EDUCATIONAL THEORY

ON DECIDING THE AIMS AND CONTENT OF PUBLIC SCHOOLING

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Abstract. In this paper, John Tillson defends an approach to deciding the aims and content of public schooling from the critique of Public Reason Liberalism. The approach that he defends is an unrestricted pairing of the Epistemic Criterion and of the Momentousness Criterion. On the Epistemic Criterion, public schooling should align students' credence with credibility. On the Momentousness Criterion, public schooling ought to include content that it is costly for children to lack the correct view about, where they are otherwise unlikely to have it. Public Reason Liberals seek to restrict both the Epistemic and Momentousness Criteria to within a range that is acceptable to politically reasonable citizens. In response, Tillson argues, first, that the considerations that encourage Public Reason Liberalism instead motivate unrestricted versions of the Epistemic and Momentousness Criteria; and, second, that Public Reason Liberalism faces a dilemma, that it either entails absurd consequences or must undermine itself in addressing these.

Key Words. public education; epistemic criterion; curriculum theory; public reason; perfectionism; momentousness criterion; directive education

Introduction[1]

Citizens often strongly disagree about what the aims and content of public schooling should be. Their disagreements include whether teachers in public schools should teach their students to *believe or disbelieve* various sets of claims, what they should teach students to *value or disvalue* and the forms such valuation should take, and which content they must cover. Sets of claims and evaluations in contention include, among many others, scientific theories such as that climate change is caused by human activity, and what responses to this phenomenon different groups and individuals owe to one another as a matter of justice, as well as sociological analyses and normative evaluations of contemporary and historical oppression and marginalization of groups by mainstream and establishment sections of the society in which the schooling takes place. Moreover, for our purposes, there are also disagreements about how to decide any of these matters. In this paper my task will be to motivate and defend a perfectionist approach to deciding the aims and content of public schooling. Perfectionism, in the sense used here, means that government may decide its policies by drawing on knowledge and compelling values that are contested even among citizens who are politically reasonable in that they are able to regard each other as free and equal, and ready to cooperate with one another on fair terms.

In this essay, I focus on public schools of the following kind: schools owned by or provided for, and run by or on behalf of the state, in which educational

1. This article develops much more fully a few arguments that I first sketched in "Knowledge, Moment, and Acceptability: How to Decide Public Educational Aims and Curricula," *Philosophy of Education* 76, no. 3 (2020): 42–55. I am grateful to J. Adam Carter, Christina Easton, Hwa Kim, and Chris Mills for helpful comments. I am especially grateful to Michael Hand and Matthew Clayton, for many discussions over the years.

aims and content are constrained and guided by the state.[2] I avoid specifying the context of my discussion with the qualifiers "modern, industrialized economies" or "pluralist, liberal democratic societies" that are generally adopted as backdrops for discussions such as mine. This is because the discussion is equally relevant to human societies that are not industrialized, democratic, plural, or liberal. Instead, I have in mind a wider set of possible contexts: namely, states in which schooling is or could be provided and in which there are human beings starting their lives as vulnerable dependents whose coming to maturity depends on socialization, enculturation, and care given by others, who could come to have various contrary sets of beliefs, attitudes, skills, and affiliations, partly as a function of schooling, the quality of whose lives in the present and at maturation can be influenced by how they are treated now, and who, upon reaching majority, will have extensive moral rights to freedom from interference in how they lead their lives. I will exclude from discussion only those societies that suffer from such nonideal features that would make it impossible or difficult to enact the principles I defend in the paper, though I take it that even in places such as North Korea, choices at the state level fail insofar as they fall short of the principles defended here. I return to considerations of nonideal contexts in the section titled, "Evolution and the Aims of Science Education."

It will be useful to introduce some technical terms to characterize the position I defend. The approach to deciding questions about the aims and content of public schooling that I defend pairs an *unrestricted* version of the Epistemic Criterion for deciding when to teach for belief with a Momentousness Criterion for deciding what to include in the curriculum. I defend this approach from a powerful and persuasive critique by Matthew Clayton and David Stevens, grounded in considerations that motivate Public Reason Liberalism.

On the Epistemic Criterion, public schooling should promote students' levels of credence in proportion with available supporting evidence. On the Momentousness Criterion, public schooling ought to include content that it is costly for children to lack the correct view about. If it is costly for children not to believe truly that wearing masks reduces transmission of aerosol viruses, that constitutes a reason to teach it. For Public Reason Liberals like Clayton and Stevens, both educational policy and its justification must be acceptable to the politically reasonable people it affects. For this reason, Public Reason Liberals seek to *restrict* both the Epistemic and Momentousness criteria to within a range that is acceptable

2. By contrast, private schools give greater discretion to private- and third-sector actors to own and operate schools. I set aside whether the arguments presented here generalize to cover schools funded and run by private- and third-sector actors.

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to politically reasonable citizens — even if this means students missing out on socially or personally momentous warranted beliefs.

In response, I argue that the grounds claimed to encourage Public Reason Liberalism actually motivate unrestricted versions of the Epistemic and Momentousness Criteria. On Public Reason Liberalism, it is valuable for people to set their own ends. I contend that where it is valuable for people to set their own ends, they can only fully meaningfully do so in light of relevant facts and free of misinformation, and so we should not restrict the Epistemic and Momentousness Criteria to exclude judgments and evaluations that are unacceptable to politically reasonable, but normatively and factually mistaken, reasonable citizens. I argue that society is under a duty — within its means and with due regard for other goals and constraint — to give students fair opportunity to reach this mark. This means arranging an educational scheme that informs its citizens of what it is costly for them not to know, as well as what it is costly to others for them not to know. While children have no duty to perfect themselves or reach optimal well-being, they do have a right to invent themselves and to a fair opportunity to reach a fair threshold of well-being, but they cannot do this in a state of ignorance: if their life is meaningless or if they otherwise fail to flourish because they chose as well as they could without being informed, then they could not sufficiently consent to the life they undertook and did not have a fair chance of a fair threshold of flourishing. Next, I argue that restricting the Epistemic and Momentousness Criteria has two further problems also recognizable to Public Reason Liberalism: restricting epistemic progress and reducing citizens' capacity to satisfy political and moral duties. Finally, I argue that attempts to satisfactorily address the last problem are incompatible with Public Reason Liberalism. Before concluding, I respond to thoughtful criticisms of the Epistemic Criterion from Adam Laats and Harvey Siegel, and Diana Hess and Paula McAvoy. Before introducing and responding to the Public Reason restrictions on the Epistemic and Momentousness Criteria, it will be useful to introduce and motivate each of these in turn. But before turning to that, I will begin by characterizing what I mean by *knowledge*.

On Knowledge

At first sight, the concept of propositional knowledge is illuminatingly analyzed as "justified true belief" (JTB). However, that analysis famously falls afoul of Gettier's counterexamples, and no modification of JTB has yet proved satisfactory.[3] While the concept may turn out to be incapable of analysis into individually

3. I would not know that it is twelve o'clock if I believed that it was one o'clock (the belief condition), nor would I know that it is twelve o'clock if it was in fact one o'clock (the truth condition). Finally, I would not know that it was twelve o'clock — even if it was in fact twelve o'clock and I believed it was twelve o'clock — if I had no reason whatsoever to think it was twelve o'clock but had only luckily guessed that was the time (the justification condition). For a typical Gettier-style counterexample to the JTB analysis of propositional knowledge, consider the case of a hitherto reliable analogue clock that had been stopped exactly twelve hours ago leading us to believe truly, and with good justification, that it is twelve o'clock. In this and similar cases, one wants to say that while all the JTB conditions are satisfied, knowledge is not had.

necessary and jointly sufficient conditions, whether because it is conceptually basic or for some other reason, I still find JTB to be a useful analysis, since the individually necessary conditions it identifies seem accurate and enable us to make sound inferences about knowledge. Here is one sound inference. Since *knowing that p* implies that *p is true*, it follows that propositional knowledge agglomerates. For instance, if you know that this bird is not an emperor penguin, and I know that it is not a king penguin, it follows that this bird is not an emperor penguin or a king penguin. However, coordination is often required for us to exchange knowledge and for either of us to reach the more informative, conjunctive conclusion; coordination, it must be said, that may not be forthcoming. In particular, we will need to hear each other's testimony (or gain evidence of what the other believes in some other way), and we will need some reasons to believe that the other does in fact *know* what they believe, and so come to share their knowledge, rather than discounting their knowledge, remaining unsure about it, or coming to adopt their belief too indiscriminately to be said to share in their *knowledge* — as opposed to, luckily, merely sharing in their belief. One point should be flagged about the usefulness of JTB for educational decision-making. Since we have no access to the truth independently of whatever justifications we have to believe that a given proposition is true, the truth condition loses independent practical relevance to deciding what to *teach* as true. Furthermore, in aiming to teach the truth based only on the available justifications, we (unavoidably) risk being in a position where our best justifications are ultimately misleading and not conducive to knowledge because they do not point to the truth. Given these considerations, it seems that justified propositions (i.e., propositions likely to be true) are what have the greatest practical relevance to the curriculum rather than knowledge in a strict sense. That said, it is sometimes convenient to speak of knowledge rather than justified propositions as I do later in this section, but this point is to be borne in mind when I do.

