

## Education *qua* Enlightenment: On the Rationality of the Principle of Reason

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There are many ways in which one might construe the meaning of “modernity,” but one of the most common definitions, arguably, is that modernity is characterized by the possible realization of a rationally-grounded, and scientifically-directed, organization of social life. The promise of modernity, one might say, is the promise of the end of ideology—the end of mysticism, of dogmatism, of arbitrariness or of force in the social and political spheres—and the beginning of an inexorable progress of Enlightenment.

This Enlightenment takes both an intellectual and a social form. On the intellectual front it consists above all in the rise of science. Max Weber’s formulation is that the world became “disenchanted” and “rationalized” through the new rigour, and indeed the relentlessness, of scientific method. From this time forward, nature became ours for the knowing and, concomitantly, for the taking (or so it was thought) as well. Simultaneously in the realm of politics, justice, democracy, and the rule of law became the catchwords of a new social order that was inaugurated with a series of revolutions in Europe—in England, in France, and eventually in Germany—revolutions that ultimately replaced (more or less successfully) absolute, monarchical rule with that of self-government: government by and for the people.

Notably, what guarantees the *telos* or promised end of Enlightenment on both fronts—intellectual and social—is that the *arché* of Enlightenment, its beginning or origin, can be traced to what is unassailably, rationally true. Just as the legitimacy of science hinged centrally on the axioms through which consistency and completeness were achieved mathematically, so too did the legitimacy of social and political claims hinge crucially on their rational foundations, their axioms, as well. Indeed, the scientific rigour of mathematical method and the socio-political good of ethical perfection are directly linked at the level of grounds. This link is achieved through logic, as Paul de Man explains:

Seventeenth-century epistemology, for instance, at the moment when the relationship between philosophy and mathematics is particularly close, holds up the language of what it calls geometry (*mos geometricus*)... as the sole model of coherence and economy.... This is a clear instance of the interconnection between a science of the phenomenal world and a science of language conceived as definitional logic, the pre-condition for a correct axiomatic-deductive, synthetic reasoning.... [T]his articulation of the sciences of language with the mathematical sciences represents a particularly compelling version of a continuity between a theory of language, as logic, and the knowledge of the phenomenal world to which mathematics gives access.<sup>1</sup>

Gottfried Wilhelm Leibniz best captured the epistemological continuity de Man describes with his formulation of the principle of “sufficient reason”—the principle that comprises the law of noncontradiction (consistency) as well as the law that, for every *thing* (for every thing that *is*, or that exists), reason can be rendered sufficiently (which is to say, with completeness).<sup>2</sup> This is the basis on which Enlightenment

philosophers were able to hold out the promise, or the vision, of a complete and perfect knowledge. Knowledge founded on this principle can be unified as a *complete* system because, unlike medieval epistemology or that of the Greeks, modern epistemology is one in which reason legislates to itself its own axioms or origins, and it does so for mathematics and for politics alike. Modern reason thereby achieves that classical perfection, that *self-sufficiency* as Aristotle would say, that was, hitherto, the exclusive prerogative of God. In this ideal conception, moreover, the human subject becomes the holder and the site of the modern promise of enlightenment. The subject becomes this site because it is in the subject, *qua animale rationale*, that the capacity for reason, for self-legislation, and thus for perfection, finds its ultimate and final ground.

