

## Virtue Epistemology and Psychology of Education

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**Abstract:** The main difference between “traditional” epistemology and virtue epistemology is outlined. The relevance of virtue epistemology to philosophy of education is set out. The ramifications of two main branches of virtue epistemology – virtue reliabilism and virtue responsibilism – for education are analyzed. The significance of cognitive agency for knowledge is shown. The importance of first-order and second-order cognitive faculties is maintained. The role of testimonial knowledge for education and problems it poses for virtue epistemology is exposed. It is proposed that testimonial knowledge could be virtuously provided that it is attained in epistemically friendly environment. The status of intellectual autonomy as a cardinal intellectual virtue is defended. The goal of nurturing intellectual autonomy in education is explained. The problem of educating intellectual virtues is discussed. Contemporary virtue epistemology is compared with Russian tradition of “developmental education” of Elkonin and Davydov. The role of mutual cooperation between students for attaining intellectual virtues is stressed.

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### 1. Introduction.

Virtue epistemology became the dominant viewpoint in contemporary epistemology in the last 10-20 years. At the same time there has been a surge of interest in virtue epistemology (VE) among philosophers of education and various education practitioners (see Moran, 2011, Ortwein, 2012, Nurullin, 2014). This is explained by the fact that VE has normative, prescriptive character unlike “traditional” epistemology which was mainly descriptive. VE explores what knowledge should be like to be called knowledge and not just true belief. Different researches tried to explore how virtue epistemology could help in answering the traditional questions about goals and methods of education. This raised some theoretical and practical challenges. In this article we will concentrate on two main questions. First of all, what are intellectual virtues and what is their role in education? Secondly, how can they be taught? In answering those questions researchers assume one or the other version of VE. For philosophers of education it is standard to assume the responsibilist version of VE because it focuses on traits that can be fostered and developed. The reliabilist approach was initially aimed at solving the Gettier problem and skeptical challenge. Nevertheless, some proponents of VE explore the practical implications of virtue reliabilism for education. We suggest that it is not necessary to choose between one or the other of these approaches. In analyzing education these approaches do not conflict with each other. Rather they focus on different dimensions of education. Virtue reliabilism

helps analyze the epistemology of education generally, define final goals of education, and offers a general framework of analyzing education. Virtue responsibilist approach focuses on more specific goals of education and means of achieving them. In this article we will draw on both approaches. At the end of the article we will explore practical issues which arise in educating intellectual virtues. Particularly, we will address the role of cooperation and interaction between students in educating cognitive faculties and intellectual traits in Russian tradition “developmental education”.

### 2. Virtue reliabilism and education.

What does it mean to know something? Traditional epistemology focused on knowledge as the end result of cognition and analyzed it separately from the knower. G.Frege and K.Popper even defended the view that knowledge exists somehow separately from mind and comprises the third realm of reality in addition to physical reality and subjective reality. Mathematical and logical truths, knowledge of laws of nature exist as true propositions outside of time and space: they were always true and will forever be true. As such, epistemology was of little interest to the philosophy of education. From this point of view the only thing you had to secure was that the knowledge that teachers passed to their students was genuine, true knowledge. VE makes a sharp turn from this view. The central issue for VE is cognitive agency: who is it that knows? What’s the difference between people who correctly answer a certain question, say the

