

Intellectual Virtues and Education Practice

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Abstract: Virtue epistemology is one of the dominant approaches in contemporary epistemology. In recent years, its potential for education became the object for research among epistemologists and philosophers of education. In this study, we define character-based approach in virtue epistemology. We argue for weak versions of conservative and autonomous approaches to character-based virtue epistemology. We analyze and critically explore intellectual virtues such as open-mindedness, love of knowledge and intellectual autonomy. Finally, we propose a roadmap for cultivating intellectual virtues in education practice. We maintain that although intellectual virtues cannot be taught directly, they can be fostered in the appropriate environment.

Key words: Virtue epistemology, intellectual virtues, intellectual character, philosophy of education, fostered

INTRODUCTION

In this study, we would like to explore the issue of intellectual virtues in the context of education practice. We will first outline the aims and purposes of virtue epistemology as a new philosophical approach to understanding knowledge. Then, we will focus on analysis of key intellectual virtues such as open-mindedness, love of knowledge and intellectual autonomy. The selection of these particular virtues is explained by their special importance for the goals of education. We will also explore some problems with defining these virtues. In the last study, we will attempt to outline a roadmap for educating intellectual virtues. We have already discussed some recipes of educating an intellectually virtuous person elsewhere (Karimov, 2014; Kazakova and Karimov, 2011). We believe that the research which links epistemology and education will be fruitful both for discussing issues of epistemology, philosophy of education as well as have practical importance for education managers and teachers.

MATERIALS AND METHODS

Main part

Virtue epistemology as a new paradigm in theory of knowledge: In the last decade, of the 20th century and the beginning of this century Virtue Epistemology (VE) became quite popular in theory of knowledge. There are several reasons for this. The foremost is that VE offered a fresh outlook on what epistemology should be doing generally and how it should solve its traditional problems. The main problem which occupied epistemologists at

least, since 1963 when Edmund Gettier published his famous 3-page article was the definition of knowledge. The traditional definition which came to be known as JTB-theory and which dates back to Plato postulated that knowledge requires that three conditions be satisfied: that knowledge should be true (false knowledge is a priori not knowledge); that it should be a type of belief (a certain state of mind which computers don't have for example); that it should be justified. Gettier (1963) showed with a couple of counter examples that these conditions are necessary but not sufficient. After that there was an explosion of works which tried to patch the original definitions adding new conditions. But, as the new conditions were added, new counter-arguments were devised. As these conditions started piling up it became evident that a new approach was required to define knowledge. In the 80-90 of the 20th century epistemologists turned their eye to ethics which was also in the crisis at this period. For a long time, two approaches were dominant in ethics: deontological ethics and utilitarianism. The proponents of these approaches already exhausted their arguments when Anscombe (1958) proposed to turn back to Aristotle and defended the virtue approach to ethics. The Greek equivalent of the term virtue "Aretha" means any kind of excellence. For example, the virtue of a knife would be that it cuts well and the virtue of an eagle would be the ability to see a mouse from 300 m high. A subset of virtues are moral virtues. They apply to human conduct. These are the qualities of an excellent person. The idea which exploded the traditional discourse in ethics was that it is not the action which should be qualified as right or wrong; rather the terms good and bad apply to personal character traits.

Good is something which a good person (e.g., Socrates) would typically do. Aristotle (2000) was first to distinguish between moral and intellectual virtues. He defined intellectual virtues as “states by virtue of which the soul possesses truth by way of affirmation or denial” and he named “art” (techne), “scientific knowledge” (episteme), “practical wisdom” (phronesis), “philosophic wisdom” (sophia) and “intuitive reason” (nous) as the five central intellectual virtues.

