, 2003, pp. 30-1). For these reasons as well, the studies in question fail to support the claim that most people fail to satisfy the scope and frequency conditions for MV.

Apropos of (ii) and (iii), there are features of the experimental contexts at issue that make it difficult to generalize on how the participants or others are likely to behave in other (potentially quite different) virtue-relevant contexts. One is a kind of contextual artificiality. It is not difficult to imagine, for instance, that at least some of the subjects in CANDLE-1 might have experienced some awkwardness or unusual pressure in the request to complete the candle task, coming as it did from a psychological experimenter in a highly controlled environment, and that this pressure might have played a role in their failure to do so. Suppose, for instance, that the same subjects were asked to complete a comparable task in a more familiar or natural environment, for example, while reading the Sunday paper at home, playing a board game with friends or family, trying to solve a logistical problem at work, or taking an exam at school. To my mind, it is far from obvious that we should expect the same type or level of intellectual flexibility in these other contexts as was manifested in the experimental context (see as well Sabini and Silver, 2005, pp. 550-3, and Webber, 2006, p. 197).

Moreover, were the subjects to consistently engage in intellectually flexible activity in these other contexts, this would appear to tell significantly in support of their possession of at least a "moderate" degree of intellectual flexibility.

A related point applies to LINES. Note that in this experiment, no significant epistemic good hangs in the balance. In (verbally) denying the evidence of their senses, the subjects are not, for instance, failing to voice some conviction that is important to them or forfeiting access to some valuable item of knowledge. It is at least an open question whether, had the epistemic stakes been higher, many of the subjects would have exhibited greater intellectual courage. (For analogous points, see Merritt, 2000, pp. 372-5, Kamtekar, 2004, pp. 470-6, Sreenivasan, 2002, p. 58, Snow, 2010, Chs. 4 and 5, and Mischel and Shoda, 1995.) This is significant given that, paradigmatically, an intellectually courageous person is one who is willing to face certain fears or harms for the sake of significant epistemic goods. These considerations underscore the possibility that many people do regularly engage in intellectually flexible or intellectually courageous activity across several relevant contexts.

Apropos of (i) and (iii), it extremely important to note that a single intellectual virtue can be manifested in a very wide and diverse range of cognitive operations or activities. Consider, for example, the virtue of open-mindedness. Open-mindedness can be manifested in attempts to understand a difficult or foreign subject matter, the handling of counterevidence, the assessment of an interlocutor's point of view, the imagining of an original idea or explanation, or a decision about whether to bring an inquiry to a close ("maintaining an open mind"). What exactly open-mindedness demands of a person is likely to vary considerably from one of these activities to the next (see, Baehr, 2011, Ch. 9). This underscores the importance of not equating one possible and rather fine-grained manifestation of a virtue with anything like the full range of its characteristic manifestations. Thus the ability to complete the candle task is far from equivalent to the ability to think or reason in

an intellectually flexible manner. In keeping with (i) and (iii), this suggests that while the participants fail to perform the targeted forms of intellectually flexible and intellectually courageous activity in the present context, they may be disposed to engage in other, potentially quite different forms of intellectually flexible or intellectually courageous activity in the present or in other relevant contexts.

Once more: CANDLE-1 and LINES show that in certain relevant contexts, most people fail to engage in certain forms of intellectually flexible or intellectually courageous activity. For all of the foregoing reasons, it would be a mistake to generalize on this failure to the conclusion that most people fail to engage in some form of intellectually flexible or intellectually courageous activity on a *regular* basis and across *several* relevant contexts. That is, the data fail to support the claim that most people fail to satisfy the scope and frequency conditions for MV.

1.3. Motivational Conditions

I turn now to consider what the research in question suggests concerning the satisfaction of the motivational conditions for FV and MV. Here as well I begin with FV and then turn to MV. According to the motivational condition for FV, to possess a given virtue V, a person's V-relevant activity must *always* (or nearly always) be robustly epistemically motivated across *all* (or nearly all) virtue-relevant contexts. And a person's V-relevant activity is robustly epistemically motivated only if (a) it is motivated by an epistemic good as such and this motivation (b) is strong enough to cause the activity and (c) does not depend on any epistemically arbitrary situational influences.