square root of 9? Suppose one of them found the answer in Internet or asked a friend, the other picked a lucky guess, while the third performed the calculation herself. All of them report correctly, but intuitively it seems that only the latter has genuine knowledge. What makes the last case different? E.Sosa proposed the archery metaphor for knowledge (Sosa, 2007). In many respects knowing is like archery. You make a claim and if it's true, you "hit the target" in bull's-eye. But a successful hit is not enough to be a good archer. The archer must manifest relevant skill. But even that's not enough. Suppose that a skillful archer shoots the target, but then a powerful gust of wind diverts the arrow, so that it misses the target. Suppose also that a second gust of wind pushes the arrow back on the right course and it finally hits the target. In that case, the shot would be successful, the archer manifested relevant skill, but the success of the shot was not due to the skill. The shot is not apt, it is not creditable to the archer, but to whimsical conditions of nature. To summarize, the archer's shot can be assessed in three different respects: 1) whether it was accurate, 2) whether it was skillful, or adroit, and 3) whether it was apt – accurate because it was adroit. Sosa calls this the AAA-structure. Beliefs also fall under the AAA-structure. According to Sosa, beliefs are performances, a special type of epistemic performance. We can speak about 1) the accuracy of belief, i.e. its truth, 2) its adroitness, i.e. whether it manifests epistemic virtue or competence and 3) aptness of belief, i.e. whether it's true because it is competent. Going back to our example, it is now clear why only the latter student really knew the square root of 9. The others satisfied the accuracy condition but didn't satisfy the adroitness and aptness condition. The cognitive success of the latter student was due to exercise of his ability. Virtue reliabilist claims that reliable abilities or faculties are epistemic or cognitive virtues. Therefore, belief that is attributed to exercise of ability is a virtuous belief. This account of knowledge correspondingly shifts the goals of education generally to form apt beliefs and not just true beliefs. The importance of acquiring apt beliefs becomes especially manifest when the epistemic environment is unfriendly as, e.g. in the Internet, where the student has to be very careful where to look for answers. The other danger is that the epistemic environment becomes too friendly when the teacher undermines the students' own incentive to look for answers. An example would be when the teacher in philosophy class informs students about all forms of argumentation pro and contra a given thesis in the history of philosophy before the students have the chance to think and choose for themselves. In this case, it is better for the teacher to

wait till the students come with an argument of their own and only then to inform them of other known arguments. In light of this discussion of the role of the teacher one more epistemological question must be answered. Should a person have a first-person access to justification for her beliefs? Should knowledge be reflective? Should first-order knowledge be accompanied by corresponding meta-level knowledge? Sosa develops his conception of meta-competence to explain what he calls reflective knowledge (Sosa, 2007, 2008). Let's use again the analogy with the hunter. The hunter is different from the archer because the hunter must be careful in picking his shots. He needs to know when, where and in what conditions to shoot in order to hit his target successfully. And, more importantly, he needs to know when to withhold from shooting. For example, if the external conditions are not appropriate (there is a thick fog, for example), it would be wise to abstain from shooting in order to avoid failure, or even worse, accidentally shoot another man. In such case, though the hunter will abstain from shooting, his performance will nevertheless still be apt. To convert this example in the epistemology terms, one's first-order knowledge must be guided by the appropriate meta-level reflective knowledge. The reflective knowledge is in effect the competency which guides the knower whether he should form a belief at all on the question at issue, or should rather withhold. A belief is fully apt when the reflective knowledge guides the first-order apt belief so that it is apt. In such case, Sosa says the subject knows full well. Reflective knowledge presupposes that we not only know something, but that we also know that we know it. Different educational theorists wrote about the importance of meta-knowledge and meta-cognition (Flavell, Miller & Miller, 2002, Argyris, 1999). The idea is that students think not only about solving the problem at hand, but think about thinking.

### 3. Social knowledge and education.

Many beliefs that students acquire in the classroom are taken for granted based on the authority of the teacher. Clearly, testimonial knowledge is not grounded in exercise of cognitive ability and, hence, would not be virtuous. Should students question or somehow re-discover for themselves everything their professors tell them? This would be implausible and impractical. There are two possible ways a virtue epistemologist may answer this question. One is to straightforwardly deny the status of knowledge for testimonial knowledge. This implies several consequences that are hard to swallow. A lot of knowledge that we think we have from school or university would not be real knowledge. It would undermine the important role of

