May 22nd, 9:00 AM - May 25th, 5:00 PM

Critical thinking and the argumentational and epistemic virtues

Tracy Bowell
University of Waikato, Philosophy Program

Justine Kingsbury
University of Waikato, Philosophy Program

Critical thinking and the argumentational and epistemic virtues

TRACY BOWELL

Philosophy Program
University of Waikato
Private Bag 3105
Hamilton
New Zealand
taboo@waikato.ac.nz

JUSTINE KINGSBURY

Philosophy Program
University of Waikato
Private Bag 3105
Hamilton
New Zealand
justinek@waikato.ac.nz

ABSTRACT: In this paper we argue that while a full-blown virtue-theoretical account of argumentation is implausible, there is scope for augmenting a conventional account of argument by taking a character-oriented turn. We then discuss the characteristics of the good epistemic citizen, and consider approaches to nurturing these characteristics in critical thinking students, in the hope of addressing the problem of lack of transfer of critical thinking skills to the world outside the classroom.

KEYWORDS: critical thinking, epistemic virtues, motivational virtues, regulatory virtues, transfer problem

1. INTRODUCTION

There is a recent trend towards virtue-theoretic approaches to argumentation (see for example Aberdein, 2010; Battaly, 2010; Cohen, 2009). We have argued elsewhere (Bowell & Kingsbury, 2013) that it is not possible to give a complete analysis of what it is for an argument to be good in terms of the virtues exercised by the arguer in putting it forward: there is an important sense in which a good argument does not become less good when put forward by someone who is not exercising the relevant virtues. However, facts about the character of the arguer are often relevant to the question of whether we should accept her premises purely because she has asserted them: thus the consideration of character is clearly relevant to the process of everyday argument evaluation. Furthermore, the virtues of the good arguer and the good evaluator of arguments are of interest in their own right - they are some of the characteristics of the good epistemic citizen, and

Mohammed, D., & Lewiński, M. (Eds.). *Virtues of Argumentation. Proceedings of the 10th International Conference of the Ontario Society for the Study of Argumentation (OSSA), 22-26 May 2013.* Windsor, ON: OSSA, pp. 1-8.

(consequently) they are what we try to develop in our students when we teach critical thinking. In this paper we distinguish between three different kinds or levels of epistemic virtues: reliabilist or cognitive virtues such as being able to recognise a sound argument or a reliable authority, motivational virtues such as truth-seeking which move you to exercise the relevant reliabilist virtues in the appropriate contexts, and regulatory virtues which guide their exercise.

Critical thinking teaching is beset by what is often called "the transfer problem": it is difficult to get students to use their critical thinking skills (which are a subset of the reliabilist virtues) in their other studies and in their everyday lives. We suggest that the problem might be addressed by a deliberate attempt on the part of critical thinking teachers to develop the motivational and regulatory virtues in their students as well as the reliabilist virtues.

2. RELIABILIST, MOTIVATIONAL AND REGULATORY VIRTUES

Consider a situation that might arise on Monday morning in a large first-year class. Imogen is sitting near the middle of the lecture theatre and paying careful and thoughtful attention to everything the lecturer says. Sebastian is sitting next to her, and he is trying to pay attention too, but he is impeded by a hangover. Robert is sitting in the front row writing it all down word for word so he can study it later for the exam. James is reading the student newspaper in the back row. Further along in the back row, Jenny is telling Megan in a whisper about her disastrous weekend, in the hope of being given a comforting hug, and Megan is responding with a detailed whispered analysis of exactly what Jenny did to cause things to go so wrong and how she can best get out of the resulting situation.

The lecturer asserts something that Imogen, on careful reflection, thinks is mistaken. Sebastian has the vague sense that there is a problem with it too, but he can't muster the will to figure out exactly what it is. None of the others have noticed the problem; the three in the back row aren't listening, and Robert, although he is listening, is not thinking about what he hears. Imogen raises her hand and puts her point and the lecturer readily engages, reconsidering his claim. He adjusts his claim in the light of Imogen's objection, and the discussion goes back and forth a few times until a version of the claim is reached that both parties think is defensible. Sebastian is following the moves, and is persuaded that the revised claim is better than the original one. He is pleased that his inchoate unease with the original claim has been vindicated, and impressed with Imogen's clarity of mind and boldness in speaking up. Robert is irritated - Imogen is wasting time that the lecturer needs if he is to cover all the points that the course outline says are to be covered in this lecture. James is amused by the comics page. Jenny feels miserable. Megan is very satisfied with her own analysis of Jenny's problem.