This philosophical link between the scientific and the socio-political that is established by logic and embedded in the very identity of the modern subject is nowhere more explicit than in the moral philosophy of Kant. In the wake of Kant's explication of the possibility of pure practical reason, the project of education became the modern project of the realization of philosophy *as* Enlightenment. As Robin Usher and Richard Edwards explain, the educative project was then conceived,

as the vehicle by which modernity's "grand narratives," the Enlightenment ideals of critical reason, individual freedom, progress and benevolent change, are substantiated and realized. The very rationale of the educative process and the role of the educator is founded on modernity's self-motivated, self-directing, rational subject, capable of exercising individual agency.<sup>3</sup>

Education could serve as this vehicle, it was thought, because education was understood as the process of bringing the philosophical understanding of science to fruition in and as the individual him or herself. Education, in other words, was seen as that process which could turn specific individuals *into* the rational, self-legislating, universal moral subjects that Kant described. On this basis, perfection was thought to be realizable in the social and political spheres. When understood in this, its fullest sense, therefore, modernity is not so much an epoch—a bracket of time (for example, 1789-1989)—as it is the incalculable *promise* of, and desire for, the realization of the modern subject.

It is precisely this idea of education as Enlightenment that has come into question today. What is too often overlooked in the literature on education, however, is that the "post"-modern interrogation of philosophy does not stem from an attitude of "doubt" or scepticism about the "metanarrative" of modernity or its ends.<sup>4</sup> In fact, I submit, the "postmodern" turn has nothing directly to do with the attitude of the critic, and least of all with an attitude of incredulity or doubt. Rather, "postmodernism" may be understood as an inevitable decentring and de-legitimation of critical reason that occurs when the principle of reason is brought, self-reflexively, to bear upon itself. If the potential for Enlightenment has come into question today, in short, it is because the very demand *for* ethical and political legitimacy has led to the realization that reason's emancipatory promise was never strictly rational to begin with. In other words, a scrupulous adherence to reason's own protocols has given rise to the crisis of reason known as "the incredulity to metanarratives."

Specifically, what emerges from analyses undertaken by those such as Jacques Derrida is that the original condition *for* Kant's (and Hegel's) dream of a unified theory of knowledge is (it always was) a certain "messianism." The condition for this promise is "messianic" in the specific sense that it rests on an unjustifiable appeal to—a calling into being of—an ideal subject whose end it prefigures and whose name it announces (*qua* "Man"). In other words, in order to justify the idea of freedom as self-legislation, an ideal of "man" as *potentially* transcendental must already be in place. The appeal to Enlightenment itself (to its possibility) *performs* that subject into being (it constitutes it) *as though it were, retroactively*, the origin or ground *of* that very end. Another way to phrase this would be to say that in naming the Enlightenment as the end of ideology, darkness, obscurity and mysticism, one actually calls into view a potentially perfect subject; perfect, that is to say, in the strictly scientific sense of self-sufficiency and completeness. This is a subject whose reason is unsullied by the bothersome contingencies of race, class, sex, age, nationality, locality, or history. This is the universal subject *par excellence*. And this universal, this perfect, this complete being *is* the subject "to come." What this means, however, is that the most general idea of education in its normative sense, the idea of education as an emancipatory project, must be fundamentally rethought (*pace* Nicholas Burbules and Harvey Siegel alike).<sup>5</sup>

One might give substance to this claim in any one of a number of registers. One might undertake, for example, an extended discussion of the relationships between logic and rhetoric, between the scientific discourse of philosophy and the mystical discourse of apocalypse, between the judgment of the beautiful and the judgment of the sublime or, indeed, between rationally grounded truths and politically motivated norms. In each one of these cases it can be shown that the necessary priority of the former over the latter—of logic over rhetoric, of philosophy over apocalyptic discourse, of beauty over sublimity, and so on—rests on a distinction that cannot strictly, and that must nonetheless, be made. Here, however, a brief discussion of the problematic status of the principle of reason undergirding the modern educational project will have to suffice.