JTB may raise questions about what truth, belief, and justification are. The characterizations I give of each of the concepts invoke one another to some extent — indeed we could not characterize any concepts without invoking others, and when we invoke fundamental concepts, like justification, truth, and belief, it is perhaps unsurprising that they invoke one another. There may be many senses of the word "truth," including the senses in which a friend, or a path, can be true. In the sense I have in mind here, it is true that Paris is the capital city of France, that $2+2=4$, and that glass shatters.[4] In the sense I have in mind, "true," and more granular expressions like "somewhat true in some respects" are predicates that may be correctly applied to representations of the world, including beliefs and propositions such as "Paris is the capital city of France." The substance of much of intellectual life is in trying to gain true representations.

I characterize an individual's beliefs as the set of representations that they are ready to rely on as being true in acting, at least to some extent and some

4. There are interesting questions about what makes things true. What makes counterfactual claims true, as well as claims about what could happen and must happen, are particularly perplexing but not things we need to trouble ourselves with.

of the time.[5] Since we may not be so confident in our beliefs that we never hedge against any of them turning out to be mistaken, we need only rely on them to some extent. Since we are not wholly rational and can have inconsistent belief sets — treating a single thing as true at some point and as false at others without any principled reason for the difference — we need only rely on these representations sometimes. I will come back to the point about inconsistent belief sets in the section, "Evolution and the Aims of Science Education." Finally, we can have justifications to think that various propositions are true, i.e., to believe them.

By "justifications" I have in mind the kinds of considerations, including various kinds of evidence, such as reliable testimony, that, taken together, form an argument with the conclusion that a claim is more likely than not. How confident you should be that a hypothesis is true (including the hypothesis that another hypothesis is false) should be based on how confident you can be that the arguments that can be adduced in support of it are sound, i.e., that the premises are all true and that the conclusion follows from them. Empirical features of the world (a test grade, a facial expression) may count as evidence for some hypothesis (that a student has a general ability, or attitude) if they feature in a sound argument supporting that hypothesis. Hypotheses can be as grand and general or as humble and particular as you like: that homework requires certain structures in place in order to add value to students' overall learning outcomes, that the needed structures for homework to add value are in place in one particular context, or that that a particular student copied their homework.[6] In any case, since we humans are fallible, and our premises may be mistaken, our premises should be apt to be double-checked by ourselves and others, though even this cannot guarantee that they are true. However, more persuasive arguments based on other premises are needed to impugn the evidence cited in the original argument.[7]

In the case of empirical matters, I take it that we can sometimes gather enough quality data and formulate hypotheses that explain enough of that data sufficiently and uniquely well that we are therefore justified in provisionally believing those hypotheses. The quality of a hypothesis is to be judged by a combination of its simplicity and its power in explaining data, including its power in identifying and explaining away errant data. In cases where contrary hypotheses can explain the total data with equal parsimony and power, we are deprived of an epistemically

5. If the extended mind hypothesis is true, as Andy Clark and David Chalmers argue, our beliefs need not be "in the head" but could be stored in external devices, such as mobile phones, that are (a) either portable or readily remotely accessible, (b) trusted by their users, and (c) well integrated into their users' cognition. Andy Clark and David Chalmers, "The Extended Mind," *Analysis* 58, no. 1 (1998): 7–19.

6. My sense of this is owed to Nancy Cartwright and Jeremy Hardie, *Evidence-Based Policy: A Practical Guide to Doing It Better* (Oxford: Oxford University Press, 2012), 6.

7. Timothy Williamson, *Philosophical Method: A Very Short Introduction* (Oxford: Oxford University Press, 2020), 14–15.

rational basis for believing one account over the other and should withhold our assent from either.[8]

Each of us has some knowledge intermingled with some error in addition to a range of things about which we are unsure, and these together, for each of us, are dwarfed by those matters on which we do not know enough even to know that there are opinions to be had — our "unknown unknowns." Some of the knowledge each of us has is common to all, some of it is common to just some. We have, in other words, nonidentical, partially overlapping sets of knowledge, and some of it is unique to each of us. Sometimes it will serve justice for some knowledge to become common to all, or to become known to some individuals. For instance, it will serve justice for the extent of sexual wrongdoing, together with its indignities and harms, to be a matter of common knowledge, enabling it to become a matter of collective deliberation. In cases like this it may be a matter of duty that some speak, and others listen; that some teach, and others learn; or that some keep an eye out for lessons, not knowing when they might be taught or by whom. In such cases ignorance may be culpable.

We should distinguish here between political and epistemic authority and appreciate that these need not always be had by the same individuals with respect to the same target. For instance, while it may be that others know me better than I know myself, and so I am not an epistemic authority about myself, it does not follow that those others have legitimate political authority over me and my life. However, more common than not for matters of injustice are cases where those belonging to a marginalized group are not listened to because they are discounted as stupid or dishonest and others are wrongly presumed to speak more authoritatively about them than they can speak on their own behalf. In these cases, marginalized people's epistemic and political authority (their right to self-rule and the fact of their self-knowledge) are both ignored.

Elizabeth Anderson has insightfully explored cases in which inadequate social integration and failures of trust due to polarization have led to important-for-justice knowledge not being transmitted between groups: e.g., failures of knowledge about the *indignities* of slavery, in addition to its *hardships*, to reach legislators made it easier for them to uphold that wicked institution. Failures of important knowledge dissemination can not only lead to failures of

8. Roger White and Richard Feldman argue this convincingly: Roger White, "Epistemic Permissiveness," *Philosophical Perspectives* 19, no. 1 (2005): 445–459; and Richard Feldman, "Reasonable Religious Disagreement," in *Philosophers Without God*, ed. Louise Antony (Oxford: Oxford University Press, 2007), 197–214. Michael Hand has maintained in various places that teachers can be justified in accepting religious beliefs, but not justified in teaching that their religious beliefs are true, where that means intending to impart the view rather than merely explaining what one's own view is. One might wonder how we can be justified in believing that something is the case, but not justified in teaching that it is the case. One way to make sense of this apparent inconsistency is to suggest that the evidentiary standards required to warrant belief are different from those required to warrant teaching. But still, Hand is committed to a permissive approach to the range of views that a single body of undisputed evidence can be taken to recommend. Michael Hand, *A Theory of Moral Education* (New York: Routledge, 2017), 37–40.

justice but can constitute a distinctive set of social injustices as well.[9] Miranda Fricker has coined a helpful set of terms (including "testimonial" and "hermeneutical injustice") for articulating how gaps in knowledge and understanding can sometimes be the moral fault of individuals or groups. Testimonial injustice refers to (at least potential) hearers' failures to acquire credible testimony from (at least potential) speakers due to the former prejudicially stereotyping the latter as stupid or dishonest. Hermeneutical injustice includes cases where people's inability to understand and articulate momentous aspects of their own social experience (though the concept ought to apply more widely than just their own social experience) is due to the lack of fair opportunity and resources to interpret and articulate their experience.[10] Part of what I appreciate about Anderson's and Fricker's analyses is that they do not impugn the concept of propositional knowledge as misguided by, for instance, only constituting an attempt at domination or unavoidably reflecting unjust, dominant interests. Apart from anything else, such attempts to impugn knowledge seem self-defeating. Instead, Anderson and Fricker accept that justice requires knowledge, among other things, to map unjust social relations and actions, and to identify successful strategies for change. I now turn to introducing and motivating the Epistemic and Momentousness Criteria.