It is not immediately clear how the studies in question are supposed to bear on our question. To the extent that the participants in CANDLE-1 and LINES fail to engage in the targeted virtue-relevant activity, the question of whether their virtue-relevant activity was epistemically motivated is moot. Thus CANDLE-1 and LINES are not very illuminating in this context. CANDLE-2,

however, is relevant. Recall that in this study most participants who received candy or were shown a brief comedy went on to complete the tacks-inside-the-box version of the candle task, while most participants who were not given a mood enhancer failed to complete the task. This is sufficient evidence for thinking that the intellectually flexible activity of most of the participants was not epistemically motivated in the relevant sense, for it fails to satisfy condition (c) above. Specifically, while most participants given candy or shown a comedy engaged in the targeted activity, the motivation for this activity apparently received a significant boost from an epistemically arbitrary situational factor (viz. the mood enhancer). This in turn supports the conclusion (especially when conjoined with several of the assumptions noted above) that most people's intellectually flexible activity is not always (or nearly always) robustly epistemically motivated across all (or nearly all) relevant contexts. Given the further assumption that similar results could be obtained in connection with other intellectual virtues, we may conclude that most people fail to satisfy the motivational conditions for FV.

Does it also warrant concluding that most people fail to satisfy the motivational conditions for MV? That is, does it merit concluding that most people's virtue-relevant activity is not *regularly* robustly epistemically motivated across *several* virtue-relevant contexts? For two of the reasons discussed above in connection with the scope and frequency conditions for MV, this conclusion is not substantiated.

First, given the wide range of activities in which a single virtue can be manifested or expressed, there may very well exist other forms of intellectually flexible activity that are sufficiently *different* from or less *demanding* than the targeted activity, such that most people's engagement in this activity would be robustly epistemically motivated to the relevant extent. Again, the fact that S's completion of the candle task is not robustly epistemically motivated hardly supports the conclusion

that S's performance of any number of other types of intellectually flexible activity would also lack such motivation.

Second, the potential awkwardness or artificiality of the experimental context in question also makes it difficult to generalize on the level of motivation operative in this context. Specifically, this feature of the context underscores the possibility that in other, more natural epistemic contexts, most people's engagement in the targeted or other forms intellectually flexible activity would be robustly epistemically motivated. Similarly, in other contexts, significant epistemic goods might be at stake, which in turn might bolster most people's epistemic motivation. In the present context, the good hanging in the balance is something akin to the solving of a trivial puzzle. This is not an especially interesting epistemic end. Thus if our concern is with the extent to which people's intellectually flexible activity is robustly epistemically motivated, we would do much better to examine such activity in contexts in which a significant epistemic good is at stake—contexts in which, say, the persons in question are genuinely curious about the matter in question. (The latter point is similar to claims others have made in defense of virtue ethics vis-à-vis situationist objections. See, for example, Flanagan, 1991; Merritt, 2000; Kamtekar, 2004; Russell, 2009; Snow, 2010; and Cokelet, 2014. Even Nisbett and Ross, 1991, emphasize the importance of subjective construal in this regard.)

For these reasons, we may conclude that CANDLE-2 fails to support the claim that most people's virtue-relevant activity is not *regularly* robustly epistemically motivated across *several* virtue-relevant contexts. Thus it fails to provide support for thinking that most people fail to satisfy the motivational condition for MV.

We are now in a position to draw a more general conclusion. We have found that the combination of CANDLE-1, CANDLE-2, LINES, and several assumptions favorable to the situationist position supports thinking that most people lack FV but fails to show that most people

lack MV. My claim is not that most people *do* possess MV. Rather, it is merely that the empirical data do not present a good reason for thinking otherwise. This in turn shows that the situationist research in question does not present a serious obstacle to thinking of intellectual character growth as a realistic educational aim.

2. The Transformation Objection

One can accept the possibility that intellectual virtue is a real and relatively familiar phenomenon while denying that intellectual character growth is a realistic educational aim. As indicated earlier, intellectual character growth involves deep personal change. Therefore, given that the intellectual character of most students is already substantially formed by the time they enter the classroom, and given the limited time and influence teachers have with their students, efforts to foster intellectual character growth in an educational setting are unlikely to be very successful.