the teacher as a keeper and translator of knowledge to future generations. It would also ignore what H. Putnam called the division of epistemic labor. One cannot know everything. There are areas of expertise and competent experts in those areas. Specifically, teachers are supposed to be competent experts in their areas and we defer to them for their knowledge and expertise and expect them to share their knowledge with us. One way to answer this challenge is to attribute less to cognitive ability and more to the epistemic environment. Recall Sosa's archer metaphor. The role of the wind which pushed the arrow first away and then back on the right course may be interpreted to show that environment plays a negative role in assessment of the aptness of the shot. But the shot could not be apt in the first place if the environment were not sufficiently friendly, e.g. in case of a hurricane. It would just always miss the target no matter what the skill is. The same goes for belief-formation. If the knower is surrounded by total propaganda and has no choice what to believe in, any exercise of cognitive ability, however reliable, will lead to false beliefs. So, the appropriate environment is a necessary condition for successful exercise of a cognitive ability and, hence, a prerequisite for forming a virtuous belief. Classroom environment is supposed to be epistemically friendly and forming beliefs in such environment seems epistemically virtuous. Another way to defend VE against the challenge of testimonial knowledge is to claim that knowledge by itself is not enough – there must be understanding. Understanding as a category of epistemology was overlooked for quite some time, and treated with suspicion because of its subjective character. Only lately epistemologists turned their eyes to it (see Pritchard, 2009 and Pritchard, Grimm, 2006). But it is clear that knowledge and understanding can come apart as in the case of someone learning the square root of 9 from the Internet. In epistemically friendly environment one can gain knowledge without corresponding understanding. In this case one can have passive knowledge without contributing anything as a cognitive agent, whereas when one also tries to understand something they can save themselves from false conclusions in case the epistemic environment is unfriendly. Understanding coupled with knowledge ensures attaining cognitive achievement because then knowledge can be credited to the knower. The ideas of cognitive achievement and credit are key ideas in VE. Knowledge does not only have instrumental value. It is not only needed to earn high grades or secure a good job. Knowledge can be valuable for its own sake. If we deserve credit for our knowledge, it becomes our achievement. Attaining knowledge is delightful. Of course, not every piece of knowledge

that we have can be credited to us. Most of it is credited to famous scientists and our teachers. Nevertheless, the idea that knowledge is a form of achievement, something which is worthy of credit can be very fruitful for purposes of forming educational strategies. Usually, in our market-based society the purpose of education and acquisition of knowledge is seen to prepare a workforce that would sell on the market. Possessing a degree from a prestigious university is looked at as a step into higher social class. Not denying the role of education as a social lift it is important to note that the instrumentalist approach to knowledge leads to degradation of education. Scoring a high grade as a sole purpose of learning tends to make students focus only on what is necessary to get the grade. This view undermines self-education, the student doesn't learn to set herself educational goals beyond what is required by the curriculum. Viewing education and knowledge as simply means to an end is a source for cheating and plagiarism in education and academic spheres.

#### 4. Virtue responsibilism and education.

Another route in understanding virtue is taken by virtue responsibilism. Going back to Aristotle, L.Zagzebski redefined intellectual virtues as traits of intellectual character. She defined knowledge as ‘... a state of cognitive contact with reality arising out of acts of intellectual virtue’ (Zagzebski, 1996, p.298). Among intellectual virtues she lists “intellectual carefulness, perseverance, humility, vigor, flexibility, courage ... open-mindedness, fair-mindedness, insightfulness ... [and] ... intellectual integrity” in addition to “... the virtues opposed to wishful thinking, obtuseness and conformity” (Zagzebski, 1996, p.155). In answer to the problem of testimonial knowledge, a virtue responsibilist can say that there are virtues of the testimony-giver (sincerity, fairness, charity) and virtues of the testimony-taker (open-mindedness, critical assessment). If both, the testimony-giver and the testimony-taker, are epistemically virtuous, testimony leads to real knowledge. Why is it not enough just to rely on cognitive abilities as virtues? The answer is that relying on cognitive abilities alone does not make one a virtuous knower. As an example, the Soviet Union had rather good education and science, but having good Soviet education – knowing math, physics and chemistry – did not make one good knower because in their everyday lives Soviet citizens, some of them otherwise brilliant minds, believed blindly in the communist propaganda. What they lacked, obviously, is what would now be called intellectual virtue, virtuous intellectual character. Before we delve further into the notion of intellectual