The Epistemic Criterion

The Epistemic Criterion guides educators in deciding which beliefs they should promote, demote, and float, even against the wishes of students' parents or against popular opinion.[11] On the Epistemic Criterion, where the truth of a theory is the subject of a school lesson, teachers should counsel belief (promote), disbelief (demote), and agnosticism (promote) in their students in proportion with what the available evidence licenses. On my version of the epistemic criterion, teachers may float rival theories — without promoting or demoting any epistemic attitudes to them — where it is not clear whether belief, disbelief, or agnosticism is epistemically appropriate. It is important to note that "promoting" and "demoting" (directive teaching) and "floating" (nondirective teaching) in the present sense does not track the distinction between didactic and nondidactic

9. Elizabeth Anderson, "Moral Bias and Corrective Practices: A Pragmatist Perspective," *Proceedings and Addresses of the APA*, vol. 89 (2015): 21–47; Elizabeth Anderson, "The Epistemology of Democracy," *Episteme* 3, nos. 1–2 (2006): 8–22; Elizabeth Anderson, "The Social Epistemology of Morality: Learning from the Forgotten History of the Abolition of Slavery," in *The Epistemic Life of Groups: Essays in the Epistemology of Collectives*, ed. Miranda Fricker and Michael Brady (Oxford: Oxford University Press, 2016), 75–94; Elizabeth Anderson, "Rethinking Equality of Opportunity: Comment on Adam Swift's *How Not to Be a Hypocrite*," *Theory and Research in Education* 2, no. 2 (2004): 99–110; and Elizabeth Anderson, *The Imperative of Integration* (Princeton, NJ: Princeton University Press, 2010).

10. Miranda Fricker, *Epistemic Injustice: Power and the Ethics of Knowing* (Oxford: Oxford University Press, 2007). In the present paper, the account I give of how to decide what material public school should cover, and whether they should float, promote, or demote it, can be regarded as a contribution to deciding what hermeneutical justice requires. Still, it should be noted that the topic of the aims of education long preceded Fricker's term.

11. I discuss parents' rights in John Tillson, *Children, Religion and the Ethics of Influence* (London: Bloomsbury, 2019).

pedagogical methods. For instance, directive teaching might involve providing the conditions within which students may find, somewhat more "for themselves," strong grounds to favor a theory.[12] Conversely, nondirective teaching may take the form of a one-way lecture. For instance, a teacher could explain that a topic is epistemically unsettled, lecture students about the contrary potential theories, together with the kinds of arguments martialed in favor of and against each of them, and simply leave it there.

Though they have not been adequately distinguished in the literature, different interpretations of the Epistemic Criterion are possible — it is the Credence-Evidence interpretation of the Epistemic Criterion that I accept. On that interpretation, we may regard theories as apt to be true or false, and sound arguments as rendering them more or less likely to be true. I use "theory" here to denote truth claims, or particular sets of truth claims. Teaching should encourage a degree of confidence in the truth of a theory that corresponds to the theory's degree of likelihood. Holding the costs of error steady, the nearer a theory comes to being certainly true or certainly false, the lesser the need to encourage students to consider ways of hedging bets to cover the losses of being mistaken. At the same time, theories which are as likely as not to be true may be taught as being such, which is itself an instance of promoting. On such a view, students are encouraged to give credence in proportion to evidential credibility.

On the other hand, where there is no determinate answer as to what the balance of probabilities is (i.e., as to whether a theory is as likely, more likely, or less likely than not to be true), then the theory must (other things equal) be floated. That is to say, belief, disbelief, or agnosticism may not be counseled and the material may be taught nondirectively (merely "floated"). An alternative condition for floating is the following: Some regard single bodies of evidence capable of sufficing to justify contrary conclusions. In such circumstances, while two individuals would be warranted in reaching contrary conclusions from the same information, they would not be warranted to directively *teach* contrary conclusions. Instead, the rival conclusions may only be "floated" rather than being "promoted" or "demoted." However, it seems that where we come to realize that a body of evidence is equally compatible with contrary conclusions (e.g., conclusions that account for that body of evidence with equal power and parsimony), from an epistemic point of view, we had better be agnostic between those conclusions rather than maintain one interpretation in spite of its underdetermination by the evidence; indeed, we will come to see that we were never warranted in reaching the conclusion we did. In this section I have sought to make the Epistemic Criterion more precise. I offer motives to accept the criterion in the course of defending it against Public Reason

12. How far children "find things for themselves" is a matter of degree, and teachers will likely want to make the discoveries achievable, i.e., to give them an achievable amount of work to do. Where a modest realization is within students' grasp, or where part of the groundwork for more ambitious realizations is within students' grasp, teachers might well provide the conditions for these realizations, in the form of, for example, providing the tools and lesson objectives or subjecting students to Socratic questioning.

Liberalism. In the next section I clarify the Momentousness Criterion, together with how it pairs with the Epistemic Criterion.[13]

The Momentousness Criterion

The Momentousness Criterion guides educators and policymakers in deciding what to include in the curriculum. On the Momentousness Criterion, where it is costly *not* to have the right view and where children are otherwise unlikely to hold beliefs in proportion with the evidence, this consideration should motivate that view's compulsory inclusion in school curricula.[14] If being wrong about the credibility of a theory has very low stakes, or if children are unlikely to be wrong about its credibility, we lack this reason to include it in the curriculum. Notice that in deciding how costly it is not to be right about the truth of theory, a judgment is being made about the truth of the theory (or at least its credibility). Consider two judges, Richard and John, assessing the momentousness of a theory called "Z Efficacy":

- Z Efficacy: taking substance Z as a supplement makes one's course of medical treatment more effective.

Richard regards Z Efficacy as more probable than not, and John regards it as far less probable than not. Suppose that both know that procuring and consuming Substance Z is costless. Richard will regard Z Efficacy as momentous, and John will regard it as unmomentous, for Richard will think that you stand to miss out on health if you do not believe Z Efficacy, whereas John will think that you do not stand to lose anything if you do believe Z Efficacy. While Richard and John have different judgments of Z Efficacy's momentousness, what they are attempting is judge is its objective momentousness (its fact-relative momentousness). Of course, we have no access to fact-relative momentousness except through evidence, so evidence-relative momentousness is the standard that judgments must resort to. Insofar as Z efficacy is not generally believed, or there is low substance Z uptake, Richard will likely insist that Z efficacy be included in school curricula, whereas John will likely insist that is it not worth the curriculum space even if it is generally believed, and even if there is huge uptake.[15]

13. The foregoing has paid attention to the likelihood of theories. However, insofar as other judgments (regarding, for instance, legitimacy, beauty, value, and rightness) are susceptible to justification and degrees of acceptance, we can apply modified versions of the epistemic criterion. For instance, on a principle of Permissibility-Evidence: one must teach for the degree of credence that an act is permissible or impermissible that is epistemically warranted by the available evidence and arguments together with appropriate dispositions of forbearance or noninterest.

14. Michael Hand, "Religious Education," in *Rethinking the School Curriculum*, ed. John White (London: RoutledgeFalmer, 2004), 152–164; John Tillson, "Towards a Theory of Propositional Curriculum Content," *Journal of Philosophy of Education* 48, no. 1 (2014): 137–148; and John Tillson, "When to Teach for Belief: A Tempered Defense of the Epistemic Criterion," *Educational Theory* 67, no. 2 (2017): 173–191.

15. Disagreement of these kinds obtain about many and various things in educational contexts. Here is Ben Kotzee on the moment of religious faith: "Contrary to what Hand and Tillson think, one's religious

I will recommend an unrestricted, perfectionist interpretation of the Momentousness Criterion. On this understanding, being wrong about the truth of a theory can be judged to be costly by perfectionist metrics, including by the standards of a uniquely plausible theory of valuable final ends and of well-being. Suppose that some final goal is known by teachers to matter and that not knowing that it matters results in students being less likely to achieve that goal. Moreover, suppose achieving some overriding final goal known by teachers conflicts with what students have convergent instrumental reasons to do, for instance, by requiring that we content ourselves with subsistence level resource acquisition. On my view, teachers should promote knowledge of final goals and constraints and of efficient, permissible means for achieving them. I want to leave what counts as a "cost" wide open (together with what the true theory of well-being is), but I will follow Allen Buchanan and flag violating morality and undermining one's own weighty interests as salient costs.[16]

There is an interesting question as to how autonomy fits together with well-being. My view is that the two obviously can conflict, as when competent adults are permitted to refuse essential medical care. Concordantly, when they reach the age of majority children have the prerogative to live suboptimally from the point of view of their own welfare, but they should, within the limits of the state's resources, have a fair opportunity to be *equipped* to live optimally. However, for reasons of prospective welfare and self-determination, children should also be equipped to mitigate the loss inherent to autonomously selecting suboptimal lives: for example, perfectionist education should not be for so narrow a life-course path that the education equips one for no deviation from that path. If a perfect life for some individual involved no need of reading and writing, they should still be able to read and write, just in case they should imprudently decide to become an editor. Since the future involves a great deal of uncertainty, we must all be somewhat generalist in our competence to accommodate a range of possible futures. We have claims against being forced into even morally constrained optimal flourishing, but not against doing our fair share to enable others to so live; therefore, I shall argue, we cannot justly complain about having to enable people to flourish in ways we might regard as misguided.

views is not of itself a momentous matter. If what I have said above is right, and God does not exist, believing in Him is a waste of time and cognitive energy, but depending on how you live your life it might not be a momentous waste. Many of us waste our time and energy down intellectual blind alleys (say, indulging in philosophy, or counter-factual history)." Ben Kotzee, "Commentary on Children, Religion and the Ethics of Influence," *Studies in Philosophy and Education* 41, no. 1 (2022): 125.