This objection can be dealt with more quickly than the situationist objection considered above. As with the situationist objection, the target of the "transformation objection" is multiply ambiguous. Once this ambiguity is brought to light, it emerges that while certain approaches to fostering intellectual character growth in an educational setting may be unrealistic, others evidently are not.

How unrealistic is it to think that educators might have the suggested impact on the intellectual character of their students? Unsurprisingly, this depends on how exactly we are thinking about the efforts and impact in question. It depends, for instance, on the following:

(i) *Who is undertaking the effort?* Is it a single teacher, a group of teachers, or an entire school?

(ii) *At what developmental level?* Is the effort being undertaken while students' intellectual character is highly malleable (e.g. in elementary school) or when their traits are more fully formed (e.g. in college)?

(iii) *What is the quality of the relevant efforts?* Are the educators in question acting on their own best guesses? Or are they relying heavily on the best research in educational psychology and other relevant disciplines (e.g. research on intrinsic epistemic motivation, a "growth mindset" [Dweck, 2006], and "thinking dispositions" [Ritchhart, 2002])?

(iv) *What is the expected magnitude of the impact?* Is the expectation that the students in question will become exemplars of intellectual virtue? Or merely that they will exhibit meaningful or worthwhile growth in these qualities?

(v) *What is the expected scope of the impact?* Is the idea that every student will experience the relevant amount of intellectual character growth? Or only that some subset or percentage of students will?

(vi) *What is the relevant timeframe?* Is the suggestion that students will experience significant intellectual character growth over the period of a semester? A year? Four years?

Whether a given attempt to foster growth in intellectual virtues is realistic or likely to succeed ultimately is an empirical question. However, my suggestion is that even in the absence of data from

controlled experiments or other empirical research, we can be reasonably confident that while some such efforts are likely to fail, others have significant promise. To illustrate, consider the following possible scenarios, each of which describes an attempt to foster intellectual character growth in an educational setting:

> Scenario 1: (i) A single inexperienced instructor (ii) at the university level (iii) proceeding mainly on the basis of her own best guesses (iv) fosters high levels of intellectual virtue (v) in all of her students (vi) over the course of one semester.

> Scenario 2: (i) An entire school (ii) at the K-12 level (iii) employs the best available research (iv) to foster moderate levels of at least three core intellectual virtues (v) in a significant percentage of their students (vi) over the course of the students' 13 years at the school.

> Scenario 3: (i) A group of experienced teachers working together (ii) at the middle school level and (iii) employing the best available research (iv) fosters meaningful growth in at least three core intellectual virtues (v) for a substantial number of students (vi) over the course of the students' three years at the school.

> Scenario 4: (i/ii) A university (iii) employing the best available research develops a program that, for (v) for the majority of its students (vi) in their four years at the school, (iv) raises the students' awareness of the nature/value of intellectual virtues, increases their understanding of their own intellectual character strengths and weaknesses, creates systematic opportunities for them to practice a wide range of intellectual virtues, and provides extensive qualitative feedback regarding these efforts.

Of the scenarios just described, the first is obviously unrealistic. And it is not difficult to imagine similar variations that would be equally implausible. The second, third, and fourth scenarios, while still involving meaningful levels of intellectual character growth, are much less ambitious. Indeed, while we cannot, from the philosophical armchair, be certain about their prospects, my suggestion is that cautious optimism about these prospects is warranted. That is, it is not implausible to think that with the right kind of resources, methods, and support, educators could hope to have a significant positive impact on the intellectual character of many of their students (see Perkins, 1993, and Ritchhart, 2002). If this is right, we may conclude that while the transformation objection has force against certain conceptions of intellectual character growth and ways of pursuing such growth, it leaves untouched several other conceptions and approaches. The fact that intellectual character growth involves a kind of personal change or transformation should not by itself lead us to regard it as an unrealistic educational aim.

3. Costliness Objection

The approaches to fostering intellectual character growth sketched in the scenarios above are demanding. They require, at a minimum, substantial teacher buy in and training as well as ongoing commitment and effort from teachers and school leaders. This observation gives rise to a third objection. Many schools already lack adequate resources for quality professional development and special programs. Morale among public school principals and teachers is at a 25-year low (Gardner, 2013). And educators at many levels already feel hard-pressed to discharge even their more formal (e.g. curricular) responsibilities in the allotted time and with the allotted resources. For these and

related reasons, intellectual character growth may still seem like an unrealistic educational aim. At a minimum, it may not seem achievable on a very wide scale.

