Dewey as Virtue Epistemologist

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***Dewey as Virtue Epistemologist: open-mindedness and the training of thought in* Democracy and Education**

Abstract

In epistemology today, the intellectual virtues are receiving renewed attention. In this vein, epistemologists like Roberts and Wood (2007) suggest that a key task of philosophy is not only to study the nature of knowledge and thought, but to promote good thinking. While not regarded as a standard thinker in virtue epistemology, Dewey thought like this too. In fact, study of the virtues that make for good thinking plays a key role in Dewey's educational thought, most notably in *Democracy and Education.* In this paper, I reconstruct Dewey's work on 'the training of thought' in *Democracy and Education* as a form of virtue epistemology. I give particular attention to Dewey's thinking about the virtue of 'open-mindedness' and highlight the touchpoints and differences between Dewey's conception of open-mindedness and contemporary accounts.

INTRODUCTION

In recent years, interest in the nature and acquisition of the intellectual virtues has grown in the Philosophy of Education. (MacAllister, 2012) The intellectual virtues are acquired intellectual character traits that govern how one is prone to think. For instance, we are used to describe thinkers as being intellectually honest, or intellectually dishonest, intellectually brave or cowardly, intellectually meticulous, or careless, or intellectually curious or dull. Such descriptions quite obviously contain evaluations of people as thinkers, but they also set standards for intellectual conduct in scientific, cultural and political life. We *want* people to demonstrate qualities like curiosity, honesty, courage, rigor, creativity (and a great many others) in how they think about the world. We also do not want them to demonstrate dishonesty, cowardice, sloppiness or drabness in their thinking. On the whole, good intellectual character is to be encouraged and bad intellectual character to be discouraged; concomitantly, few would disagree that part of the task of enlightened schools is to foster good intellectual character traits amongst its students.

The effort to form students' intellectual character in positive ways has long been seen as one of the central aims of education. Plato, for instance, proposes that there is but one intellectual virtue – wisdom – and that all the other virtues are subordinate to it. (*Republic*, 428a–444e) For Plato, the task of education (at least, the education of philosophers) is to cultivate the wisdom that is needed to understand the true nature of the physical, moral and political world. Aristotle distinguished the intellectual from the moral virtues and held that there are five different forms of intellectual virtue: theoretical or scientific knowledge (*episteme*), craft knowledge (*techne*), practical wisdom (*phronesis*), intuition (*nous*), and philosophic wisdom (*sofia*). Aristotle held that, while one can teach the intellectual virtues, strictly speaking, the moral virtues cannot be taught – they can only be practiced. It follows that, for Aristotle, the main formative work of education is to shape children's intellectual faculties; in fact, Aristotle held that the kind of education he had in mind

would only work with older children who had already acquired the moral virtues (that is before entering his *Lyceum*).

The intellectual virtues required for good thinking were not only prized by the ancients. Locke's work on education (in *Some Thoughts Concerning Education*) and his work on epistemology (e.g. his *Essay Concerning Human Understanding*) contains much reference to the character traits needed for good thinking. Indeed, Roberts and Wood (2007, pp. 20-22) hold that Locke had a *regulative* view of the task of epistemology – the point of epistemology was to help reform people's intellectual lives in accord with reason. Forming good habits of thinking was then also the task that Locke saw for education, writing that the teacher's task is:

> …to fashion the Carriage, and form the Mind; to settle in his Pupil good Habits, and the Principles of Vertue and Wisdom; to give him by little and little a view of Mankind; and work him into a love and imitation of what is Excellent and Praise-worthy…(1722: 40)

Like Locke, Dewey too thinks that philosophy and education should focus on improving thinking. From Locke, Dewey takes the idea that both our natural inclinations and our social environment often incline us to bad thinking. Referring specifically to Locke, Dewey holds that

> Education has… to safeguard an individual against the besetting erroneous tendencies of his own mind—its rashness, presumption, and preference of what chimes with self-interest to objective evidence— …[and] undermine and destroy the accumulated and self-perpetuating prejudices of long age. (1910: 25)

Instead, Dewey holds that

> '…the work of teaching must… transform natural tendencies into trained habits of thought…' (1910: 26)