16. Allen Buchanan, "Political Liberalism and Social Epistemology," *Philosophy & Public Affairs* 32, no. 2 (2004): 95–130. It may be worth flagging that some (e.g., Victor Tadros) regard weighty wrongdoing as noninstrumentally imprudent, and some (e.g., Susan Wolf) subdivide well-being further into meaning and happiness. Victor Tadros, *Wrongs and Crimes* (Oxford: Oxford University Press, 2016); and Susan Wolf, "Happiness and Meaning: Two Aspects of the Good Life," *Social Philosophy and Policy* 14, no. 1 (1997): 207–225. It is also worth noting that our weighty interests include not only our well-being, but also our agential interests in directing unimpeded our lives even in ways that to some extent undermine our well-being.

One can nest the Epistemic Criterion within the Momentousness Criterion, so that the strictness with which one obeys the Epistemic Criterion tracks the momentousness of the theories being taught. It might be that where the truth of low-stakes theories is concerned, teachers might have little reason to ensure that students reach the right judgments and may instead use those theories to design opportunities for students to practice reasoning through identifying, articulating, and weighing relevant considerations, assuming responsibility for the content of their thoughts and the direction of their deliberations.[17] Literature teachers need not insist that children leave a lesson knowing who the villain was in some whodunnit, but biology teachers ought to insist that children leave knowing the effects of binge drinking. We will revisit the matter of costless false belief later. We will also make use of the fact that determining the costs of cognitive states *requires* making a judgment about their truth value. In the next section we consider Public Reason Liberalism's motivations for restricting this pairing of the Epistemic and Momentousness Criteria.

Antiperfectionism and Public Reason

Considerations of political morality are unavoidably material to the mission of public schools, and to deciding the aims and content of the education they provide. As Matthew Clayton and David Stevens observe, "state-maintained schools are funded by citizens through taxation and governed by legislation enacted by the state on behalf of the public."[18] For this reason, to make progress on the question of what mission state-maintained schools may permissibly serve, "we need to know what aims and objectives the government is morally permitted to force its citizens to serve" (*PRE*, 67). On antiperfectionist visions of political morality (such as Clayton and Stevens's), government has principled reasons not to take a stand on matters that are in dispute among *politically reasonable* citizens. Politically reasonable citizens are those citizens committed to the values of freedom, equality, and society as a fair scheme of cooperation. On this understanding, political institutions "should not be motivated by or directed to serve any particular comprehensive end" or theory.[19] Comprehensive ends and theories are those ends and theories that go beyond commitment to the values of freedom, equality, and society as a fair scheme of cooperation. Comprehensive ends and theories, which politically reasonable citizens disagree about, can be called "politically controversial" comprehensive ends and theories. (In plural societies, comprehensive ends and theories are almost inevitably politically controversial.) Politically controversial ends and theories are a subset of what Robert Dearden called "behaviorally controversial" ends and theories. For

17. Tillson, "When to Teach for Belief."

18. Matthew Clayton and David M. Stevens, "What Is the Point of Religious Education?," *Theory and Research in Education* 16, no. 1 (2018): 67. This work will be cited in the text as *PRE* for all subsequent references.

19. Matthew Clayton, "Anti-Perfectionist Childrearing," in *The Nature of Children's Well-Being*, ed. Alexander Bagattini and Colin Macleod (Dordrecht, Netherlands: Springer, 2015), 126.

Dearden, those ends and theories which "numbers of people" disagree about the value or truth of, are behaviorally controversial.[20] Within a certain scope (to be discussed in the next section) antiperfectionists insist that the justification of theories and ends must use the vocabulary of *public reason* (i.e., they must draw on a bank of concepts which has been emptied of any politically controversial items).

Broad and Narrow Antiperfectionism

Within what contexts and for what purposes would antiperfectionists have us use the vocabulary of public reason to justify our conceptions and ends? When may citizens invoke concepts and ends from the comprehensive conceptions, and when may they not? In other words, when does the public reason constraint apply? It would be clearly authoritarian and offend against the value of freedom to forbid people from acting on their comprehensive conceptions and ends at all. On the other hand, in so far as allowing people to act on them affects other people's lives, the value of freedom may be offended against from the other direction. While some (including T. M. Scanlon) recommend a narrow scope, Clayton and Stevens and others recommend a broader scope.[21] For John Rawls, the public reason constraint must apply at least to how we justify "the basic structure of society," i.e., to deciding *constitutional essentials*, "how political power is acquired and the limits of its exercise" and *basic justice*, "the background institutions of social and economic justice."[22] Limiting that constraint in this way is what Jonathan Quong calls the Narrow View:

> *The Narrow View*: The idea of public reason must apply to constitutional essentials and matters of basic justice, but need not apply beyond this domain.[23]

Pointing out that the Narrow View is compatible with more limited forms of political perfectionism, Quong defends the "Broad View," arguing that "public reason ought to apply, whenever possible, to all decisions where citizens exercise political power over one another."[24] As Cristóbal Bellolio puts it, "all public debates with a coercive impact should be instilled with the spirit of civility that political liberalism aims to promote in pluralistic societies. There is no overriding reason to follow it in some matters and not in others which have a very similar

20. Robert Dearden, "Controversial Issues and the Curriculum," in *Theory and Practice in Education* (London: Routledge and Kegan Paul, 1984), 85.

21. Cristóbal Bellolio, "The Quinean Assumption: The Case for Science as Public Reason," *Social Epistemology* 33, no. 3 (2019): 205–217; Steven Lecce, *Against Perfectionism: Defending Liberal Neutrality* (Toronto: University of Toronto Press, 2008); Jonathan Quong, *Liberalism without Perfection* (Oxford: Oxford University Press 2011); Lawrence Torcello, "The Ethics of Inquiry, Scientific Belief, and Public Discourse," *Public Affairs Quarterly* 25, no. 3 (2011): 197–215; and Catriona McKinnon, *Climate Change and Future Justice: Precaution, Compensation and Triage* (London: Routledge, 2012).

22. John Rawls, *Political Liberalism*, expanded ed. (New York: Columbia University Press, 2005), 229.

23. Quong, *Liberalism without Perfection*, 274.

24. Ibid.

effect on the lives of citizens."[25] Political power, I take it, applies at least to any act of government that makes or is based on enforced requirements of citizens. Since, as Clayton and Stevens point out, "state-maintained schools are funded by citizens through taxation and governed by legislation enacted by the state on behalf of the public," they fit the bill (*PRE*, 67).[26]

These considerations put the onus on those who defend the Narrow View to explain why Public Reason Liberals should restrict the Public Reason constraint. Even still, my joint pairing of the Epistemic and Momentousness Criteria is likely to be rejected as unduly perfectionist even by those who accept the Narrow View. This can be seen in the later Rawls's decidedly parent-focused (as opposed to child-focused) approach to educational policy. For him, parents may withdraw their children from public schooling for comprehensive reasons so long as they "[acquire] the capacity to understand the public culture and to participate in its institutions, [become] self-supporting members of society over a complete life and [develop] the political virtues."[27]

Antiperfectionism versus Perfectionism in State Schools

On perfectionist understandings, state-maintained schools may promote — and, if not promote, at least act on — information about the good and the true if what they have is knowledge, even if its content is a matter of behavioral or political controversy. Perfectionists claim they have no principled reason to refrain from promoting or acting on any behaviorally controversial information (including information that is politically controversial). Antiperfectionists say we have reason to refrain from promoting or acting on politically controversial information.