In the process of noticing the lecturer’s apparent mistake, Imogen has exercised cognitive capacities such as perception, the capacity for effective deductive or inductive reasoning, and memory (perhaps of something she has already learned). To be in a position to exercise these capacities, she must be motivated: she is paying attention to what is said, and thinking about it. Perhaps she

is motivated by a generalised desire to get closer to the truth, or a specific desire to get closer to the truth about the point at hand; perhaps she is generally diligent, and sees that what this class requires is careful and critical thinking; perhaps she is motivated by the desire to impress Sebastian or the lecturer. There are any number of motivations she might have, but she must have one. Paying careful and critical attention is not something that just happens: it takes effort.

In speaking up and putting her point, Imogen displays intellectual courage and autonomy. By giving due consideration to Imogen's point and reconsidering his claims accordingly, the lecturer deploys his own cognitive capacities, and in deploying them properly and in appropriate measure, he also displays open-mindedness in being prepared to reconsider and to adjust his claims. By being prepared properly to engage with points raised by someone who might be considered to have less knowledge of the matter in hand, and over whom he has power, the lecturer also exercises epistemic humility. In this scenario, everyone who is listening benefits by the exercise of these virtues, because the interaction will be more likely to lead the participants and listeners to true (and if the assertion was on a topic of importance to the students or the lecturer or both, significant) beliefs. In addition, the rest of the class (those who are listening) will have had habits of good enquiry modeled. Perhaps Robert will notice, reading over his notes, that Imogen's speaking up actually advanced and clarified the lecturer's exposition of the topic of the lecture, and change his view of what it is to be a good student in this class. Furthermore, those students who are properly motivated as enquirers have had an opportunity to exercise intellectual diligence, open-mindedness and the ability to recognize trustworthy authority. None of these advantages would have been gained if Imogen had not spoken up, or if the lecturer had defensively stuck to his initial position.

This scenario shows that being a truly critical thinker involves more than simply being good at evaluating arguments and weighing evidence. You might have those abilities and fail to deploy them in a situation in which they would be appropriate. This might happen because for some reason you cannot be bothered - as when Sebastian thinks something is amiss but doesn't manage to put in the effort to figure out exactly what, or when James reads the newspaper and Jenny tells Megan her troubles in the back row of the lecture theatre - a failure of motivation. Or it might happen because you fail to identify your situation as one in which critical thinking is called for - as Robert does when, having the view that lecturers have absolute epistemic authority, he occupies himself with writing down every word the lecturer utters rather than thinking critically about what is said. (You might also deploy critical thinking skills where they are not appropriate - as Megan does when Jenny confides in her seeking a sympathetic ear rather than a solution, and Megan gives a detailed analysis of precisely what her problem is and how it can be solved.)

The genuinely critical thinker has the reliabilist epistemic virtues – in particular, the ability to reason inductively and deductively. She also has the motivation to deploy those abilities in appropriate circumstances. And she has something else as well - the characteristics that we (following Lepock, 2011) are calling "regulatory virtues".

2.1. Regulatory virtues

Imogen displays intellectual courage and autonomy. The lecturer displays open-mindedness and epistemic humility. He does *not* deploy his reasoning skills to defend his position against all comers, but sees what is right about Imogen's point and adjusts his view accordingly. Characteristics such as intellectual autonomy, open-mindedness and epistemic humility regulate the application of reasoning skills. They constrain our cognitive and communicative exchanges with others, enabling us to treat other enquirers properly and to take proper account of the contributions they make to enquiry. We will not defend any particular list of the regulatory virtues here, but others that recur in the literature include fairness, conscientiousness, intellectual candour, and having a sense of proportion. (See for example Zagzebski, 1996; Lepock, 2011; Cohen, 2009; Aberdein, 2010.)

In our example, the protagonists exercise these characteristics in a balanced way. The good student strikes a balance between autonomy and the recognition of appropriate authority, recognizing the authority of the lecturer but not according it too much weight, thereby remaining prepared critically to evaluate the points the lecturer raises. The lecturer displays intellectual humility, but not too generously. If he was too humble (for example, if he capitulated immediately without having properly considered Imogen's point) then he might mistakenly revise his own position, or revise it correctly but on the strength of little or no evidence. The lecturer displays open-mindedness, but it would be a vice to be entirely open-minded. If it were immediately clear that Imogen's point was irrelevant to the matter at hand, then there would be no need to consider revision of his own position in the light of it. The intellectually conscientious move would be to explain why it is irrelevant.