Specifically, to say that the originary condition for Enlightenment is a certain irrationality is to say there is something in or of the desire *for* Enlightenment—in or of the desire *for* reason—that is in principle incapable of being "lit" or illuminated *by* reason. That "thing" (so to speak) is the very *imperative of* reason that the philosophical discourse of modernity first established as its ground, and that contemporary theories of education continue to uphold. Ironically, moreover, the problem with establishing the imperative of reason itself on rational grounds can be seen most clearly in a demonstration that has no immediate connection to any putative "postmodernism" at all; it can be shown with reference to the mathematical discoveries of Kurt Gödel. For significantly, the German mathematician had shown already in 1931 that Leibniz's principle of reason with its two fundamental requirements—namely, those of consistency (the law of non-contradiction) and completeness (the law of sufficient reason)—is itself logically undecidable. It is this logical point about principled grounds, rather than any mood of distrust about ends, that has implications for educational theory today. For it is this logical point that belies the rationality of Enlightenment's origins.

Gödel first made his argument in a ground-breaking essay, “On Formally Undecidable Propositions of *Principia Mathematica* and Related Systems,” that is widely celebrated as a watershed development in the history of mathematics and logic because it first brought the concept of formal undecidability to light.<sup>6</sup> There he offered two “incompleteness theorems” that expose an intriguing paradox: a formal calculus or geometry can only be taken as consistent (as incapable of producing two contradictory formulas) insofar as it gives rise to a proposition that is not strictly decidable as either true *or* false. Conversely, the calculus can only be taken as complete (as capable of deciding all possible propositions) insofar as it issues in contradiction (in which case it fails as a system). In effect, Gödel’s discovery of formal undecidability established that a mathematical system is either consistent or it is complete; it cannot be both, however, because the demand of the one logically precludes the possibility of the other. This paradox emerges when the principles of consistency and completeness are themselves subjected to the demands of consistency and completeness; that is, when they are turned, recursively, to bear upon themselves.

What this means, in effect, is that although any formal axiomatic system *must* appeal to the ideal reconciliation of consistency and completeness if it is to issue in “true” propositional content, that very ideal is either contradictory or incomplete. The infinite *ideal* of reason thus serves as a kind of ordinary sense—the sense of a unity that is anticipated, or only ever *to come*. A strictly logical inquiry into the scientific and social-political demand *for* reason—for its imperative—gives rise, therefore, to the realization that an appeal to what is *anticipated* is required to *open* the possibility of a closed system through which a particular determination (that this *is* presently true, or that this *is* presently good) may then legitimately be made. The messianic anticipation of what is “to come” is, in this sense, the logical condition for the rational decision about what presently *is* (the truth).

Notably, Gödel was investigating the logical possibility of a complete axiomatic system such as Euclidean geometry; he had, presumably, little interest in the political or educational implications of his discoveries. It is fair to ask, therefore, whether any general lessons may be drawn from Gödel’s proofs for the philosophy of education. I have argued, however, that the philosophy of education shares with mathematics the insistence on the logical protocols of consistency and completeness that are embodied by the principle of reason. Indeed, the rendering of reason was just what the educative promise of Enlightenment (the ideal of a grounded knowledge) required. Consequently, implications for education are clearly there to be found. In particular, what crosses the disciplinary divide is the point that the full and sufficient rendering of reason is logically impossible, because one can always turn the principle of consistency and completeness back upon itself, and so can open up the decision (of true or false) to a constitutive undecidability. This indicates, most importantly, that a moment of idealization, a metaphysical promise of a completeness to come, is an inescapable dimension of the social and political promise of Enlightenment as well. Something must be unjustifiably posited by philosophy no less than by science if social enlightenment or mathematical truth is to get off the ground.

In the case of educational theory, this posit takes the form of an *unjustifiable* appeal to the autonomous, self-directed subject, and it does so nowhere more markedly than in Kant's original formulation of "autonomy." Specifically, Kant says that we can know the moral law—the imperative to legislate for oneself *autonomously*, or without being conditioned by any other thing—in absolutely certain, transcendental terms. We know the moral law, he says, by the feeling of "respect" it inspires. However, it emerges, this feeling is not itself knowable. On the contrary, it is characterized as "mysterious and wonderful," and neither its basis nor its origin can be determined.<sup>7</sup> Nonetheless, *because of man's own transcendental nature*, Kant argues, we recognize in the moral imperative—the imperative to legislate for ourselves, autonomously and rationally—a "holiness" that corresponds with what we essentially *are*. And this is why we respond to the moral law: it evokes in us the respect for our own rational, or supersensible, capacity. This subject is thus called into being *as* a self-legislating and therefore self-sufficient force. The origin of the moral law, then, is no more rational than is the origin of the geometrical system. Both are called into being, irrationally, as the end that will *come*.