Since Clayton and Stevens have most fully developed and defended a Public Reason approach to educational policy, it is primarily their work I shall engage. They defend a version of antiperfectionism that would restrict the Epistemic and Momentousness Criteria. According to their Acceptability Requirement, "education policy must be regulated by principles that are acceptable to reasonable people" (*PRE*, 65). The conception of reasonableness they have in mind is what we might call Political Reasonableness, a "baseline commitment to treating others as free and equal, and to social unity," social unity being the view that "society should be a fair system of mutual cooperation" (*PRE*, 65). For educational policy to be acceptable to Politically Reasonable people, it must not promote or rely on values or judgments that they reject.

25. Bellolio, "The Quinean Assumption," 213.

26. Elsewhere, Clayton has argued that parents ought to be subject to antiperfectionist constraints in raising their children due to a parallel case argument. On that argument, the same conditions that obtain in citizens' subjection to state power also obtain in children's subjection to parental power (i.e., that we do not become subjects voluntarily, use is made of coercive sanctions, and profound effects are had on the lives of individuals). Matthew Clayton, *Justice and Legitimacy in Upbringing* (Oxford: Oxford University Press, 2006), chap. 3.

27. Rawls, *Political Liberalism*, 200.

The attraction of Clayton and Stevens's view is considerable. It seems desirable that the ends and theories people are forced to serve should be agreeable to them. Otherwise, they would seem to be unconsenting subjects of brute domination. Where that domination exceeds ensuring that they act in accordance with their enforceable moral duties (i.e., acting in compliance with the duties that regarding others as free and equal, and commitment to fair terms of cooperation, place on them), this seems objectionable. It seems desirable to minimize the degree to which the subjects of political power are alienated from and unable to identify with that power. Instead, it seems desirable to maximize the extent to which the subjects of political power can regard themselves "as jointly realizing a fair scheme of social cooperation" or "as partners that produce a valuable shared end" (*PRE*, 70). For Clayton and Stevens, what matters is that people can justly feel included, not that they believe the truth. Besides ensuring that we act in accordance with our weightiest moral duties (e.g., the prohibition on doing serious harm), what else are governments entitled to do? While humans seem to have an interest in having the freedom to formulate and pursue their own conception of the good, they may require constraints beyond those of their enforceable moral duties (e.g., constraints regarding taxation, road safety laws, food hygiene standards, and so on). How do we combine our claim to freedom with the need for such legal constraints? Following Rousseau, Clayton and Stevens allow that our "freedom is preserved" only if each citizen "endorses the rules that constrain" them (*PRE*, 69). The Acceptability Requirement is, for Clayton and Stevens, the "best interpretation of what it means for the state to respect the freedom and equality of its citizens" (*PRE*, 69).

Antiperfectionist Constraints

The Epistemic and Momentousness Criteria can both be constrained by antiperfectionism. Consider the following versions:

- Antiperfectionist Credence-Evidence: One must teach for the degree of credence in a claim that is epistemically warranted by the available evidence wherever that degree of credence is acceptable to politically reasonable people.
- Antiperfectionist Momentousness Criterion: Where it is costly not to have the right view and children are otherwise unlikely to hold beliefs in proportion with the evidence, this should motivate that view's compulsory inclusion in school curricula as long as the relevant evaluation of (a) the evidence, and (b) the understanding of "costliness" is acceptable to politically reasonable people.

Being wrong about the truth of a theory could be judged to be more or less costly by antiperfectionist metrics. For instance, if being wrong about the truth of a theory meant diminishing one's ability to satisfy their moral obligations, this could be unanimously judged momentous by politically reasonable people. So too could damage to one's stock of instrumental convergent goals:

> • Instrumental convergent goals: "There are some *instrumental goals* likely to be pursued by almost any intelligent agent, because there are some objectives that are useful intermediaries to the achievement of almost any final goal."[28]

Instrumental convergent goals include self-preservation, goal-content integrity (preserving the content of one's goals), cognitive enhancement (e.g., decision-making ability), securing reliable access to reliable advice and information, and resource acquisition. Where being wrong about the truth of a theory robs one of such useful intermediaries, it may be regarded as costly from an antiperfectionist point of view. Hence, the antiperfectionist restriction of the Epistemic and Momentousness Criteria would require that publicly maintained schools promote beliefs

> a. that enable students to satisfy their moral obligations, or
>
> b. that are not disputed by politically reasonable people, that are known to be true, and that it is costly to lack the correct view about in ways that are appreciable to politically reasonable people.

Antiperfectionist lines of thought would appear to recommend making public schooling policy with an eye to a restricted class of stakes and to the truth value of a restricted class of judgments. This contrasts with my view, which is unrestricted. However, I will argue that appearances are deceptive: antiperfectionist lines of thought actually lead to an unrestricted application of the epistemic criterion as well. While less sophisticated attacks on the Epistemic Criterion are vulnerable to charges of opening the "floodgates" of what must be taught nondirectively (or impartially) to include false and dangerous views held by some (such as anti-vaxxer, chemtrail, and 5G-tower conspiracy theories), at first blush the Acceptability Requirement has better resources for keeping the floodgates shut.[29] However, the moves made by the antiperfectionists to keep from opening the "floodgates of impartiality" are ultimately self-defeating, presenting them with a dilemma: accept unattractive floodgate consequences or else lose antiperfectionism altogether.

28. Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford: Oxford University Press, 2014), 9.

29. Trevor Cooling's "diversity criterion" would refrain from promoting scientific literacy in cases where significant disagreement exists between belief communities which "honour the importance of reason giving and exemplify a commitment to peaceful co-existence in society." Trevor Cooling, "What Is a Controversial Issue? Implications for the Treatment of Religious Beliefs in Education," *Journal of Beliefs & Values* 33, no. 2 (2012): 169–181. Commitment to peaceful coexistence is a startlingly undemanding notion for just relations. As Michael Hand points out, such standards are liable to distort pupils' understandings of what weight of evidence is sufficient for warranting what degree of credence and thereby their ability and confidence in drawing sound inferences. Michael Hand, "Religion, Reason and Non-Directive Teaching: A Reply to Trevor Cooling," *Journal of Beliefs & Values* 35, no. 1 (2014): 79–85.

Floodgates of Impartiality and Divergence

Clayton and Stevens's view might seem to open up what I have called the "floodgates of impartiality" concerning what may be taught regarding matters that are rationally settled among expert communities.[30] For example, the questions of whether human actions account for rapidly deteriorating climate conditions and whether flu vaccines cause autism are matters considered beyond reasonable dispute among climate scientists and medical researchers respectively. Nevertheless, there are no end of ignorant parties who genuinely deny these things. Clayton and Stevens can begin to respond to these charges by observing that citizens have enforceable duties to one another: they may have duties not to create inhospitable climate conditions abroad, and not to endanger children by failing to vaccinate them. To execute these duties, it may be expedient in some cases and necessary in other cases to know the truth. "Anti-perfectionists," as Clayton says, "may take a stand on the soundness of claims that are relevant to our status or conduct as free and equal citizens."[31] The important question is just how much one has to know, and how ignorant one can afford to be, in going about the business of satisfying one's enforceable duties to treat others as free and equal, and we shall come back to this point in the next section.

Given this response to the floodgates problem, it may seem difficult to think of divergent policy implications of the Acceptability Requirement, on the one hand, and of the unrestricted Epistemic and Momentousness criteria, on the other. Indeed, while Clayton and Stevens attack a priority of religion model— which is to say, the practice of featuring religious views more prominently in curricula than nonreligious views — so too have I.[32] It might be thought on this basis that which approach to deciding public schooling aims and content we select does not matter. However, it is important to make sure that public schooling policy decisions are based on sound reasons. In addition, any convergence in policy outcomes is contingent on a chancy overlap of the politically reasonable and epistemically warranted. While Clayton and Stevens as well as Hand[33] argue that religious education should be nondirective, for Clayton the balance of evidence tells against theism, whereas for Hand the balance of evidence is indeterminate. Were Clayton to adopt Hand's principles for deciding educational policy, or were Hand to adopt Clayton's estimate of the evidence bearing on theism, they would reach the shared view that schools ought to teach against theism. Furthermore, if we accept my own Credence-Evidence interpretation of the Epistemic Criterion, we will find it unlikely that where evidence-based expert consensus has not been reached,

30. John Tillson, "Religious Education and the Floodgates of Impartiality," in *Philosophy of Education 2011*, ed. Robert Kunzman (Urbana, IL: Philosophy of Education Society, 2011), 118–123.

31. Clayton, "Anti-Perfectionist Childrearing," 139.

32. John Tillson, "In Favour of Ethics Education, Against Religious Education," *Journal of Philosophy of Education* 45, no. 4 (2011): 675–668.