The 20th century epistemologists embraced this idea of intellectual (or epistemic) virtue and proposed a new approach to solution of epistemological problems on the basis of the concept of virtue. Different versions of VE gave different interpretation of what should be called intellectual virtue. The proponents of the first version, virtue reliabilism, tried to define virtue in terms of faculties which serve cognition such as eyesight hearing and so on (Sosa, 1980). The central idea of virtue reliabilism is that only those beliefs amount to knowledge which were formed owing to the use of intellectual virtues (or faculties), thus avoiding the Gettier counterexamples. The opponents from the camp of character-based VE argued that while it may be true for such simple beliefs as my sitting now in front of computer and typing, it is far less obvious that the same holds for more complex beliefs such as scientific, philosophical or religious beliefs. It is hard to agree that all that needs to be done in those areas in order to acquire knowledge is the proper functioning of sensory and intellectual faculties. To acquire a good belief in science you will typically need such qualities as inquisitiveness, open-mindedness, perseverance, intellectual honesty and others which are not cognitive faculties. These are the traits of intellectual character. Such types of inquiry place demand on us as cognitive agents. The main difference between cognitive faculties and intellectual character traits is that faculties are innate while intellectual character traits are developed. We are born with certain abilities such as eyesight, hearing, etc. Virtues, on the contrary, need to be cultivated. We don't naturally tend to be open-minded or intellectually charitable; we need to be taught to be that way. Thus, character-based VE maintained that epistemology should be a normative discipline. The main problem is that traditional epistemology was very abstract and detached from the real process of acquiring knowledge, it was a very sophisticated debate which was hardly applied to science or education. If epistemology is to be some kind of organon for acquiring knowledge it should answer the fundamental question: what does it take to be a good knower? The latter question is central for character-based virtue epistemology (Zagzebski, 1996). This new project in epistemology was aimed at changing the whole agenda

of epistemology. Rather than analyzing a ready piece of knowledge, we should be studying different practices which aim at acquiring knowledge and what helps us achieve excellence in this practices. Therefore, the central for VE is the analysis of intellectual character.

The literature soon started to pile up on the issue of intellectual virtues such as open-mindedness, intellectual autonomy, intellectual courage and others. There is a controversy among virtue epistemologists about the issue how VE should be going about the traditional epistemology. According to Baehr (2011), we can distinguish between conservative and autonomous approaches in character-based VE. The conservative approach is that VE should be seen as a new way to solve traditional problems in epistemology. The autonomous approach postulates that virtue epistemology largely should be not concerned with traditional problems and has its own area of research. We adhere to the weak versions of both approaches. Firstly, we see that traditional epistemology could use the potential of virtue epistemology for its own problems because any full-fledged account of knowledge will include reference to intellectual character traits, especially in regard to such knowledge as science and philosophy. For example, without love of knowledge as a dominant intellectual character trait one cannot become a good scientist. We acknowledge that sometimes a scientist may have other external motives for doing scientific research such as fame and money. But, they would never enter this profession in the first place without having some internal motives and would never succeed as good scientists without internal motives guided by positive intellectual character traits. Secondly, we agree that VE opens a whole new area for research which consists mainly of two themes:

- Analysis of different intellectual virtues
- Application of intellectual virtues in different epistemic practices such as teaching, reading, writing, arguing and so on. The former has now a considerable amount of literature and there is a growing amount of literature which tries to connect virtue epistemology to education (Macallister, 2012; Pritchard, 2013; Baehr, 2013)

RESULTS AND DISCUSSION

Intellectual virtues. Open-mindedness, love of knowledge, intellectual autonomy: First, there is the question about the structure and content of intellectual virtues. Different researchers emphasize different virtues and there is no canonical doctrine about what each virtue means. Baehr (2011) identifies six groupings of intellectual virtues

according to the requirements that intellectual inquiry places on us. The first demand is motivational how the inquiry is supposed to begin at all. The intellectual virtues that are important here are inquisitiveness, reflectiveness, contemplativeness, curiosity, wonder. Corresponding vices are intellectual laziness and unreflectiveness. A second requirement of inquiry is focus. It requires of us such traits as attentiveness, sensitivity to detail, careful observation, scrutiny and perceptiveness. A third concern is for evaluation of different sources of information. The corresponding virtues are intellectual fairness, consistency and objectivity, impartiality. The fourth requirement is to avoid self-deception which requires such traits as self-awareness and self-scrutiny, intellectual integrity. The fifth requirement is the ability "to think outside the box". This requires the following virtues: imaginativeness, creativity, intellectual adaptability, flexibility, agility and open-mindedness. Finally, intellectual inquiry demands exertion and endurance, so intellectual courage, determination, patience, diligence and tenacity are required. This classification seems plausible, though the first and the fifth group as well as the third and the fourth groups are very close and could be united into one. But Baehr (2011) himself says that this classification is neither exhaustive, nor mutually exclusive. This is justified because intellectual virtues are dependent on one another and cannot "operate" separately.