In this paper, I am interested in Dewey's conception of 'the training of thought' – a conception that reaches a particular height in *Democracy and Education* (1916). While he does not use the term 'intellectual virtue' I hope to show that Dewey's is indeed a virtue conception of good thinking. First, I sketch the development of Dewey's thinking regarding 'the training of thought' through the two related works of *How We Think* and *Democracy and Education*. Next, I situate Dewey's conception of good thinking within contemporary virtue epistemology and ask what the touchpoints are between Dewey's work on the training of thought and more recent proposals regarding the development of intellectual character. In particular, I focus on one intellectual virtue that has attracted much attention in recent epistemology and that Dewey singles out by name: the virtue of open-mindedness. I explain how contemporary virtue epistemology views open-mindedness and ask what Dewey contributes to our understanding of this important intellectual virtue.

Dewey on the 'training of thought'

While he is not a *standard* figure in virtue epistemology, Axtell (1996) makes a case for seeing Dewey as a virtue epistemologist. Axtell traces Dewey's interest in the intellectual virtues back to his essay 'The Virtues' (1908). In that essay, Dewey treats the intellectual virtues alongside the moral virtues, but he gives the virtue of 'wisdom' a special place, writing

> '…the heart of a voluntary act is its intelligent or deliberate character. The individual's *intelligent* concern for the good is implied in his sincerity, his faithfulness and his integrity. Of all the habits which constitute the character of an individual, the habit of *judging* moral situations is the most important, for this is the key to the *direction* and to the *remaking* of all other habits.' (Dewey, 1908: 375)

It is clear that, like Aristotle, Dewey saw the moral virtues as being *directed* or steered by the intellectual virtues – in this case, the virtue of wisdom. Two years later, in *How We Think* (1910), Dewey gives even more importance to such matters. *How We Think* connects Dewey's work in psychology with education. It is not just a book about how we think, but how we should think (or why we think) and the book brings Dewey's pragmatism full-square to education. For the pragmatist Dewey, the point of all thinking is to solve the practical problems associated with living. For Dewey the most fundamental human intellectual activity is finding out about the world so that we can act in it. Problem-solving does not merely constitute the aim or point of thinking, whether we realise it or not all thought is a form of asking questions and answering them for an ultimately practical purpose.

In *How We Think*, Dewey quite clearly identifies the task of education as fostering the intellectual habits needed to engage in this kind of thinking as problem-solving. He holds that it is not the

> '…business of education to prove every statement made, any more than to teach every possible item of information…' (1910: 28),

but to:

> '…cultivate deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual's working habits methods of inquiry and reasoning appropriate to the various problems that present themselves.' (1910: 28)

In this passage, it is clear that Dewey not only has in mind thinking that is 'individual' or 'creative' (Dewey is often associated with individualism and creativity), but *evidence-based* thinking – as he puts it, having a preference for 'conclusions that are properly grounded'. Furthermore, Dewey holds that this kind of evidence-based thinking is precious and hard to acquire. He writes:

> No matter how much an individual knows as a matter of hearsay and information, if he has not attitudes and habits of this sort, he is not intellectually educated… And since these habits are not a gift of nature (no matter how strong the aptitude for acquiring them); since, moreover, the casual circumstances of the natural and social environment are not

enough to compel their acquisition, the main office of education is to supply conditions that make for their cultivation. The formation of these habits is the Training of Mind. (1910: 28)

In *Democracy and Education* (1916), Dewey takes up the issue of the training of thought again. Rather than the psychology of thinking, in *Democracy and Education*, Dewey's focus is on the *role* of thinking in society. Briefly put, in *Democracy and Education* the training of thought is important, because it enables children to take part in *democracy* (which for Dewey is more than just a political system – see below). Despite the more political and social focus in *Democracy and Education,* there remains an essential connection with the earlier book, as Dewey's reformulates many of his arguments from *How We Think* in *Democracy and Education*.