33. See Clayton and Stevens, "What Is the Point of Religious Education?," and Hand, "Religious Education," respectively.

despite eons of attention from and discussion among the most brilliant of inquirers, there will be any realistic prospect of children reaching sound conclusions. This acknowledgment would promote a great deal more intellectual humility in the face of such disagreement and complexity.

Epistemic Fortune

The idea of promoting and acting on part of, but not all of the truth, as Clayton and Stevens advocate, is potentially dangerous. All systematic ignorance is potentially dangerous: we cannot tell in advance which fundamental truths it is dangerous for citizens to be ignorant about, i.e., just those truths that enable them to act in accordance or compliance with their enforceable duties and no more. This is because knowledge is fundamentally interconnected. Facts about reality form a coherent and interrelated whole. As Jonathan Lowe has it, "Truth is single and indivisible or, to put it another way, the world or reality as a whole is unitary and necessarily self-consistent."[34] Changing facts about the world have ripple effects for the rest of reality, sometimes known as "the butterfly effect," and changing beliefs about the world have ripple effects for what other beliefs we ought to have about it. That is, the unity of reality implies the capacity for an ontological butterfly effect and, recognition of this unity implies the possibility of an epistemic butterfly effect. Epistemic examples include defeaters: e.g., in court all evidence could point to guilt of an alleged assault, but a single piece of missing evidence could count as a defeater, say that the accused turned out to have been in a different country at the time of the assault. Suppose that their innocence meant that someone else must be guilty, because an assault certainly took place. If there were a limited number of potential perpetrators who had previously told persuasive counternarratives, this might imply that at least one of their alibies was false. This example is illustrative of how our beliefs about what justice requires can be subject to epistemic ripple effects. The thought is that in forming new beliefs, we lean on existing beliefs. If our existing beliefs are false, the beliefs formed on their basis are not well-supported. Even if these beliefs are not about principles of justice, they may be about the material conditions under which justice can be achieved; even beliefs about the nature of space and time may become relevant in the coming years, in the same way that beliefs about anthropocentric global warming have become relevant over the last hundred years.

While any belief might be combined in ways that lead to endangering moral duties to fellow citizens, the more foundational the belief, the greater the risk. Religious examples include the belief that unborn children have souls, that humans who die while innocent gain access to paradise without running the moral gauntlet of life that could preclude them from it, and that petitionary prayer is efficacious. Nonreligious examples are also available: degrees of optimism or pessimism in the goodness of human nature can lead us to under- or overestimate levels of precaution necessary to avert wrongdoing, and ignorance about the material conditions of the world can lead us to mistakenly executing our duties

34. E. Jonathan Lowe, *A Survey of Metaphysics* (Oxford: Oxford University Press, 2002), 3.

in ways that we cannot generally predict or to pursuing activities that lead to ruin. As a general rule, the more accurate and more complete the information we hold as a community, and the more those out of the know can identify and defer to those in the know, the better our chances of ensuring that we jointly satisfy our civic duties.

Furthermore, without the unrestricted Epistemic Criterion, we risk every kind of future accomplishment. Judgments about which claims are most credible must be presupposed in the selection of topics for further investigation. For those persuaded of Biblical inerrancy, there is scant reason to explore the events of deep time preceding man's appearance on earth. Consider the following example of an epistemic butterfly effect described by Timothy Williamson:

> In early twentieth-century logic, a question arose that was both mathematical and philosophical: what does it means to have a "definite method" for solving a mathematical problem without creativity? To answer the question, Alan Turing devised an abstract theory of imaginary universal computing machines. Later, in an attempt to break German codes during World War II, he actually built such a machine. Its success helped defeat Nazism. That was the origin of modern computers that have transformed our world.[35]

There was no reason to expect in advance that the truth about what constitutes a solution to Turing's problem would enable a scientific and technological revolution that would improve human capabilities. On the Acceptability Requirement, forming policy sensitive to the truth about this would have been hostage to whether anyone reasonably rejected it. Finding out that it enabled immense improvements to the political community's stock of primary goods, or an effective tool to repel aggressive attacks, might occur too far downstream to come to light.

Furthermore, the difference between sciences and other disciplines is often much overstated. Disciplines may be distinguished broadly by their objects of inquiry, their methods of inquiry, and the concepts employed in characterizing and investigating their objects of inquiry. All the same, they will rely on broadly the same kinds of procedures. The means that we have for acquiring knowledge include deductive and inductive arguments, as well as abductive arguments (arguments to the best explanation). It is worth quoting J. L. Mackie's characterization of such abductive arguments at length:

> The evidence supports the conclusion, it is suggested, because if we postulate that the conclusion is true — or better, perhaps, that it is at least an approximation to the truth — we get a more adequate overall explanation of that whole body of evidence, in light of whatever considerations are cited, than would be given by any available alternative hypothesis.[36]

As Mackie observes, such patterns of inference are widely employed outside of the hard sciences, in the social sciences, natural theology, police detective work, history, and legal theory. Following Quine, we should see science as an extension

35. Timothy Williamson, *Philosophical Method: A Very Short Introduction* (Oxford: Oxford University Press, 2020), 93.

36. J. L. Mackie, *The Miracle of Theism: Arguments for and against the Existence of God* (Oxford: Oxford University Press, 1982), 4.

of common sense, with a scientist being "indistinguishable from the common man in his sense of evidence, except that the scientist is more careful."[37] In this way, it makes little sense to hive off the sciences from the nonsciences for directive teaching. All theories about the world and our place in it rest upon more or less evidence that renders them more or less probable (or improbable), historical and theological theories included.

It may be objected that failure to promote knowledge does not necessarily result in ignorance. Students might come to knowledge through evaluating neutrally presented information in schools or might come to it through some independent routes. However, to the extent that knowledge is not presented *as knowledge* and strategically scaffolded for understanding and acceptance, students' views are given wider scope to diverge from expert community consensus through nondirective teaching. Because they lack important background knowledge, motivation for sustained inquiry, and key concepts and critical skills, children are not typically well-placed to identify and interpret evidence or evaluate arguments for and against complex scientific theories without a great deal of evidential curation, simplification, and explanation provided by sources they trust. Ultimately, a great deal of testimony — testimony that the evidence is thus and so and even that arguments martialing this evidence are sound — is needed to cultivate (relatively) independent and reliable inquirers. It may reasonably be worried that to the extent that these views diverge and compound, moving yet further away from reality, as their false beliefs become premises in arguments — even otherwise valid arguments — to further beliefs, they — at the limit — threaten to cocoon them in delusion. One can only hope (in vain) that people with such beliefs accede to no political power, or never gain financial recourse to fund misconceived research or misinformation campaigns. For every fundamental falsehood one holds, the further satisfying of one's citizenship duties (as well as other goods to be discussed later) becomes hostage to fortune.

There is a contrast between propositions such that it is momentous for everyone that just someone or just a few people should believe them (call this "specialized moment"), and propositions such that it is momentous for each individual that they should believe them themselves (call this "general moment"). Consider the proposition that nothing can exceed the speed of light. While it might make some difference to me that physicists know it, it does not seem to make much difference to me that I know it. This distinction is an arguable basis for a contrast between general education and specialized education: whereas general curricula would be interested in propositions of momentous importance for each individual to know, more specialized curricula would concern themselves with propositions which it is of momentous importance to society that at least some people know. However, such a distinction would not license those outside of specialist education to believe anything they like; it would be better for them to

37. Willard Van Orman Quine, "The Scope and Language of Science," *British Journal for the Philosophy of Science* 8 (1957): 1, 5.

take an attitude such as this: I do not know about this matter, those in specialist education know better, and it is their judgment that ought to be factored into determining the facts on which decisions (e.g., of policy) are based.

In Clayton and Stevens's sense of the term "reasonable," most findings of the scientific community agreed on by expert consensus both in terms of the conclusions and the means of proof "cannot command the universal assent of reasonable people" (*PRE*, 73–74). However, educational policymakers must unavoidably rely on judgments of the relative likelihood of theories being true, and of the costliness of the failure of students' belief to track these likelihoods; they must do this even if they only wish to judge costliness in a restricted, antiperfectionist way. They must do so in circumstances of popular disagreement in order to decide on the content and aims of education. However, the truth is best gauged by deference to the evidence-based consensus of subject experts, rather than of nonexperts. Contemporary orthodoxy in science forms an impressively mutually consistent body of beliefs that can provide the needed judgments of the relative likelihood of different theories the uncertainty of which must be hedged against. Thus far I have argued that Public Reason Liberalism really ought to motivate an unrestricted version of the Epistemic Criterion. Next, I suggest that the concern with self-determination that motivates Public Reason Liberalism seems on further reflection to both undermine Public Reason Liberalism and to motivate unrestricted versions of both the Epistemic and Momentousness Criteria.