What is the difference between intellectual and moral virtues? There can be at least three different viewpoints on this matter. The first would be that there is no principal distinction between moral and intellectual virtues. All intellectual virtues are thus, reduced to moral ones. For example, intellectual courage is a form of courage *per se*. Some examples of intellectual courage in the literature suggest this. For example, if the reporter finds some important information about local government but she knows that publishing this information will result in her resignation and possible closing down the newspaper, it takes courage to publish this information notwithstanding. We agree that this would be the instance of courage *per se* but we think this is not genuine intellectual courage. Intellectual courage is the courage to think differently when all the available evidence suggests otherwise. This suggests that intellectual virtues are part of intellectual domain rather than moral. The second possible viewpoint is that intellectual virtues are a subset of moral virtue. The counter argument here would be the case when someone has genuine intellectual virtue while, at the same time, lacking moral virtue. Imagine some scientist who values intellectual goods and is a brilliant researcher but, at the

same time, he doesn't care about his family and children, financially or otherwise. We would call that person a moral wretch, even if he is an excellent scientist. This example shows that intellectual virtues can be separated from moral virtues. The third view which we adhere to is the complex view that intellectual virtues and moral virtues are different types of excellence. Zagzebski (1996) maintains that intellectual virtues are different from moral because they involve "a cognitive contact with reality". Intellectual virtues are virtues of human beings *qua* cognitive agents. Moral virtues are excellences of human beings *qua* persons. But, since personal traits spread across the whole personality of a human being intellectual virtues cannot be completely separated from moral virtues. Usually, when a person is fair-minded, she will likely show fairness as a moral virtue. Likewise, when a person is charitable to others she is likely to manifest intellectual charity in her cognitive life. Virtues, moral and intellectual alike, contribute to human flourishing.

What are the character traits that contribute most to best education practices? We will divide them into two groups. The first group are virtues which are self-regarding. These are virtues that the teacher tries to foster in their students. The second group comprises other-regarding intellectual virtues. These are virtues with are required from the teachers themselves.

Among self-regarding virtues that we believe should be of special interest to educators are open-mindedness, love of knowledge and intellectual autonomy. In this study, we would like to give the general idea of these intellectual virtues. Open-mindedness is an intellectual trait that is required in a situation when there is a conflict of opinions, an argument going on between opposing parties. Open-mindedness is opposed to dogmatism. Generally, open-mindedness means that a person is ready to set aside her own beliefs and give an impartial ear to the opposing view or if a person doesn't already have a formed belief on the matter, she is willing to listen carefully and impartially to all opposing parties (Roberts *et al.*, 2007). The latter case is easier to imagine. The ideal here would be an impartial judge who rules for or against conflicting parties only on the basis of objective evidence. At the same time, we can think of several obstacles on this path. The first is the lack of desire from a person to decide at all. An average person out there wants one truth and wants it quick. He is not comfortable in the first place with the situation of possible argument and conflict because it places on him the burden of decision who is right and who is wrong. And this usually takes some intellectual effort, the lack of which is usually demonstrated by an average person. In most cases, a person tries to convince himself that the matter is