This objection turns in part on a mistaken view of the requirements of educating for intellectual character growth. Specifically, it intimates that fostering such growth is something an educator does *over and above* her usual efforts to impart knowledge and foster a range of intellectual skills. While understandable, this suggestion is largely mistaken. As I have argued elsewhere (Baehr, 2013), the most promising approach to educating for growth in intellectual virtues does involve familiarizing students with certain virtue-relevant terms and concepts. However, this is something that can be done very quickly. For the most part, educating for growth in intellectual virtues is a matter of imparting knowledge and sharpening skills *of a certain sort* and *in a certain way*. Specifically, it involves a heavy emphasis on such values and activities as thinking, inquiry, question-asking, self-reflection, intellectual risk-taking, and conceptual understanding. Many of these values and activities are compatible with traditional modes of instruction.

This point notwithstanding, there are real costs involved with trying to educate for intellectual character growth and these costs need to be honestly confronted. I turn now to address what I think are the two most significant costs. I then turn to highlight several aspects of the *value* of intellectual virtues. Here my aim is to show that while there are genuine costs associated with trying to educate for growth in intellectual virtues, these costs generally are worth incurring. To the extent that this value is made known and appreciated among educators and educational policy makers, the widespread adoption of intellectual character growth as an educational goal may begin to appear more realistic.

The first real cost concerns the emphasis alluded to above on a deep understanding of the subject matter. This emphasis is an indispensable part of trying to foster growth in intellectual virtues. Intellectual virtues *aim* at deep understanding of important subject matters (Baehr, 2014). An

intellectually virtuous person is one who pays close attention to detail, takes pains to avoid errors, is thoughtful and rigorous in her inquiries, and so on, out of a desire for deep understanding. She is not motivated by or satisfied with a cursory grasp of important information; nor is she inclined merely to memorize important facts and formulas. Rather, she desires to know—to *understand*—these things. Accordingly, educating for intellectual character growth requires educating for deep understanding. The problem is that given a fixed and limited number of instructional minutes, a focus on depth generally requires some kind of compromise on breadth. Thus if tasked with educating for intellectual character growth, many teachers are likely to find themselves struggling to cover all of the requisite material.

While the tension between breadth of coverage and depth of understanding is real (and hardly unique to educating for intellectual virtues), and while this tension is likely to complicate attempts to educate for intellectual character growth in some academic settings, there are ways of minimizing this tension. These range from eliminating all non-essential content and busywork to making strategic use of projects and assignments completed outside of class (e.g. "inverted instruction"). Furthermore, there are broader educational trends—particularly in K-12 public education in the United States—that suggest a growing dissatisfaction with academic curricula and state standards that are "a mile wide and an inch deep" as well as a growing interest in curricula and standards that focus on cognitive skills like critical thinking and on conceptual understanding over rote memorization (see, for example, the new Common Core State Standards at www.corestandards.org). If broader educational thinking continues to move in this direction—emphasizing, as it were, the quality of knowledge over the quantity—then the challenge of teaching for deep understanding may dissipate.

A second and more significant cost associated with educating for intellectual character growth concerns the kind of buy in, training, and ongoing commitment and support that are part

and parcel to such an undertaking. In certain contexts, this cost may not be too significant. If a teacher's educational values and practices are already fairly well aligned with educating for intellectual intellectual virtues, and if these values and practices are supported by the surrounding educational environment and culture, then the transition to a more systematic and explicit focus on intellectual character growth may be natural and relatively smooth. However, in many other contexts, embracing intellectual character growth as an educational goal is likely to require significant changes—changes in how teachers and administrators understand their role as educators, in what they value, in how they make decisions, in some of their pedagogical techniques and strategies, and more.

To my mind, this is the most formidable obstacle to a widespread practice of educating for intellectual virtues. However, I think the difficulty of overcoming it depends in no small part on how educators perceive the *value* of the change in question, which itself is susceptible to educative efforts. Accordingly, in the remainder of this section, I briefly highlight several normative dimensions of intellectual virtue. To the extent that educators are made aware of and convinced of this value, the widespread adoption of intellectual character growth as an educational ideal may be more realistic than what has just been suggested.