Self-Determination/ Independence and Truth

Clayton and Stevens regard individual self-determination to be one of the fundamental values that "ground" the acceptability requirement (*PRE*, 71). As Clayton says elsewhere:

> One prominent argument for anti-perfectionism proceeds from the ideal of independence, which asserts that each person should endorse the rules that govern how she lives her life. With respect to our personal goals, for example, independence requires that we decide for ourselves what ends we pursue during our lifetimes, rather than have our ends set by other people.[38]

However, full self-determination is possible only in light of the truth. Individuals cannot fully self-determine in ignorance. In order to *fully* self-determine, one needs (a) a range of available options and to commit oneself in light of (b) all relevant information, (c) only accurate information, and (d) free from coercion.[39] Information is relevant when it forms part of a sound argument to select one end or to reject another end. Following Allen Wood, "I am coerced to do something when I either do not choose to do it or if, when I choose to do it, I do it because I have no acceptable alternative." Some alternatives "might be unacceptable because they threaten an evil so extreme I can't or won't consider them

38. Clayton, "Anti-Perfectionist Childrearing," 126.

39. A surprising omission from this list may be manipulation. I address this omission in "Children, Religion, and Influence in Philosophy of Education," interview by Richard Marshall for *3:16* (2020), https://www.3-16am.co.uk/articles/children-religion-and-influence-in-philosophy-of-education?c=end-times-series.

(being shot, letting my family starve), while others might be unacceptable for moral or legal reasons."[40] Individuals may more fully self-determine than others insofar as they satisfy more of these criteria or satisfy these criteria more fully than others do. Unless they satisfy them fully, however, they are not fully self-determining.

There is a weaker form of self-determination available that forms a subsection of this. On this view, people are self-determining if they have a range of valuable options, are intelligent enough to select effective means to satisfy their goals, can tell when their goals are compatible, and are rational enough to recognize and respond to reasons in forming and revising their goals. This weaker form of self-determination, other things being equal, is certainly a desirable form of self-determination. However, we have strong reasons to want more: i.e., to want accurate information, and to eschew inaccurate information, so that our determinations are more fully our own. This is not an overly demanding standard: if someone withholds information, adds in inaccurate information, or unnecessarily burdens and muddies their decisions with obstacles like judging which of a plethora of contrary theories are true, we reduce their autonomy in morally significant ways. The burdens of working out the truth may be too much for us to come to a position where we are sufficiently well placed to determine for ourselves what to do. Notice that in assessing a person as rational or trying to bring a person towards rationality (rather than merely enhanced, instrumental intelligence), we rely on judgments of whether or not they are able to identify reasons and respond to them, and in doing this it is impossible not to rely on judgments about what counts as a reason. This is also true when we aim to disclose normatively relevant information.

Indeed, it seems that we do a disservice to individuals if we do not allow them to make decisions and formulate life plans in light of facts, in that we rob them of a chance to be self-determining. It is quite plausible that decisions and actions made in such circumstances have limited value. It is to labor under a misapprehension, and if one's whole life is spent in this way, the very real worry is that one's life will have been wasted. In Arthur C. Clarke's "The Nine Billion Names of God," Tibetan monks seek to compile a list of all of the names of God, the purpose for which they believe the universe was created.[41] I won't spoil the story for those who have not read it, but suppose the monks were wrong. Certainly they would have a sense of purpose, but if they were told that they were mistaken, and that there was in fact no God to have names applied, they might wish to find this out sooner rather than later. Given the choice between false appearance of meaning, or meaning premised on a falsehood, full respect gives us weighty reason to disabuse individuals of their misunderstandings. Failure to do so might entail that uninformed people commit

40. Allen W. Wood, "Coercion, Manipulation and Exploitation," in *Manipulation: Theory and Practice*, ed. Christian Coons and Michael Weber (Oxford: Oxford University Press, 2014), 21, 23.

41. Arthur C. Clarke, "The Nine Billion Names of God" (1953), in *The Nine Billion Names of God* (New York: Harcourt, 1967).

significant efforts, resources, and portions of their lives to realizing illusory values which they would not have done if only they had access to a fuller range of available information.

A Dilemma for Antiperfectionist Education

In this section I argue that the moves made by the antiperfectionist to keep from opening the floodgates of impartiality are ultimately self-defeating. This presents the antiperfectionist with a dilemma: accept unattractive floodgate consequences or else lose antiperfectionism altogether. Recall that antiperfectionists may take a stand on the soundness of claims that are relevant to satisfying our civic duties. In order for government to effectively decide whether citizens' beliefs do fail to allow them to execute their enforceable duties, the government must construct a theory of how things are, and judge whether believing falsely is likely to lead to unsatisfied duty. That is to say, all of their policy decisions to refrain from intervention in false beliefs would have the falsity of those beliefs featuring as premises anyway. In constructing such a theory and acting on it, they would thereby violate the Acceptability Requirement. To illustrate this more clearly, recall the case of Z Efficacy. Suppose that Z Efficacy is a matter of disagreement among politically reasonable citizens. Government will still want to know whether Z Efficacy denial or advocacy in state-maintained schools will tend to frustrate citizens' fulfillment of their moral obligations. In deciding this, Government will have to form a view of Z Efficacy's probability.

Educational Aims

I have argued that where it is valuable for people to set their own ends, they can only fully meaningfully do this when equipped with relevant facts and free of misinformation. I have argued that the relevant facts are those which are sensitive to our ethical and moral knowledge about the costs of ignorance. It is the duty of society, within its means and with due regard for other goals and constraints, to provide children with an adequate opportunity to access and act on this knowledge. It is then their prerogative to fail to live meaningfully. While children have no duty perfect themselves, they do have a right to invent themselves, but they cannot do this in ignorance: if their life is meaningless because they chose as well as they could without being informed, then they could not truly consent to the life they undertook and did not have a realistic chance at a meaningful life. It is the duty of society, within its means and with due regard for other goals and constraints, to provide children with an adequate opportunity to access and act on this knowledge. I say "adequate opportunity" because society cannot ensure that children gain the knowledge and cannot invest unlimited resources to enable its acquisition. As the saying goes, you can lead a horse to water, but you cannot make him drink.[42] Since there are likely many ways of leading a good life, and education for future well-being-constrained-by-moral-requirements, educational aims must

42. That said, for a discussion of compulsory (moral) knowledge insertion, see Matthew Clayton and Andres Moles, "Neurointerventions, Morality, and Children," in *Treatment for Crime: Philosophical Essays on Neurointerventions in Criminal Justice*, ed. David Birks and Thomas Douglas

hedge across multiple possible futures including ones in which students do not elect to optimize well-being-constrained-by-moral-requirements. Education will therefore be generalist in character, providing access to a theoretical framework within which students are equipped to identify permissible valuable ends and useful permissible intermediaries. Other goals include not just providing individuals with access to information — often by knowing enough to know who to defer to and seek advice from[43] — but also preparing generational cohorts to satisfy their collective duty of preserving and improving the social stock of knowledge[44] for the sake of reducing various kinds of injustices and increasing opportunities for flourishing, which may include opportunities for epistemic achievement. Before concluding, I want to address two more critiques of the Epistemic Criterion from the literature.

Evolution and the Aims of Science Education

Adam Laats and Harvey Siegel have argued that science education should not aim at *knowledge that* (and the belief they recognize such knowledge would involve) even the best attested scientific theories are true.[45] For Laats and Siegel, science education should instead aim at encouraging students' *understanding of* and *knowledge about* the best scientific theories: knowledge about and understanding of (a) what such theories claim, (b) how their supporting evidence makes them the best scientific theories, and (c) how to develop the ability to apply, explain, and answer questions about these theories — where this amounts to evidence of understanding. However, it is not clear why science teachers should not additionally aim for knowledge that theories are true, when they are. Laats and Siegel point out that sometimes knowledge about and understanding of theories and belief that they are true do not go together:

1. There are theories supported by compelling arguments that are hard to internalize (e.g., even physics graduates get questions about the law of inertia wrong despite passing the relevant tests in class).