beyond positive solution and thinking about it is a waste of time and the person resists making judgment at all. This indifference is hard to overcome. The other danger is that even when a person is willing to give and impartial hearing to opposing parties, he is not able to recognize that one of the parties has actually more solid ground or that one of the parties indulges in sheer demagoguery. But at least, we can imagine something like this open-mindedness exercised in real life, albeit not by everybody. The harder case is when someone already has an established belief about something and facing weighty argument against it is cognitively obliged to relinquish her belief. This seems to be a too high a demand on someone. Suppose, someone showed you the evidence that your long-time friend is a child-molester or a drug-dealer. Your first inclination (and anyone else's) would be to simply disregard the evidence, to decide that the evidence is actually fabricated and to place trust with you friend. Unless of course, we are talking about epistemic saints. This reminds of what T.Kuhn said about changing of paradigms in science. According to T.Kuhn, a new paradigm replaces an old one when the old generation of scientists physically die. This seems a little extreme but dogmatism in science is just as well-known as dogmatism in religion. This type of open-mindedness is indeed hard to achieve but without it all inquiry would stagnate. Unless a person decides to change her mind on the issue under the pressure of counter-evidence she cannot progress in cognition. We must mention another issue about-mindedness. Like all virtues, it can be turned to vice if practiced inappropriately. You can't be open-minded in the sense that you can be swayed in your opinion about everything with a slightest doubt. For example, one can be open-minded in regards to the question whether there is life on Mars. But, it would be unwise to be open-minded to everything that is written in yellow press or passed as gossip. One shouldn't be open-minded to the point when "his brains fall out". A healthy dogmatism would be required here from an intellectually virtuous person.

Open-mindedness doesn't work just by itself. It needs the drive from other intellectual virtues. The "driving" virtue for open-mindedness is love of knowledge. It is true that, it is hard to relinquish your beliefs especially if they were validated until now by numerous facts but if there is an overriding desire for knowledge, then open-mindedness may be given way against the hardest of convictions. Love of knowledge is may be the most important intellectual virtue for the purposes of education. As Aristotle said, all men by nature desire to know. There are a couple of problems with defining what love of knowledge is. The first is what

kind of knowledge should be loved. Not every kind of knowledge is such that it is worthy of loving, e.g., knowledge of how many blades of grass are there in your lawn or knowledge about how many steps exactly are there on the staircase at your office. Our cognitive powers are discriminative and we desire to know something that is important for us. It must be noted here that importance is not the same as practical utility. Knowledge about the origin of the universe or about deep metaphysical issues serves no practical purpose but is important in some other way. To explain in what way following Roberts *et al.* (2007), we need to divide all knowledge in three types. First, there is propositional knowledge which is formulated in the form of propositions "A is B". Second, there is knowledge as understanding. We not only form beliefs but try to get a deeper understanding of why A is B. Beliefs can be held without understanding for practical purposes. I can have beliefs about how cell-phones function without deep understanding of the laws of physics. But, understanding is important if we want to have some knowledge about the nature and purpose of things. The third kind of knowledge is the first-hand knowledge or knowledge by acquaintance in Russell's terms. This would be the first-hand experience of Niagara Falls or Mona Lisa, watching sunset, etc. This knowledge is also important even though it serves no practical purpose. We would say that all knowledge that brings us satisfaction and serves human flourishing is important. Also knowledge must be relevant for a certain context and certain people. For example, knowledge about the structure of microscopic particles is important but it is not relevant for a judge passing the judgment in court. So, we would say that there are contextual limitations for love of knowledge.

The other problem is more general. It is about the value of knowledge. Why is knowledge more valuable than mere true belief? This question is discussed widely among modern epistemologists (Ryan, 2014). The issue is traced back to Plato (1963). In Meno Socrates asks what is the difference between someone who knows the right answer to the question "Which is the road to Larissa" and someone who has traveled there himself, so he truly knows the right road. The answer that Plato gives is roughly that knowledge is more grounded than mere true belief. It is not easily lost like the statues of Daedalus which were by the legend so life like that they had to be tethered so that they would not run away. As Plato writes, "true opinions are a fine thing and do all sorts of good, so long as they stay in their place but they will not stay long. They run away from a man's mind; so they are not worth much until you tether them by working out the reason". Why this question is relevant for education practices?

The question is why the attainment of knowledge should be the primary goal of education over and above mere true belief. To answer this question, we must follow Pritchard (2013) who distinguishes between mere cognitive success and cognitive achievement. The difference is that mere cognitive success can be attained in relatively friendly epistemic environments. For example in ordinary case when you use your sense of perception and form a belief that there is a cup of tea in front of you, we would call that a cognitive success. On the contrary, cognitive achievements require the exercise of cognitive agency, e.g., in solving a difficult scientific problem. Pritchard (2013) distinguishes also between cognitive achievements and strong cognitive achievements. The latter are attained in the presence of unfriendly or even hostile epistemic environment. The idea is that, you don't need to teach someone to have a mere cognitive success. But cognitive achievements are harder to get so the "educational process should continue enhancing the cognitive skills of the pupil, to encourage the level of display of cognitive agency at issue in strong cognitive achievements".