character, it should be noted that the definition of intellectual virtue and intellectual character is contextual. In a very narrow and strict religious society such trait as open-mindedness could be considered as vice, and unwavering belief in authority could be considered as a prime virtue. Still, there is more or less general agreement between different scholars as to the list of intellectual virtues and vices. Zagzebski modelled her theory on Aristotelian understanding of intellectual virtue, but unlike Aristotle she subsumes intellectual virtue under moral virtue. This makes intellectual virtue as a sub-category of moral virtue in the sphere of cognition. Intellectual virtues are considered as a mean between extremes, just as moral virtues. For example, open-mindedness would be a mean between gullibility and dogmatism. Intellectual courage is a mean between intellectual rashness and intellectual cowardice. Zagzebski does not arrange intellectual virtues in a hierarchy but one can wonder if there is some cardinal intellectual virtue. And if there is one, it would be one of the prime goals of education to foster and develop it. One answer is that no intellectual virtue is above the others but they all come in together, i.e. you cannot have one without all the others. We believe that this is a strong claim that is hard to defend. Rather, we should find among intellectual virtues one that presupposes them all. The best candidate for this role is intellectual autonomy. Intellectual autonomy is usually defined as ability to think for yourself, make decisions on your own. It seems that at least all full age people have intellectual autonomy, because otherwise they couldn't legally marry, sign contracts, etc. It is true that there is some base intellectual autonomy, but beyond that it comes in degrees. The importance of intellectual autonomy was stressed by various philosophers and above all Immanuel Kant. In his famous essay "What is Enlightenment?" he defines it as "emergence from... self-imposed nonage (Unmündigkeit). Nonage is the inability to use one's own understanding without another's guidance. This nonage is self-imposed if its cause lies not in lack of understanding but in indecision and lack of courage to use one's own mind without another's guidance. Dare to know! (Sapere aude). 'Have the courage to use your own understanding', is therefore the motto of the enlightenment" (Kant, 1997). "Unmündigkeit" is also translated as immaturity. Here Kant talks about people who lived to a certain age, grown-ups, who possibly acquired different kinds of knowledge, but who are still immature. They still cannot or are not willing to think for themselves. They trust someone else to do it for them. What keeps them immature is laziness, cowardice and money. I need not think if I have a book that thinks for me. And, famously, I have

no need to think, if only I can pay. Kant's motto resonates very well with modern strategies of education, especially the idea of life-long education. Being able to think for oneself is to set oneself intellectual goals, find means to achieve and pursue them independently of the influence of the others. It is important that developing intellectual autonomy at the same time is overcoming one's intellectual vices, such as intellectual laziness and intellectual cowardice. Intellectual autonomy presupposes many other intellectual traits such as open-mindedness, intellectual courage, intellectual humility, and is opposed to such vices as conformity, dogmatism and wishful thinking. If I want to be intellectually autonomous I will be open to accept any result, challenge any authority, at the same time realistic evaluation of my progress, investigate every available cognitive option. I will lean away from conforming with a false but accepted view. I will believe something just because it would be very nice if it were true. Thus, intellectual autonomy can be viewed as a cardinal intellectual virtue. The importance of epistemic autonomy is stressed by Pritchard: "The pupil who has highly developed cognitive abilities and who can deal with epistemic unfriendly conditions has a self-reliance that pupils who depend on the right kind of helpful conditions being in play before they can have knowledge lack. Epistemic autonomy is arguably a good thing in its own right, regardless of what further epistemic benefits it might bring" (Pritchard, 2013). Correspondingly, developing it should become the highest goal of education. Intellectual autonomy can be considered as a synonym for cognitive agency. When I am autonomous I am no longer just an object for the influence of others, beneficiary or not. I am no longer passive, I become active and assume cognitive agency.