Where the rationality of the principle of reason comes into question for the educational project, then, is in the very move whereby the moral "good" is determined *as* the nature, *as* the essence, of "man." In effect, Kant claimed that we know what is good because we know what we are, and we know what we are because we know what is good. By virtue of this "fact of reason"—what Kant calls the "essential ends of man"—we can not only determine the difference between right and wrong in an ethical sense, but we can also know the "true" meaning of philosophy, which is to say, we can determine a ground for epistemology more generally. For, it turns out, Kant views philosophy itself as "the science of the relation of all knowledge *to* the essential ends of human reason."<sup>8</sup> This true relation between philosophy and human ends is established by the feeling of respect. Paradoxically, therefore, we find that just as the critique of pure reason gives rise to the possibility of moral knowledge by revealing to us *its* grounds, so moral knowledge, in turn, has also *already* given rise to the philosophical system as well. Here again, an undecidable formula—this time in the form of an impossible relation between epistemological grounds and ethical norms—results when the question of reason is brought, self-reflectively to bear upon itself.

Thus, just as the ideal of completeness is a necessary but impossible ground of mathematical determination in general according to Gödel's undecidability theorems, so too it is arguable that the ideal of autonomy (or self-legislation) is the necessary but impossible ground of the ethical-political determination of education *as* an emancipatory, enlightening aim. The idealized subject (the appeal to its promised autonomy) may be seen as a necessary dimension of any theory of education aimed at social or political enlightenment, in other words, just as the ideal of mathematical closure (the appeal to its promised self-sufficiency) is a necessary dimension of any geometrical system. And this is because the self-determination of the subject—its capacity to stand over itself, as it were, and to know itself as an object of representation—is what guarantees the possibility of distinguishing true from false for philosophy and for mathematics alike. Yet in both cases it is strictly the

logical inquiry into grounds, *not* a doubt or a scepticism about modern rationality's ends, that has brought this issue to light. In both cases, moreover, it becomes clear that it is precisely the imperative *of* reason—the imperative to ground one's claims on axioms that are self-justifying and, hence sufficient in the classical sense—that has come into question today.

What is “post”-modern about the contemporary philosophical scene, therefore, is not that modernity is *over*. On the contrary, it is that modernity has (now) opened itself up to the realization that it is logically incapable of being present, of being here, now. Modernity *de-legitimizes itself*. It does so because the very principle of reason on which modern science and modern philosophy depend itself demands a ground. Reason must answer for itself.<sup>9</sup> This is the one thing, however, that reason cannot do. And, once it becomes clear that it is precisely the impossibility of this ground (this *arché* of subjective freedom first described by Kant), *not* the dubiousness of Enlightenment's end (its *telos*), that is actually at stake, it also becomes clear that current debates in the field of philosophy of education can be cast in an entirely different light.

In particular, this shift of focus helps us to see that neither an embrace of reasonable doubt in the “postmodernism spirit” such as Nicholas Burbules advocates, nor a vigorous restatement of “that old-time Enlightenment metanarrative” with its appeal to rational justification such as Harvey Siegel describes, can support the classical educative aim—not, that is to say, without reinstating the very messianism, and thus the irrationality that both conceptions are intended to combat (*RR*, 129-39).<sup>10</sup> Neither approach can support this end because the very appeal to reason as a justifiable norm presupposes just that condition of completeness, just that self-sufficiency, that science first described. It does so because it must. The alternative is an educative project that lacks a horizon—it is one, in effect, that essentially has nowhere to go. Thus, for example, Siegel is not wrong to complain against Burbules that “justifying putative virtues of reasonableness by noting that we regard them as such cannot succeed” (*RR*, 107). As he says, “the conception of reasonableness Burbules offers, in so far as it is acceptable, will be rationally so. That is, that conception will itself be warranted, and worthy of our embrace, only to the extent that it can be justified by good reasons, established as good by reference to fallible criteria concerning the goodness of reasons” (*RR*, 110).