To understand Dewey's view regarding the connection between thinking and politics, one must understand Dewey's view regarding democracy. For Dewey, democracy is not just a form of government, but a form of thinking and communicating with one another that people must adopt to live together as equal citizens in society. As Dewey writes:

> 'A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience.' (1916: 87)

The point is a familiar one to Dewey scholars. Democracy is not just a way by which people are governed, but is a way that people live together. Importantly, the democratic way of living together is one in which people communicate with one another about public affairs and in which decisions about public affairs are arrived at communicatively. That does not just mean that people *talk* about what is to be done, but that they try to *persuade* one another through argument. The democratic form of living is one in which people try to persuade one another about what is to be done through argument, the ideal being that the strongest argument wins.

In chapter 7 of *Democracy and Education*, Dewey sets out very neatly the tight relationship between this democratic form of life and education. A democratic society, Dewey holds, is not possible if society does not educate its young; moreover, the purpose of education for Dewey is to see to it that democracy as a form of thinking and acting together can continue from one generation to the next. As Dewey writes:

> 'the realization of a form of social life in which interests are mutually interpenetrating, and where progress or readjustment, is an important consideration, makes a democratic community more interested than other communities… in deliberate and systematic education…' (1916: 87)

Dewey's point is that democracy does not come naturally. It is a form of living together that evolved over time and in order to become part of the kind of public deliberation and debate that characterises Deweyan democracy, each generation of children need to learn the ground rules of democracy afresh. Firstly, each generation of children need to learn how to take part in democratic discussion, that is peacefully, non-violently and in turn-taking way. Moreover, they need to learn the principles by

which these discussions are settled – the logic of rational persuasion – and they need to learn how to put these principles to use in democratic discussions. Lastly, children need to learn the thinking skills that are needed to reinvent or regenerate democracy as and when needed. This is, as Dewey puts it, the deeper reason why democracy needs education so much more than any other form of government; because in a democracy, the ideal is that *any* citizen should be in a good position to take part in open-ended democratic discussions about matters of public importance. Other, more hierarchical forms of government, demand that only the elite become versed in political debate, but democracy demands that every citizen be a an educated citizen.

I've explained why Dewey holds education to be so important to democracy. How must education carry on its task of preparing children for democratic citizenship? For Dewey, education's task is to shape children's *thinking* in such a way that they will become good democratic citizens and in chapter 11 – 13 of *Democracy and Education,* Dewey explains what the democratic mode of thinking essentially consists in. Recall that in *How We Think*, Dewey stressed the role of thinking in problem-solving. In *Democracy and Education*, Chapter Thirteen, Dewey starts from a related idea – that of having any experience at all.[i] For Dewey, all thinking begins with experience. Dewey holds that experience is the combination of an active and passive element. On the active side of experience stands 'trying' that is attempting to accomplish or do something in the world; this is the analogue of Dewey's focus on problem-solving in *How We Think*. On the passive side of experience stands 'undergoing', that is, feeling the consequences of what one has done. To experience anything, for Dewey, involves trying to do something and undergoing the consequences.

For Dewey, experience gives rise to the most primitive form of thinking – trial and error. If one tries something out and experiences the same consequences sufficiently many times, it is possible to notice a relationship between trying to do the thing and experiencing the consequences. If one then makes a generalisation of the form 'doing this kind of thing gets these kinds of results', one is thinking. As Dewey puts it

> '…thought… is the discernment of the relation between what we try to do and what happens in consequence…' (1916: 169)

Dewey thinks that experience brought to consciousness like this is thought. He goes further, though, to distinguish between two kinds of thought arising out of experience. We can see these as two modes or phases of thought, one more primitive and one more sophisticated. Here is how Dewey describes the 'trial and error' mode of thinking:

> 'We simply do something, and when it fails, we do something else, and keep on trying till we hit upon something which works, and then we adopt that method as a rule of thumb measure in subsequent procedure.' (1916: 170)

Dewey paints the shortcomings of trial and error thinking as follows.