2. In understanding and knowing about outdated science, typically students will come to believe they are false.

(Oxford: Oxford University Press, 2018), 235–251. For discussions of noncompulsory knowledge insertion, see John Tillson, "Is Knowledge Insertion Desirable?," *Educational Theory* 70, no. 4 (2020): 483–505; John Tillson, "Imagine You Could Insert Knowledge into Your Mind: Should You?," *Psyche*, July 14, 2021, https://psyche.co/ideas/imagine-you-could-insert-knowledge-into-your-mind-should-you; and Gonzalo Obelleiro, "What Might Dewey Think of Knowledge Insertion?," *Educational Theory* 70, no. 4 (2020): 507–515.

43. Ben Kotzee, "Education and Epistemic Injustice," in *The Routledge Handbook of Epistemic Injustice*, ed. Ian James Kidd, José Medina, and Gaile Pohlhaus Jr. (London: Routledge, 2017), 330.

44. Ben Kotzee, "Intellectual Perfectionism about Schooling," *Journal of Applied Philosophy* 36, no. 3 (2019): 436–456.

45. Adam Laats and Harvey Siegel, *Teaching Evolution in a Creation Nation* (Chicago: University of Chicago Press, 2016), chap. 7.

However, in the first case, we may want our teaching to achieve deeper cognitive penetration than it currently does and think further about how to achieve it: e.g., by having our students design a system whose successful operation depends on the correct theory. Where we cannot achieve that, we would at least be happy that students believe that, epistemically speaking, they ought to believe Newton's law of inertia and find ways to manage its lack of cognitive penetration by taking steps to avoid having their hard-to-discard folk physics guide their practical deliberations, especially about engineering projects. Of course, we must not set impossible standards for teachers and if students cannot all come to *know* the law of inertia with a fair effort from their teachers (rather than merely know *about* it), we can at once acknowledge that falling short of the aspiration is not the fault of the teachers, but is still a shortfall from the legitimate aspiration. In the second case we usually want students to disbelieve the theories we are asking them to know about and understand: we want them to know that the theory of the four humors is false, we don't just want them to know that it claims various things, makes various predictions, and is at variance with what we have experimental reason to believe. We certainly don't want them to start drawing blood to remedy illnesses.

However, if we want students to internalize dispositions of critical thinking, as Siegel has argued persuasively that we ought to, it is hard to see how we can at once teach children to appreciate that a full understanding and knowledge of the relevant reasons commends a theory as true, but not encourage them to accept that theory on the strength of those reasons. If teachers encourage students that they should in general believe whatever they have most reason to believe, and then show the students that they have most reason to believe what science tells us, it is hard to see why teachers are not thereby encouraging knowledge that the science is true (and the belief that the science is true that such knowledge entails). Siegel defends the cultivation of reason as a central aim of education:

> [E]ducation should have as a fundamental aim the fostering in students of (1) the ability to reason well, that is, to construct and properly evaluate the various reasons which have been or can be offered in support or criticism of candidate beliefs, judgments, and actions; and (2) the disposition or inclination to be guided by reasons so evaluated, that is, actually to believe, judge, and act in accordance with the results of such reasoned evaluations.[46]

Laats and Siegel comment that "If it seems to [responsible] parents that their children are forming beliefs in school that the parents find objectionable, the latter will surely, and sensibly, object."[47] This might be so, but the issue could emerge in cases where parents worry that children are being told to accept faulty critical thinking dispositions that will lead them to objectionable irreligious belief. These parental objections do not amount to any kind of weighty reason of justice to limit children's education. They are at most a set of nonideal parameters we have reason to respond to strategically, sometimes by electing a lesser evil. Certainly, I am ready concede that in teaching evolution in a creation nation, such a strategy as

46. Harvey Siegel, *Education's Epistemology: Rationality, Diversity, and Critical Thinking* (Oxford: Oxford University Press, 2017), 4.

47. Laats and Siegel, *Teaching Evolution in a Creation Nation*, 73.

Laats and Siegel's may often prove strategically sensible to avoid flight from public schools.

Pedagogy for Equal Citizenship

In a brief and illuminating discussion of the Epistemic Criterion, Diana Hess and Paula McAvoy worry that "a teacher in a State with a defense of marriage amendment on the ballot does not prepare students for political engagement by asserting that there is one right answer."[48] However, as flagged earlier, there is an important distinction between pedagogy and the aims it is supposed to satisfy. Acting on the Epistemic Criterion need not involve simply telling students anything; instead, it ought to involve thinking imaginatively about the most effective pedagogy to cultivate (1) accurate belief, (2) appreciation of the reasons why the belief is accurate, and (3) the capacity and readiness to revise their view should considerations later emerge that undermine it. Acting on the Epistemic Criterion is compatible with enabling students to engage in constructive, cooperative discussion of topics that they disagree about fervently, and even about which they are inclined to think of people who hold contrary views as morally the worse for holding them. Managing such discussions is a sensitive matter that should not be entered lightly or before the processes of speaking and listening are established, and group trust and sympathy have been built.

Hess and McAvoy rightly emphasize the importance of students learning "to treat each other as political equals by deliberating across their political, moral, cultural, and religious differences."[49] For this reason, they worry about the Epistemic Criterion's "use standards of moral and political philosophy to determine whether views are sufficiently reasonable [to teach nondirectively]," objecting that "this is a much higher standard than is used in the public sphere and would require teachers to exclude discussion of important political issues."[50] However, teachers could encourage students to engage in discussions about epistemically closed topics, and share their views about those topics, allowing students to respond to one another's views. If, on the Momentousness Criterion, it will be costly for students to leave the classroom with the wrong view about the matter under discussion, they will seek ways to bring students (in the shorter or longer term) to come to see that some views some of them have are indeed false and costly (to them or to others) for them to believe. In any case, it is likely that there are many cases where teachers and other well-informed people will simply not know what the right view is and will enter and enable discussions without a clear idea what the correct view is or whether it is costly to lack it. In such cases discussion can equally be had where students practice "deliberating across their political, moral, cultural, and religious differences." At the same time, students need plenty of opportunities for

48. Diana Hess and Paula McAvoy, *The Political Classroom: Evidence and Ethics in Democratic Education* (London: Routledge, 2015), 168.

49. Ibid.

50. Ibid.

coordinating and cooperating on matters about which they disagree, finding compromises and mutually acceptable trades.[51]

Conclusion

We have distinguished restricted and unrestricted versions of the Epistemic Criterion and of the Momentousness Criterion as principles for deciding the content and aims of public schooling. I have elucidated and motivated each, favoring a Credence-Evidence interpretation of the Epistemic Criterion and indicating the wide range of relevant costs the Momentousness Criterion is sensitive to. I have sought to motivate and defend these interpretations from objections from Public Reason Liberalism that would limit each to operating with views acceptable to politically reasonable people. In response, I argued first that the grounds that motivate Public Reason Liberalism motivate unrestricted versions of the Epistemic and Momentousness Criteria. First, in so far as it is valuable for people to set their own ends, they can only fully meaningfully do this in light of relevant facts and free of misinformation, and so on the basis of an education guided by unconstrained versions of the Epistemic and Momentousness Criteria; second, truncating the Epistemic and Momentousness Criteria restricts epistemic progress and reduces citizens' capacity to satisfy political and moral duties. Finally, attempts to address these problems were ultimately shown to give up on Public Reason Liberalism altogether. I hope this paper has contributed to liberating the Epistemic and Momentousness Criteria from the Public Reason Liberalism Constraint.

51. One variation on this question of what public schooling must cover that is particularly pertinent at present in the United States, and to a lesser extent in the United Kingdom, is whether some topics ought to be excluded altogether, rather than whether some views about those topics may or must be promoted or demoted, or whether they are insufficiently important to warrant occupying limited curriculum space. Uncontroversial examples might include vivid details apt to traumatize learners and modus operandi for wrongdoing. More worrisome examples include discussion of sexual orientation and gender, and systemic racism and implicit bias. Sadly, legislation of this kind is under consideration in most U.S. states. I cannot address this topic at length, but the general response the argument in this paper would suggest is that such legislation must not be introduced insofar as it prevents students from coming to have knowledge that it is costly for them to lack. Furthermore, insofar as the topics are matters of polarizing public disagreement, failing to have opportunities to discuss them reduces opportunities for students to negotiate profound differences, to find ways to resolve them, and to cooperate despite them. A full analysis of the issues involved turns on the value of freedom of speech rather than just the aims of education. The literary and freedom of expression advocacy group PEN America regularly updates a spreadsheet tracking these laws and their status on its website: https://docs.google.com/spreadsheets/d/1Tj5WQVBmB6SQg-zP_M8uZsQQGH09TxmBY73v23zpyr0/edit#gid=1505554870.