Such a critique is fair to a point: Burbules cannot have it both ways. Either his alternative conception of rationality does answer to the injunction to render the sufficient reason for itself, or else it is an unwarranted appeal to a particular form of subjectivity that Burbules happens to prefer. The suggestion that we might “adopt certain stances without fully endorsing them” is neither here nor there.<sup>11</sup> On the other hand, however, the fact that Burbules explicitly names the unwarranted, affective dimension of rationality is an arguable improvement over Siegel's own approach. For, despite the fact that Siegel (unlike Burbules) willingly takes on the burden of justifying reason itself, his argument bears the same messianic appeal that was already apparent in Kant (*RR*, 16, 25).

While it not possible to engage fully with Siegel's approach here, his three argumentative strategies can quickly be sketched. The first strategy consists, in

essence, in Siegel's insight that when one makes a putatively *universal* claim about, for example, the ubiquity of uncertainty in women's lives (Lynda Stone), or about the reasonableness of reasonableness itself (Nicholas Burbules), one is engaged in a performative contradiction, because one is mobilizing the very epistemic and argumentative resources one is trying to combat. Burbules counters this argument effectively when he points out that such "transcendental arguments do not work against positions that don't claim a superior, definitive alternative."<sup>12</sup> Thus they do not work against the position I outlined earlier, which is that the educative ideal of critical reason undercuts itself—not because it is spurned, but on the contrary because it is treated with precisely the respect it deserves. Siegel's first strategy thus defeats a straw postmodernist; it brings us no closer to the "redemption" of reason he seeks.

Siegel's second tactic is his attempt to provide what he calls "a self-reflexive [justificationist] strategy" (*RR*, 77). Rationality can be defended in a non-circular and non-question-begging way, Siegel argues, with the transcendental argument that those who question "seriously" the reason for rationality are already presupposing the overpowering force of reasons, and so are implicitly supporting the rationalist's own position from the start.<sup>13</sup> What Siegel fails to explain, however, is how rationality can be justified as a universal ideal *for*, and why it should be imposed *upon*, those who "[raise] no sceptical challenge to the rationalist's position" at all (*RR*, 83). To respond to this challenge, one would have to explain why it is legitimate to prescribe that one "ought" to inculcate an interest in critical thinking when it is *not* already there.

This is precisely where the third justificatory strategy comes into play. On Siegel's view, the claim that rationality ought to be embraced as an educational ideal not only *can* have universal application and legitimacy, but indeed *must* have universal application and legitimacy if it is to be considered "justified." Siegel admits that he has not "systematically defended" this thesis; he suggests, however, that it *is* defended by Jürgen Habermas and Karl Otto Apel (*RR*, 216, n. 31). It appears, therefore, that Siegel's third tactical defence of the Enlightenment metanarrative stands or falls on the basis of Habermas's work. It is particularly significant for Siegel's case, therefore, that the Habermasian thesis of universalism rests on two metaphysical pillars: an unacknowledged transcendentalization of the subject, and a teleological conception of human progress.<sup>14</sup> Consequently, Habermas's argument cannot serve as the epistemological defence Siegel requires. For, to the extent that the irrational moment of Enlightenment is reproduced in Habermas's own thought, Siegel's case for rationality is ultimately undone as well.