The third most important intellectual virtue is intellectual autonomy. Intellectual autonomy should first be separated from more familiar notions of moral and political autonomy. We call someone autonomous in politics or in morality if this person is capable of making decisions by herself. We don't allow voting those who are under 18 precisely because, we believe that they are not capable of making a choice by themselves. Intellectual autonomy is roughly the ability to think autonomously. Autonomy is the Greek word for self-government. *Sapere aude!* Have courage to use your own reason is the main motto of Enlightenment, according to Kant. One problem here is that a cognitive agent is not Robinson Crusoe. He functions in society and is influenced by different traditions among them the traditions of cognition. We are taught in schools and universities to follow the same ways that are accepted in our community (including scientific community which is represented by editorial boards of scientific journals and so on). So, a cognitive agent is indebted to others for much of his knowledge. Moreover, autonomy can be a vice if someone rejects advice and criticism from others when they are due. So the difficulty here is to draw the thin line between the situation when a knower should govern himself and when he should be governed by others. We believe that ultimately, we want to have someone thinking for themselves and without the help of others. But, to achieve that cognitive ability a person needs teaching and guidance from others. This guidance, of course, requires from the teachers that they foster critical thinking and questioning from their students. An extreme counter

example would be having someone to memorize some data by heart without any questions or discussion. It is important in education to let the students find some answers for themselves and not chew everything and put in their mouths. The right amount of guidance is a virtue of the teacher. Thus, autonomy as a virtue comes with a provision that there should be a reasonable and appropriate guidance from others.

We discussed some of the most important intellectual virtues from a educator's standpoint but this account would not be sufficient without mentioning of other-regarding virtues. Driver (2000) suggests that intellectual character traits produce epistemic goods for oneself while moral traits contribute to flourishing of others. This would be true only if intellectual virtues were only self-regarding but there are also other-regarding intellectual virtues which are demanded in such practice as teaching which we will explore later on. Open-mindedness, love of knowledge and autonomy are egoistic in the sense that they benefit the ones who have those virtues, in other words, they are self-regarding virtues. Wright (1963) explains the difference between self-regarding and other-regarding virtues is as follows: "One way of marking the distinction between them is to say that self-regarding virtues essentially serve the welfare of the agent himself, who possesses and practices them whereas other-regarding virtues essentially serve the good of other beings. The sharpness of the distinction is not obliterated by the obvious fact that virtues which are essentially self-regarding, may also be accidentally other regarding and vice versa". Kawall (2004) lists the following as 'candidates' for other-regarding epistemic virtues:

- Honesty (e.g., in one's testimony), sincerity, integrity (including an unwillingness to misuse one's status as expert) and creativity (which can inspire others and lead to the discovery of new truths in a community)
- The skills of a good teacher
- The skills of a good listener (and critic) insofar as they help other epistemic agents to articulate and examine their own beliefs carefully and lucidly"

There are, of course, exceptions from this list. One of the best examples here to demonstrate other-regarding virtues would be Socrates's irony. When Socrates pretended to agree with his interlocutors he didn't show any sincerity but the purpose of this intentional lying was educational.

Educating intellectual virtues: Why are we sure that, it is important to pay special attention to fostering intellectual