The example also illustrates that the ways in which intellectual capacities come into play and the degree to which they need to be employed is in part determined by the role an enquirer plays within a process of enquiry**.** While both arguers and their audiences need to exercise their perceptual capacities, their capacities to reason well, their intellectual diligence, boldness, and ability to recognize and heed evidence, the person putting an argument may be required to exercise intellectual courage in greater degree than the person who receives it, especially if the conclusion is controversial. The receiver of an argument, on the other hand, is more likely to be required to display open-mindedness, especially if the argument requires them to revise or relinquish their existing beliefs.

2.2. Motivational virtues

Critical thinking, we have said, requires motivation, and we have left open the question of what motivates Imogen and the lecturer to behave as they do. Not all of the motivations we suggested for Imogen seem equally virtuous - if she is trying to impress, that seems a less good motivation than if she is trying to get to the bottom of the topic at hand because she thinks it is genuinely interesting and important. Nevertheless, all of the benefits (for Imogen, the lecturer and the rest of the class)

that we suggested would follow from her behavior follow from it independently of what motivated it.

Some motivations, however, will tend in general to lead to critical thinking in the situations in which critical thinking is required. The desire to impress is not one of them; the desire to get to the bottom of things is. Valuing significant truths, and inquiry and discussion as a means of getting to them; wanting to have, communicate and act on true beliefs; these are the kinds of characteristics we are calling motivational virtues.

Motivation is needed not just for the exercise of critical thinking abilities but also earlier, for their development. Perception, memory, introspection, and the ability to reason deductively and inductively are all capacities with which we are naturally endowed, but often training and practice are required in order that they be properly developed and appropriately employed. Perceptual abilities can be honed to take heed of features unavailable to those with standard perceptual ability - we can learn to listen properly to music, to appreciate the subtleties of fine wines, or to visually identify different types of aircraft from the shape of their wings or tails. Practice is required in order to hone cognitive and perceptual abilities, and practice requires motivation.

3. THE PROBLEM OF TRANSFER AND THE MOTIVATIONAL AND REGULATORY VIRTUES

We have recently been part of a team conducting an empirical study, in the course of which students were interviewed with a view to finding out how they think about their own deeply held beliefs (see Goldberg, Kingsbury and Bowell, 2013). The interviews graphically illustrate some of the problems we face as critical thinking teachers. Even though the interviewees have taken a critical thinking course and think they have benefited from it, many of them don't think that their beliefs about moral issues need to be backed up by reasons. One says, in response to the question "Why do you think meat-eating is morally ok?": *I don't know, I don't really think about it,* and later: E*veryone's entitled to their beliefs, I guess.* After some discussion of this point, she says *I try not to think about it.*

Some of the interviewees don't want to be faced with evidence for fear of what they might have to conclude from it, and how they might feel they might have to change their behaviour in response. Behaving as you think you ought might be very difficult; easier not to come to the conclusion that you ought. One says she *wishes* she was a vegetarian, because she is fond of animals, but when she is told about some of the evidence of how badly the meat industry treats animals, she says:

> *To a certain extent, ignorance is bliss.*
> Interviewer: *Better not to see the evidence, perhaps?*
> Interviewee: *It's not better [PAUSE] but [PAUSE] easier...*

> *If it was a simple choice, like reaching to the left or reaching to the right at the supermarket, that's something I could handle without having a mental breakdown over it.*[1]

The refrain *Everyone's entitled to their beliefs* recurred frequently, often seeming to function as a reason to think that all beliefs, and all reasons for belief, are equally good.

If the students have attitudes like these, it is unsurprising that the standard critical thinking course tends not to produce an improvement in reasoning outside the confines of the course.[2] Teaching critical thinking with the aim of developing not just the relevant (reliabilist) abilities but also the kinds of motivational and regulatory virtues discussed in the previous section might have considerable benefits, among them the mitigation of the problem of transfer.

Why might a student who did well in the end of semester critical thinking exam nevertheless not think critically when it comes time to choose a career, or to decide who to vote for or whether or not to eat meat? One possibility is that although they can solve a critical thinking problem when it is presented to them as such, they are not good at recognising critical thinking problems in the wild – they do not see that *this* is the kind of occasion those classes were supposed to prepare them for. Another is that although they have the skills and can see that this is the sort of situation in which they are applicable, they can't be bothered applying them (they lack the motivational virtues). Yet another is that they have not properly acquired the skills - either they had them but they did not stick, or what they acquired were not critical thinking skills in any broad sense but only the ability to do well in a critical thinking exam. It seems likely that all three of these are part of the explanation of the transfer problem. If we could instil in our students regulatory virtues, which involve being able to judge when and to what extent to employ which reliabilist virtues, that would help with the first kind of situation. If we could instil motivational virtues, getting students to see the importance of employing the reliabilist virtues in those contexts, that would help with the second.