> 'The action which rests simply upon the trial and error method is at the mercy of circumstances; they may change so that the act performed does not operate in the way it was expected to.' (1916: 170)

Dewey sets out what is needed to overcome this problem:

> 'But if we know in detail upon what the result depends, we can look to see whether the required conditions are there.' (1916: 170)

In short, Dewey thinks that trial and error thinking consists in merely noticing a correlation between two events – trying to do something in a particular way and success or failure. What is needed in addition to knowledge of such a correlation is knowledge of the underlying mechanisms that produce the effect. This more sophisticated form of thinking, Dewey calls 'reflective thinking'. He describes it thus:

> 'Thinking… is the intentional endeavour to discover specific connections between something which we do and the consequences which result, so that the two become continuous. Their isolation, and consequently their purely arbitrary going together is cancelled; a unified developing situation takes its place. The occurrence is now understood; it is explained; it is reasonable, as we say, that the thing should happen as it does.' (1916: 170)

Why should we *think* and, more importantly, *think reflectively*? Dewey holds that we should do this to avoid two kinds of poor intellectual behaviour: (i) routine behaviour – that is doing things in the same way simply because one has always done it like that (or because someone else has done it like that) and (ii) capricious behaviour – that is acting at random. Reflective thinking represents an improvement on routine and capricious behaviour.[ii]

Why is reflective thinking so important to Democracy? It is because democracy is a form of living together in which we think about and reason with one another about what is the best thing to do or the best way to live. Democracy is a form of communal problem solving in which we overcome tradition or routine and caprice in what we do, by subjecting what we do and how we live to intelligent scrutiny. Democracy requires that citizens become good at reflective thinking.

Dewey's discussions of the intellectual attitudes conducive to good thinking reaches a height *Democracy and Education*, Chapter 13 'The Nature of Method'. In this chapter, Dewey discusses the 'habits of mind' that are involved in good reflective thinking and how to promote them. He writes:

> 'Some attitudes may be named…which are central in effective intellectual ways of dealing with subject matter. Among the most important are directness, open-mindedness, single-mindedness (or whole-heartedness), and responsibility.' (1916: 204)

In the passages following, Dewey describes each of these attitudes in turn.

'Directness' – By 'directness', Dewey means confidence in thinking. Rather than defining it directly, Dewey defines directness by listing it's opposites: self-consciousness, embarrassment and constraint. To be direct is to be un-self-conscious, unembarrassed and free in one's thinking. For Dewey, it means a confidence or straightforwardness in how one tackles intellectual problems and a focus on what one is investigating (not a focus on oneself). In fact, later in *Democracy and Education*, Dewey calls this virtue 'straightforwardness' rather than 'directness'.

'Single-mindedness' – By 'singlemindedness', Dewey means intellectual integrity, that is a 'completeness of interest' or a 'unity of purpose' in one's thinking. 'Single-mindedness is a rather odd word to choose, but Dewey means by it a full concern for what one is thinking about and not 'divided interest'.

'Responsibility' – Of 'responsibility', Dewey writes: 'By responsibility as an element in intellectual attitude is meant the disposition to consider in advance the probable consequences of any projected step and deliberately to accept them…' This is an interesting way to look at things. Dewey's pragmatism meant that he always saw any phenomenon (human or natural) as a matter of its consequences. Here, Dewey holds that one only understands something if one knows what it is for or what it does. By responsibility, Dewey means thinking things through in terms of their consequences. Dewey also calls this attitude 'thoroughness'.

For our purposes, the most important of the attitudes of good thinking that Dewey identifies is open-mindedness.

'Open-mindedness' – By 'open-mindedness', Dewey means the opposite of partiality in one's thinking. Open-mindedness is the overcoming of partiality and the active welcoming of 'suggestions and relevant information from all sides'. He writes:

> 'Openness of mind means accessibility of mind to any and every consideration that will throw light upon the situation that needs to be cleared up, and that will help determine the consequences of acting this way or that.' (1916: 206)

Dewey's identification of open-mindedness as an important intellectual virtue would strike a chord with contemporary virtue epistemologists. To show the touchpoints between Dewey's ideas regarding the 'training of thought' and contemporary virtue epistemology, we turn to the present.