Curiosity, open-mindedness, intellectual honesty, intellectual courage, and other intellectual character virtues are attractive and admirable personal traits. They are qualities that we generally desire in ourselves and in our friends, spouses, and children. They are partly constitutive of what it is to be a good person or to flourish as a human being. Conceiving of education as aimed at growth in these traits—as aimed at becoming a certain type of *person*—adds a dimension of *meaning* and *purpose* to the educational enterprise that practitioners are likely to find compelling and motivating. Compare this more familiar educational goals, for example, high scores on annual state tests. The better teachers among are not inspired and motivated by this goal. While they may view such scores as

partial indicators of academic success, they do not confuse them with the very point of education. In this way, the pursuit of intellectual character growth in an educational context has the potential to add a humanizing and intrinsically rewarding dimension to the activities of teaching and learning.

The foregoing point underscores the intrinsic value of intellectual virtues and the positive bearing of such value on educational efforts aimed at fostering growth in these traits. But it is also important to call attention to the broadly instrumental value of intellectual virtues. This includes their relation to certain important moral, political, and prudential goods.

As many philosophers and others have noted, we act on the basis of our beliefs. For this reason, the moral quality of our actions often is a function of the quality of the beliefs that give rise to or guide these actions. If we form beliefs in ways that are narrow-minded, biased, intellectually lazy, or dogmatic, then the moral quality of the actions based on these beliefs is likely to suffer. We might be led to act in ways that are negligent, disrespectful, or cruel. Conversely, if we are, say, careful, thorough, attentive, honest, and open in how we go about forming our beliefs, this can have a significant positive effect on the moral status of our actions. It can facilitate actions that are respectful, thoughtful, and compassionate. Thus an exercise of intellectual virtues is importantly related to morally responsible action (Montmarquet, 1993).

The exercise of intellectual virtues is also central to a healthy democracy. For a liberal democracy to flourish, its citizens must engage in certain forms of intellectual activity. They must be curious and thoughtful about political matters and cultivate informed perspectives on these matters through careful and thorough research and reflection. They must also exercise the intellectual autonomy and courage necessary for scrutinizing the actions of their government and for challenging these actions when they are deemed questionable. These actions are facilitated by a free press whose representatives are willing to investigate thoroughly and to report fairly and objectively. A healthy democracy also requires a willingness among politicians and their constituents to engage in

public debate marked by qualities ranging from intellectual honesty and open-mindedness to intellectual courage and tenacity. In these and many other ways, a healthy democracy depends on its citizens having and exercising a wide range of intellectual virtues (Hazlett, 2016; Nussbaum, 2010).

In the current economy, intellectual virtues also have a high degree of prudential value. Given the centrality of technology to the global economy and to many domestic economies, together with the rapid rate at which technology evolves, employers today tend to be less concerned with what their employees learned in school and more with how well they can think and learn. This point is illustrated by the current emphasis in the job market on so-called "soft skills," which include several intellectual virtues like curiosity, open-mindedness, intellectual autonomy, and intellectual humility (Friedman, 2014; Heckman 2000). As the character traits of a good thinker or learner, intellectual virtues are vital part of what students need if their education is going to prepare them to for success in the labor market.

We began in this section by considering an objection to the effect that intellectual character growth is an unrealistic educational aim because it is too costly. In response I have sought to underscore the significant and wide-ranging value of intellectual virtues. My suggestion is that if teachers and administrators are made aware of and become convinced of this value, they may be more willing to make the relevant changes and adjustments. If so, this makes the widespread adoption of intellectual character growth as an educational ideal a more realistic prospect.[3]

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[1] A rather different response to the situationist challenge that I will not develop here is to accept that *at present* intellectual virtue is a rare phenomenon but that educative efforts are capable of changing this. For arguments to this effect, see Ritchhart, 2002, and Perkins, 1993.

[2] Depending on how "contexts" are to be individuated, the scenarios described in this and the preceding paragraphs may seem to include contexts different from the original one. If so, they would support (ii) or (iii) not (i). I do not have a firm opinion about how to individuate contexts. Below I give some examples of contexts that seem more clearly to be distinct from the original experimental context; however, were the contexts described in the present and preceding scenarios also deemed different from the original context, this would have little bearing on my argument, especially as I offer additional support for (i) below.

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