Consider now the third possibility: the student has not properly or lastingly acquired the abilities involved in reasoning well and evaluating other people's reasoning. The results of research on what improves transfer are very mixed, but one feature that consistently appears to make a difference is the length of the critical thinking course (students in courses lasting five months or more are more likely to show gains) (Behar-Horenstein & Niu, 2011). Most critical thinking courses, however, are one-semester first-year courses, and there are not in general follow-up courses that give the student the opportunity to further develop and practice the skills taught in them. It would be unsurprising if the abilities developed do not have time to become deeply engrained, and the exercise of them habitual, in the brief period covered by the course.

---

[1] Goldberg, Kingsbury and Bowell, 2013: the quotations are from interviews with Participants 6 and 3 respectively.

[2] See Behar-Horenstein and Niu (2011), amongst many others, for evidence of the transfer problem.

Compare the one-semester critical thinking intervention to, for example, how people learn to do long division. Every year, for years and years, children do long division in math class, the exercises gradually becoming more complicated as the years go by. The same procedure keeps getting used, over years of practice exercises, until it is thoroughly engrained. For many adults who have been through this process, long division is second nature – they can recognise a situation in which long division is called for and do it, even if years have passed since the last such situation arose.

It might well be a good thing if critical thinking were taught in a sustained way in primary and/or secondary school. Failing that, it might be a good idea to introduce a higher-level tertiary course that picks up where the standard first-year course leaves off. But since most of us are, for the moment, stuck with the one-semester first-year critical thinking course, it may be worth thinking about how one might try to get students to act as though they were engaged in a longer course of study which continued after the formal critical thinking course had ended. Everyday life offers plenty of occasions for critical thinking, and the more of it students do, the more likely they will be to continue to do it, and to do it in the situations in which it is important. Again, the moral is that motivational and regulatory virtues need to be instilled in the student during the critical thinking course – but also, they need to be explicitly told what kind of skills are involved in critical thinking and that finding opportunities for practicing them both during and after the course will help to develop and maintain them.

Critical thinking students are often positioned as an audience for the arguments with which they are presented. The virtues helpful to good enquiry in this context include the courage to interrogate an argument, even when it is presented by someone who is generally taken to be authoritative or powerful (so students also need the ability to recognize appropriate authority) and open-mindedness (to be prepared to revise or relinquish beliefs on the strength of a good argument that gives good reason to doubt those beliefs). Students also need to learn to exercise fairness in their approach to an argument, and this will include avoiding *ad hominem* responses that reject an argument out of hand on the basis of who or what the arguer (supposedly) is. First and foremost, however, before coming to be able appropriately to manage their own enquiry and their responses to arguments, students need to be able to recognize situations in which they ought to use their reasoning skills, and to be motivated to use them in these situations. They need to have come to the view that the ability to reason well and to act on the results is a good.

REFERENCES

Aberdein, A. (2010). Virtue in argument. *Argumentation, 24*, 165-179.

Behar-Horenstein, L., & Niu, L. (2011). Teaching critical thinking skills in higher education: a review of the literature. *Journal of College Teaching and Learning*, *8*, 25-41.

Battaly, H. (2010). Attacking character: ad hominem argument and virtue epistemology. *Informal Logic*, *30*, 361-390.

Bowell, T., & Kingsbury, J. (2013). Virtue and argument: taking character into account. *Informal Logic*, *33*, 22-32.

Cohen, D. H. (2009). Keeping an open mind and having a sense of proportion as virtues in argument. *Cogency, 1*, 49–64.

Goldberg, I., Kingsbury, J., & Bowell , T. (2013). Measuring critical thinking about deeply held beliefs. *Virtues of Argumentation. Proceedings of the 10th International Conference of the Ontario Society for the Study of Argumentation*.

Lepock, C. (2011) Unifying the intellectual virtues. *Philosophy and Phenomenological Research*, *83*, 106-128.

Zagzebski, L. (1996). *Virtues of the mind: An inquiry into the nature of virtue and the ethical foundations of knowledge.* New York: Cambridge University Press.