Open-mindedness in recent virtue epistemology

In recent epistemology, there has been a flurry of interest in the intellectual virtues. For some time, epistemologists like Sosa (1980; 2007), Montmarquet (1993), Zagzebski (1996) and Greco (2010) have held that it is not enough for epistemology to analyse the central concepts having to do with knowledge (like true belief, justification or warrant). Instead, epistemology should study what it is about individual thinkers as people that make them *good thinkers*. Some, like Sosa (2007) and Zagzebski (1996) hold that the only way that epistemology will be able to solve some of its traditional problems – like how to respond to scepticism, or how to solve the Gettier problem[iii] – is to turn from studying knowledge to studying knowers. Others, like Roberts and Wood (2007) hold that, quite apart from its value in solving problems in epistemology, studying intellectual character is important for its own sake. As Roberts and Wood hold, what most people are interested in is not how to understand knowledge but is in knowing what to believe or think or how to become better thinkers. For Roberts and Wood, epistemology should become a normative or 'regulative' discipline that dispenses advice to the thinking public about good thinking.

Roberts and Wood view a number of important intellectual virtues as particularly important to intellectual life: love of knowledge, intellectual courage, intellectual

caution, humility, autonomy, intellectual generosity, practical wisdom and intellectual firmness (by which they mean the right kind of intellectual tenacity). Baehr (2011: 2) lists some of the same virtues as Roberts and Wood, but also includes inquisitiveness, attentiveness, thoroughness, fairmindedness, honesty, humility, rigour and open-mindedness.

Amongst the intellectual virtues that philosophers of education cite as particularly important is open-mindedness; in fact, it would not be exaggerating to say that open-mindedness is the most studied single intellectual virtue. William Hare's work is closely associated with the study of and promotion of open-mindedness and he devotes two books (*In Defence of Open-Mindedness*, 1985, and *Open-Mindedness and Education*, 1993) to its study and promotion. In their survey of the intellectual virtues that revitalised the idea that the intellectual virtues deserve wide-scale promotion through society, Roberts and Wood (2007) give what they call 'openness' a starring role. Furthermore, Baehr (2011) and Riggs (2010) both hold that *open-mindedness* is one of the first virtues typically mentioned on lists of the intellectual virtues we are supposed to encourage in schools and universities.

Baehr sketches three different conceptions of open-mindedness. According to the 'conflict model', open-mindedness is a virtue that is especially needed to handle situations in which there is a conflict between one's own settled view of a matter and evidence that conflicts with one's settled view. We admire people who are not threatened by views that clash with their own, so perhaps this is what open-mindedness amounts to, the:

> '…willingness or ability to temporarily set aside one's doxastic commitments about a particular matter in order to give a fair and impartial hearing to an opposing belief, argument, or body of evidence…'
> (Baehr, 2011: 143)

While initially attractive, Baehr points out that not all open-mindedness has to do with an open-ness to see the other point of view when one has already made up one's mind about some matter. On the conflict-model of open-mindedness, open-mindedness is a virtue that comes into play when one has already made up one's mind about something; it consists in the willingness to consider points of view other than one's own. However, open-mindedness does not only come into play or is not only needed when one has already made one's mind up about something. Open-mindedness is equally needed when one is still considering what view to form or struggling to know what to believe. Baehr mentions the example of a judge who approaches a new legal case with an open mind. The judge has heard no evidence and has not made up her mind either way about the case; yet we'll call it a virtue if she considers both sides of the argument with an open mind. We can say the same about an open-minded detective or an open-minded scientist who comes, for the first time, to a new case or problem. Open-mindedness is the consideration of all evidence – not just one's own settled view or what clashes with one's settled view and is equally valuable in situations in which one has 'made up one's mind already' and in cases when one is still uncertain what to believe.