### 5. Educating intellectual virtues.

Theoretical and practical aspects of education are not always easily reconciled. The main issue here is: can intellectual virtues be taught? This turns the discussion from theoretical to practical sphere. Intellectual character is not nurtured by repeated exhortations: "try to be curious" or "show open-mindedness". If asked explicitly, students will maintain that they are open-minded, critical, and intellectually autonomous. And no one will admit that they are intellectually lazy or coward. Baehr proposes several strategies of nurturing intellectual character (Baehr, 2013). Firstly, institutional culture should be amended generally to include the commitment to education of virtues. This commitment should be reflected in the official mission of the educational institution, hiring faculty,

public relations, development of curricula, etc. The second strategy is direct instruction in intellectual virtue concepts and terminology with series of instructional lessons on what intellectual virtues are. The third strategy is to deliberately invoke self-reflection and self-assessment at class or at homework. The fourth strategy is to make explicit connections between the course material and intellectual virtues. To this it is usually added that teachers must manifest intellectual virtues themselves, so that students learn by imitating the example. In this article, however, we would like to pay special attention to the Russian tradition of “developmental education” by Elkonin and Davydov (Davydov, 1996, Elkonin, 2001). We will see that the ideas, propagated in by American philosophers in the 80-90-ies of the previous century were anticipated by the Russian philosophers, psychologists and educational theorists in the 50-60-ies of the previous century. Elkonin and Davydov claimed that the aim of education is the development of cognitive faculties, their mastering and reproduction, and not transference of knowledge and its reproduction. Education is the form of activity which results in the change in the student as the subject of learning. This change is manifested in the development of theoretical thinking which includes reflection, formulation of goals, planning, ability to exchange products of knowledge. These ideas have much in common with the tradition of VE. This commonality is even more interesting, considering the cultural environment of their emergence (50-ies in the Soviet Union and 90-ies of the liberal West). But these traditions have one main difference. For VE the social character of knowledge presents a challenge which demands determining those sources of knowledge which are trustworthy. For Elkonin and Davydov cooperation between individuals in acquiring knowledge is considered as the prime condition of development of personal traits (including intellectual traits). This cooperation includes not only “teacher-student” interaction, but also “student-student” interaction. This cooperation forms the environment where an individual acquires capacity for self-reflection and self-control. The cooperation produces incentives for self-education, which contributes to intellectual autonomy. It is important for the learners to realize that their education is socially important and praiseworthy. Through cooperation the learner is educated to ask meaningful questions to peers and teachers, to participate in discussions, and initiate those discussions. Thus, the external interaction of students translates itself into internal faculties of the individual. The teacher is considered as an authority and, therefore, is rarely subject to criticism. But in

the process of critical evaluation of the peers students learn to critically evaluate themselves. The self-reflection here results from viewing oneself through the eyes of the others.

## 6. Conclusions.

In this article we explored connections between the main version of contemporary virtue epistemology and education. VE focuses on cognitive agency and intellectual character. The agent is intellectually virtuous if her cognitive agency significantly contributes to her beliefs. Virtue reliabilism stresses the role of first-and-second order cognitive faculties for knowledge. The importance of cultivating cognitive faculties was shown in the case of hostile epistemic environment. Knowledge is considered as an achievement which can be credited to the knower. We explored how testimonial knowledge can be a challenge to VE. It was shown that this challenge can be answered by either shifting the emphasis on the role of epistemic environment or by defining the virtuous traits of the testimony-giver and testimony-taker. In discussion of virtue responsibilism we emphasized the role of intellectual autonomy as cardinal intellectual virtue. We saw that it presupposes many other intellectual virtues and that its importance was praised by Kant. We outlined briefly several strategies that were proposed for educating intellectual virtues. We compared VE with the tradition of “developmental education” of Elkonin and Davydov and saw much in common. The difference of Russian tradition is that it stresses the importance of mutual cooperation between students in fostering intellectual character traits, such as self-reflection and autonomy.

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