In early modern and in contemporary philosophy of education alike, it emerges that a certain irrationality informs the emancipatory educational ideal. What is most significant here, however, is that this insight is not the result of a sceptical doubt about ends; it is the result, rather, of a logical inquiry into the rationality of reason to begin with. For this leaves philosophers of education in a somewhat uncomfortable place. It leaves us with the realization that the idea of education as emancipatory in *any* sense—as progress, as betterment, or as positive change—cannot *but* institute

the self-sufficient subject as its ground. It cannot but do so, because the idea of emancipation through education rests on a conception of reason that already entails this ideal. This means, in turn, that mysticism, ideology or force are just what the idea of education *as* emancipation—as the end of ideology and the horizon of enlightenment—need.

This issue cannot be addressed simply by moving that horizon further back, in fallible terms, with the promise that enlightenment will be accomplished in *another* epoch rather than this. For this is still to say “the” subject will eventually *be*—that it is still to come. But nor can educational theory eschew the messianic ideal altogether, in the name of “postmodern” doubt. The requisites of reason are not so easily dismissed. What educational theory can do, it therefore seems to me, is to try to take responsibility *for* its ends. If an appeal to the promise of reason *is* a calling into being of a subject to come, then the question for us now is, how *do* we name ourselves today?

*For response see essay by Floden*

1. Paul de Man, “The Resistance to Theory,” *Yale French Studies* 63 (1982): 13-14.
2. This explication of Leibniz’s formulation is provided by Jacques Derrida in “The Principle of Reason: The University in the Eyes of its Pupils,” trans. Catherine Porter and Edwards P. Morris, *Diacritics* 13 (1983): 7.
3. Robin Usher and Richard Edwards, *Postmodernism and Education* (London: Routledge, 1994), 2.
4. See, for example, Nicholas C. Burbules, “Postmodern Doubt and Philosophy of Education,” in *Philosophy of Education 1995*, ed. Alven Neiman (Urbana, IL: Philosophy of Education Society, 1996); Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (Minneapolis: University of Minnesota Press, 1984).
5. Burbules, “Postmodern Doubt and Philosophy of Education” and Harvey Siegel, *Rationality Redeemed? Further Dialogues on an Educational Ideal* (New York: Routledge, 1997). Siegel’s book will be cited as *RR* in the text for all subsequent references.
6. Michael Detlefsen, “Gödel’s Incompleteness Theorem,” in *The Cambridge Dictionary of Philosophy*, ed. Robert Audi (Cambridge: Cambridge University Press, 1995), 298-99.
7. Immanuel Kant, *Critique of Practical Reason*, 3d ed., ed. and trans. Lewis White Beck (New York: MacMillan, 1993), 85n., 90.
8. Immanuel Kant, *Critique of Pure Reason*, trans. Norman Kemp Smith (London: MacMillan, 1929), 657, my emphasis.
9. As Martin Heidegger writes, “the principle of reason is, as a principle, not nothing. The principle is itself something. Therefore, according to what the principle itself tells us, it is the sort of thing that must have a reason. What is the reason for the principle of reason? The principle itself behooves us to ask this question.” Martin Heidegger, *The Principle of Reason*, trans. Reginald Lilly (Bloomington: Indiana University Press, 1991), 11.
10. See Nicholas C. Burbules, “Reasonable Doubt: Towards a Postmodern Defence of Reason as an Educational Aim,” in *Critical Conversations in Philosophy of Education*, ed. Wendy Kohli (New York: Routledge, 1995), 84.
11. Burbules “Postmodern Doubt and Philosophy of Education,” 45.
12. *Ibid.*, 41.
13. Insofar as scepticism is a well-established, *rational* philosophical position, Siegel has not gone very far afield in his search for an alternative perspective.
14. I defend this claim elsewhere. See Stella Gaon, “Pluralizing Universal ‘Man’: The Legacy of Transcendentalism and Teleology in Habermas’s Discourse Ethics,” *The Review of Politics* 60, no. 4 (1998): 685-718.