This leads us to a second possible view of open-mindedness that Baehr calls the 'adjudication model' of open-mindedness. According to this model,

> '…open-mindedness is… a disposition to assess one or more sides of an intellectual dispute in a fair and impartial way…'

This model seems an improvement on the 'conflict model' and deals specifically with the sort of case that Baehr mentions above. On the adjudication model, open-mindedness consists in treating the different sides in a dispute equally and fairly, or with the same amount of consideration. But even the adjudication model is not good enough. A third picture shows why. Sometimes, open-mindedness does not even involve having to adjudicate between two different possible positions that are in conflict with one another. In some situations in which we need to investigate matters and figure out the truth, there may not be two (or more) settled positions on the table between which we need to adjudicate fairly. Take Fleming's discovery of penicillin. Fleming was not confronted with two options between which he could choose, like either 'mould kills bacteria' or 'mould does not kill bacteria'; rather what we found 'open-minded' about him was that he noticed that the bacteria on his mouldy slides had died and that he, eventually made the connection (never made before) between mould and the death of bacteria. Perhaps keeping an open-mind is not like willingness to hear the opposite view or like fair adjudication between views; perhaps it is more akin to the imaginative or creative thinking that Fleming exhibited in this case (when other scientists may have dismissed the dead bacteria on the mouldy slides as a fluke or an accident)

Based on this way of thinking, Baehr suggests a third view of the nature of open-mindedness – what he calls the 'transcendence' view. According to this third view, open-mindedness consists in one's ability to and inclination to leave behind a default or privileged standpoint and transcend that to reach another cognitive standpoint.[iv] As Baehr puts it, open-mindedness is:

> [t]he willingness to transcend a default cognitive standpoint in order to (i) take up or (ii) seriously consider the merits of a distinct cognitive standpoint.

Put very simply, on the transcendence view, open-mindedness is being in a constant state of readiness to change one's mind.

Yet another view of open-mindedness is found in Adler (2004) and Riggs (2010). According to what one may call a 'fallibility' view of open-mindedness, open-mindedness is not a stance that one takes towards any particular beliefs or set of beliefs, rather it is an attitude that one takes towards oneself as a believer. As Riggs puts it:

> 'To be open-minded is to be aware of one's fallibility as a believer, and to be willing to acknowledge the possibility that anytime one believes something, *it is possible that one is wrong.*' (2010: 180)

On Baehr's 'conflict model' the essence of open-mindedness is to consider seriously viewpoints that conflict with one's own. Adler and Riggs, one may say, present a different variant of this picture. It is not that, whenever one believes something specific, it must be that one should consider the opposite view too. On the

Adler/Riggs view, open-mindedness is an attitude towards oneself as a knower; it is the attitude that one is fallible and could always be wrong.

Dewey on open-mindedness

To understand how Dewey thinks about open-mindedness, we must trace the way his thought developed from the writing of *How We Think* to the writing of *Democracy and Education.* In *How We Think*, Dewey first mentions 'open-mindedness' in the context of spelling out the need for the 'training of thought'. Dewey starts with Bacon and Locke's observations regarding *bad* thinking or the causes of thought being led astray. Dewey particularly admires Locke's analysis of the causes of poor thinking and summarises Locke's view to the effect that bad thinking is primarily caused by:

> (a) dogma
> (b) *closed minds*
> (c) prevalent passions and
> (d) dependence on authority.

We therefore meet the notion of 'open-mindedness' for the first time via its opposite: the vice of closed-mindedness, which, in this context, Dewey equates with 'fixed belief'. (1910: 25)

Dewey first mentions open-mindedness in the context of calling for the training of thought in order to *remedy* the causes of bad thinking. The solution to bad thinking, Dewey holds, is a form of education that cultivates:

> '…deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual's working habits methods of inquiry and reasoning appropriate to the various problems that present themselves. (1910: 27 - 28)

Early in *How We Think*, Dewey seems to equate 'open-mindedness' to a form of thinking that is based on independent investigation, rather than dogmatic, driven by custom or dependent on others' say-so.

Dewey next asks how it is possible to train children in this form of thinking and here, he appeals to children's natural capacities. Dewey holds that children's natural 'curiosity' and 'wonder' must be transformed into a more complicated form of 'intellectual curiosity' (see above). In these passages, Dewey equates 'open-mindedness' with curiosity. Referring again to Bacon, he writes:

> 'Bacon's saying that we must become as little children in order to enter the kingdom of science is at once a reminder of the open-minded and flexible wonder of childhood and of the ease with which this endowment is lost.' (1910: 33)

Later in *How We Think*, Dewey makes more or less the same identification, placing open-mindedness as a productive characteristic of thinking alongside the intellectual

virtues of curiosity and humility (1910: 177). He places open-mindedness as a form of curious wonder and childlike wonder or 'mental play'. Dewey writes:

> 'Absence of dogmatism and prejudice, presence of intellectual curiosity and flexibility, are manifest in the free play of the mind upon a topic. To give the mind this free play is not to encourage toying with a subject, but is to be interested in the unfolding of the subject on its own account, apart from its subservience to a preconceived belief or habitual aim. Mental play is open-mindedness, faith in the power of thought to preserve its own integrity without external supports and arbitrary restrictions.' (1910: 218 – 9)

In *How We Think*, we may conclude, Dewey has a view of open-mindedness that equates it with curiosity and with the inclination to explore the world in an evidence-based fashion driven by a sense of wonder. It is also clear that Dewey thinks that this attitude is naturally found in children and is dulled by some aspects of adult (social) life.

In *Democracy and Education* Dewey again mentions open-mindedness for the first time in a negative context – the context of criticising some *bad* forms of thinking. Of bad habits of thinking, Dewey writes:

> 'We speak of *fixed* habits. Well, the phrase may mean powers so well established that their possessor always has them as resources when needed. But the phrase is also used to mean ruts, routine ways, with loss of freshness, open-mindedness, and originality. Fixity of habit may mean that something has a fixed hold upon us, instead of our having a free hold upon things.' (1916: 57)

Just as in *How We Think*, he also goes on to identify open-mindedness with curiosity.

> 'With respect to sympathetic curiosity, unbiased responsiveness, and openness of mind, we may say that the adult should be growing in childlikeness.' (1916: 59)

Dewey's main discussion of open-mindedness comes in chapter thirteen of *Democracy and Education.* In his point-by-point discussion of the important intellectual virtues, Dewey moves beyond the curiosity account. In these passages, Dewey returns to the pragmatic tenor of other parts of *Democracy and Education* and sketches open-mindedness as a form of thinking as problem solving. Recall that, for Dewey, all thinking is, in some sense, a form of identifying problems and solving them. He holds that:

> 'Openness of mind means accessibility of mind to any and every consideration that will throw light upon the situation that needs to be cleared up, and that will help determine the consequences of acting this way or that. Efficiency in accomplishing ends which have been settled upon as unalterable can coexist with a narrowly opened mind. But intellectual growth means constant expansion of horizons and consequent formation of new purposes and new responses.' (1916: 206)

In these passages, Dewey holds that 'open-mindedness' is essentially the kind of problem-solving attitude taken by those who engage practically in the world. For the one who is genuinely interested in solving problems, open-mindedness consists in an inventive welcoming of any evidence that can be helpful in solving the problem. As Dewey holds at the end of this passage, this problem-solving attitude not only consists in finding the means to satisfy a purpose one already has, but can also consists in finding 'new purposes' to pursue.

To the four different accounts of open-mindedness discussed above, we can therefore add a two inter-penetrating explanations of open-mindedness from Dewey. Open-mindedness consists in *curiosity* about the world that drives exploring the world out of an interest to *solve problems.* This explanation is reconcilable with Baehr's third account of open-mindedness mentioned above – that open-mindedness is the willingness to transcend a privileged cognitive standpoint. Dewey also holds that one must guard against 'privileged standpoints'. He holds that:

> '[e]xorbitant desire for uniformity of procedure and for prompt external results are the chief foes which the open-minded attitude meets in school…' (1916: 206)

and goes on to mention

> 'The teacher who does not permit and encourage diversity of operation in dealing with questions is imposing intellectual blinders upon pupils -- restricting their vision to the one path the teacher's mind happens to approve.' (1916: 206)

That Dewey thinks of open-mindedness as being able to overcome a fixed viewpoint is further made plausible when he writes that intellectual growth is

> '…impossible without an active disposition to welcome points of view hitherto alien…' (1916: 206)

That open-mindedness is *this* active disposition to welcome alien points of view sits very neatly with Baehr's account. However, Dewey's solution still differs in emphasis from that of Baehr. For Dewey the solution to 'intellectual blinders' and 'restricted vision' is to be more like a child or to *return* to a childlike mode in one's thinking. After all, Dewey writes:

> 'Open-mindedness means retention of the childlike attitude; closed-mindedness means premature intellectual old age.' (1910: 206)

If Baehr thinks that one must display the rather adult virtue of recognising that one has a certain privileged cognitive standpoint and working to overcome it, Dewey's solution is being a little more like a child in one's thinking – that is tapping into a natural sense of curiosity and wonder and a natural inclination to play. These are differences of emphasis, but goes to the point of whether one's *motivation* for being open-minded is something like a calculated and cultivated adult recognition that one must overcome one's privileged cognitive standpoint or the retention or rediscovery of a natural curiosity within oneself that one has always had since childhood.

While one may plausibly interpret Deweyan open-mindedness as a willingness to transcend previously held views, his view is not reconcilable with another account of

open-mindedness we encountered above. This is the Adler/Riggs account according to which open-mindedness is essentially an attitude one takes to one's own thinking – that it is the constant awareness and caution that one is fallible and may be wrong. Dewey does not think like this at all. Remember, for Dewey, open-mindedness is a virtue that is essentially sparked by one's interest and involvement in the *world*; for Dewey, open-mindedness is trying to solve problems in the world in a 'childlike' fashion, by curious exploration and play. Indeed, in chapters 4 and 16 of *Democracy and Education*, Dewey names another intellectual virtue, the virtue of 'responsiveness' that seems to capture this particularly well.[v] In chapter 4, Dewey links 'sympathetic curiosity, unbiased responsiveness, and openness of mind' and in chapter 16 he praises a certain 'responsiveness and alert eagerness for additional meaning'. This 'alert eagerness for additional meaning' is clearly an attitude one takes to the world, not an attitude of doubt in oneself. The impression that Dewey would not agree with the Adler/Riggs account is strengthened by his later stress on a virtue that we do not normally hear much talk of – 'directness' (see above). Remember that Dewey thinks it is important in thinking to be direct – to be unselfconscious. Open-mindedness cannot be a form of self-doubt or self-consciousness (like Riggs and Adler think), because Dewey explicitly holds that:

> A self-conscious person is partly thinking about his problem and partly about what others think of his performances. Diverted energy means loss of power and confusion of ideas. Taking an attitude is by no means identical with being conscious of one's attitude. The former is spontaneous, naive, and simple. It is a sign of whole-souled relationship between a person and what he is dealing with. The latter is not of necessity abnormal. It is sometimes the easiest way of correcting a false method of approach, and of improving the effectiveness of the means one is employing, -- as golf players, piano players, public speakers, etc., have occasionally to give especial attention to their position and movements. But this need is occasional and temporary. (1916: 204)

In writing thus about 'directness', Dewey clearly expresses the view that a constant doubt in oneself as a thinker is not productive; such an attitude is only occasionally needed.

Conclusion

In this paper, I tried to show how Dewey's thinking about the 'training of thought' as we find it in *How We Think* and *Democracy and Education* foreshadows our contemporary interest in educating the intellectual virtues. In this, Dewey draws his inspiration from Locke, rather than from the ancients, but it is clear that Dewey's educational work gives a very important place to the intellectual virtues. In particular, the intellectual virtue of 'open-mindedness' considered so important today was of particular importance to Dewey too and explained the connection in his work between open-mindedness, curiosity and problem-solving.[vi]

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[i] Dewey's ideas regarding thinking as a kind of 'experience' return as the major theme in *Education and Experience*. (1938)

[ii] It is striking is that Dewey has a very experimental, scientific view of reflection. This distinguishes his work from that of another exponent of reflective thinking, Donald Schön (1984). Schön sees reflection as an ineffable process that can really only be seen in action, while Dewey simply has an experimental view of reflection. Schön's work on reflection has led many educationalists to adopt an almost mystical view of reflection; I recommend Dewey's version.

[iii] The problem to the effect that one can have justified true belief but still fail to have knowledge. See Gettier (1963).

[iv] For alternative uses of the concept of openness to the viewpoint of others (from dialogic theory), see Wegerif (2011) and Higham, Freathy and Wegerif (2010).

[v] I thank Rupert Higham.

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