virtues in education practices? It may seem that intellectual and moral virtues are acquired not by memorizing the list of them but in the process of immediate communication in appropriate social environment. Therefore, intellectual virtues should not be the problem for the educator whose primary aim is to transfer a set amount of knowledge to the student. The answer to this objection is that modern education is realized in information-based society. We believe that mere transference of knowledge in the situation of free and growing information flow has almost no value. Thus, the realization of intellectual virtue approach to education can be regarded as a further step to humanization of education and an advance compared to critical thinking approach. The early realization of this new approach can be traced to Lipman (1991). His idea is that the purpose of education is to educate future citizens. According to Lipman, the process of education should be modelled on the example of scientific inquiry. This means that the qualities that are required from a future researcher should be fostered already in young age. Here, again an objection could be raised that even if we agree with this position in general and hold that the purpose of education is not transference of knowledge and not even acquiring competencies, this approach could only work in early childhood when the personality is being formed. It seems that it's too late to talk about teaching virtue to students in high schools and universities. In reality, we face the situation that in many countries the students who enter high schools or universities are in their majority not intellectually mature. Our own practice of working with students of different age is that only 10% of them were in a situation where they could reveal their intellectual virtues. Therefore, we believe that development of intellectual virtues in students should become the actual goal of modern education. If this goal is not fulfilled in early stages then it should be reached in later stages.

But how do we teach someone to be intellectually virtuous? Some recipes were already discussed by Bæhr (2013) but generally this problem is explored very little. Here our intention is modest. We would like to outline a complex approach to education where the situations are created where the person is capable of self-formation. This approach can be summed up in the following points.

Virtues unlike knowledge and skills cannot be transferred by training they cannot be trained directly. We maintain that virtues can only be developed by a virtuous person during the activity of self-perfection. If we are talking about formation of virtues in education practice, we should regard the student not as an object who is to be perfected by the teachers but as an agent who acquires

self-knowledge and through self-knowledge forms some traits of his or her intellectual character. The problem is how can we direct the process of self-building that it fits the goals that we set? And how can we assess the results of this self-building?

One of the solutions which could be proposed is the creation of environment for independent problem solving. In this "free search" the students get the opportunity to realize their personal intellectual character traits, question their own beliefs and values and form new more mature beliefs.

There are also certain demands for the group in which a student is studying. The environment of "the society of researchers" stimulates this intensive search. The question put in the right form and asked in a group which has certain internal relationships promote this "free search" and self-transformation of personality.

The questions should be formulated in such a way that they should have a single correct answer. The form of the question should contain the model of interaction about this problem. The problems should be introduced in the form of a dialogue and discussion which contains the initial arguments and counter-arguments for stimulation of research attitude.

The position of the teacher should be free from such tasks as control and assessment. The teacher is an organizer (a manager). The relationships in the group should be in the form of mutual respect and interest. Since, the teacher doesn't assess the work of the group, the assessment is carried out inside the group by the students themselves which gradually brings the possibility of self-assessment. Objective self-assessment is one of the most important intellectual goals. Outside observer should assess the effectiveness of work not by the results (a test, a report) but by the character of the work on the problem (interestedness, perseverance, etc.).

The implementation of intellectual virtue approach in education is aimed at raising the motivation of students for education. Self-awareness of the need of personal growth creates in the students the aspiration to realize intellectual virtues in other activities. The above mentioned tasks cannot be achieved without first changes in local and international government regulation of education (Nigomatullina and Nikolayeva, 2013). The perspectives of implementation of virtue approach to education require organizational-structural changes (Kupriyanov *et al.*, 2015).

CONCLUSION

In contemporary discussions of education the idea of preparation of qualified force is sometimes

contrasted with the idea of Bildung, the German term for self-cultivation (Stockfors, 2014). We maintain that introducing intellectual virtues in education agenda helps achieve the goals of Bildung. We support the notion that the final goal of education is preparation of a good citizen. A good citizen will be morally and intellectually virtuous. Education should be directed to foster the growth of intellectual character by cultivation of intellectual virtues. Open-mindedness is a character trait which opposes dogmatism and cultivated future citizens against the dangers of fanaticism and extremism, religious or political. Love of knowledge helps realize the idea of life-long learning, brings in the internal value for knowledge. It secures future progress in advance of knowledge. Intellectual autonomy is necessary for moral and political autonomy because moral and political decisions of a citizen must be informed and rational. In this study, we attempted to explore the notions of intellectual virtue in the context of education. We analyzed some of the critically important intellectual virtues and revealed some difficulties in defining them. Finally, we sketched the roadmap for implementation of virtue approach to education. We suggested that this will require the change of the role of the teacher in education practice. We maintained that this role amounts to creating the environment where intellectual virtues of the students will develop and mature.

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