

Acknowledging Incompleteness

Robert E. Floden

*Michigan State University*¹

Does an endorsement of emancipatory education require a mystical, messianic commitment to ultimate human perfectibility? If so, does a rejection of perfectibility then necessitate a rejection of emancipatory education, or just an abandonment of the hope for a perfect defense of this ideal?

Stella Gaon calls into question the support contemporary philosophers of education have offered for emancipatory education, whether that support has been based on commitment to reason or on a reaction to the postmodern condition. Using Gödel's incompleteness theorem as a demonstration of the self-refutations that spring from an Enlightenment approach, Gaon suggests that irrational elements will inevitably be a part of any defense of autonomous rationality as a central goal of education, which is what I take to be her conception of emancipatory education.

To focus my response, I begin by restating what I see as the main points in Gaon's paper. An early point key to her discussion is that contemporary followers of the Enlightenment tradition are committed to Leibniz's principle of sufficient reason. In essence, the principle states that every thing is as it is for a reason, a principle that Gaon links to two desirable characteristics of a logical system: consistency and completeness. She links the principle to completeness because Leibniz believes that there is a reason for *every* thing. She sees contemporary philosophers of education as sharing these commitments. "[T]he philosophy of education shares with mathematics the insistence on the logical protocols of consistency and completeness."

For Gaon, Gödel's theorem is significant because it uses reason itself (actually, a logical system) to refute the Enlightenment idea of sufficient reason. She extends this self-referential rational critique to the moral dimension by noting that Kant's central ideas rest on pre-rational intuitions, and further extends the critique to contemporary philosophy of education. She moves from the unattainability of consistency and completeness to the conclusion that Enlightenment goals for education can only be defended by reference to "irrational" considerations, in particular a "messianic" look forward to a future perfectability.

Gaon's essay provides a helpful reminder that a defense of rational autonomy as a goal of education, indeed a defense of *any* goal of education, is bound to be based on something more than a chain of rational argument. In particular, a commitment to give serious consideration to any claims about goals of education presupposes a commitment to "serious consideration," hence to reason. Those who are *not* interested in giving serious consideration may adopt other goals, and feel no compulsion to answer questions about what led them to a different position. Hence the familiar transcendental arguments for reason as an educational aim can only get started if all the parties agree to reason about aims.

The critique of contemporary philosophers of education, however, over generalizes from Gödel's work in mathematics. Gödel demonstrated that mathematical

systems of a particular level of complexity, in particular that those that contained arithmetic, were incomplete, in the sense that *some* true statements within the system were unprovable. That theorem put a stop to the mathematical program, promoted by Hilbert, that hoped to create a rigorous formalization of all of mathematics. But it showed neither that all mathematical systems were incomplete (Gödel himself proved the completeness of the propositional calculus) nor that all mathematics was thereby “de-legitimated.”

The theorem was important in demonstrating limits on the possibility of rigorous formalization of mathematics. Mathematicians could no longer hope for the certainty that such formalization would have brought. But the impossibility of a formal basis for all of mathematics—for completeness—does not preclude the construction of rigorous formal arguments in support of many mathematical claims. Similarly, acknowledging that empirical science may never lead to a complete description of the universe does not invalidate claims about *some* parts of the universe, or even imply that science will never explain some particular phenomenon, such as consciousness:

[T]he history of science cautions us against writing off any domain of investigation as inaccessible. Given the finiteness of our collective lifespan, the boundedness of our distribution in space, and the limitations of cognitive systems, it is highly likely that there are some aspects of the universe that we shall never be able to fathom. However, it is not clear that we can come to know *which these are* without an enormous amount of effort.²

To make her case that emancipatory education is necessarily looking toward a future deliverance, Gaon claims that Gödel’s work indicates that “any formal axiomatic system must appeal to the ideal reconciliation of consistency and completeness if it is to issue in ‘true’ propositional content, even though that very ideal is either contradictory or incomplete.” The incompleteness of formal systems does not, however, imply that results proved within them are not “true;” it merely implies that some true claims may be unprovable. No “ideal reconciliation of consistency and completeness” is necessary, just the acknowledgement that formalization has limits. When the result is extended to philosophy of education, Gödel’s work suggests that there are limits to the principle of sufficient reason, or at least to the human capacity to discover what the reasons are. But it does not suggest that reasons can never be found, nor does it suggest that the pursuit of reasons must appeal to some impossible future ideal. The acknowledgement that a complete set of reasons will never be attained is consistent with a general practice of seeking to understand the reasons for particular events. If philosophers of education acknowledge that perfection is unattainable, they can still press for an education that aims at reason and truth, that is, for some version of emancipatory education.

The argument for emancipatory education will still, as Gaon reminds us, be based in part on “a certain irrationality,” namely the desire for enlightenment. What are the consequences of acknowledging that irrationality? What effect does that irrationality have on the power of arguments for emancipatory education?

The advantage of an argument based solely on valid, transparent reasoning is that it is compelling for a universal audience, or at least for any audience that has

agreed to reason. An argument that starts from an “irrational” desire for enlightenment must use some means other than reason to persuade its audience. What is needed will vary according to the audience.

If the audience is one that begins with this desire, nothing need be done beyond acknowledging that shared starting point. The contemporary philosophers of education Gaon alludes to in her paper represent such an audience.

Could the set of contemporary philosophers of education have some members who do not share this starting point? If they start from a different desire, could they still remain committed to reasoning? Perhaps Gaon herself falls into this group, since she has written a paper that appears to use reasoning, yet sees the desire for enlightenment as contingent. Could a philosopher consistently believe that enlightenment should not be a general educational goal, yet still be committed to using reason to consider what the goals should be? Plato’s discussion of education in *The Republic* could be seen as a reasoned analysis that leads to enlightenment for some, but not all. Are there ways, irrational ways, to move someone to a shared starting point? The study of rhetoric is one place to begin exploring possibilities, something I do not have the time to pursue here.

What if the audience begins without a commitment to reasoning? Young children may constitute such an audience. Philosophers of education may sometimes feel that their introductory classes have some students fitting that description, students who have beliefs about the methods and purposes of education that will not be affected by reasoning, even reasoning that starts from premises they accept. Such an audience needs persuading both to begin with a desire for enlightenment and to feel compelled to accept conclusions to which reason leads.

In what could such persuasion consist? Perhaps it comes through students’ Deweyan participation in shared endeavors in which they have an interest. Perhaps it comes through teachers giving reasons to “expand the capacity of the student for understanding and evaluating reasons” as Strike suggests.³ In such cases, students begin on the road to valuing reason by developing habits. The developmental grounding of reason in (irrational) habit does not speak against the value of reason as an educational goal; it stands as a reminder that the incompleteness of reason leaves a place for habits in education.

Gaon uses Gödel as a telling example of the way that attempts to build closed systems often founder on the rocks of self-reference. Philosophers of education can acknowledge incompleteness, however, without abandoning their attempts to argue for reason as a central, though not sole, aim of education.

1. This essay has benefited from suggestions from students in my philosophy of education doctoral seminar: Erica Boling, Jodie Galosy, Mark Hamilton, Sharon Hobson, Suzanne Knight, Violeta Lazarovici, David McCreight, Steve Sharra, Jewel Smith, and Linda Williams.

2. Philip Kitcher, *The Advancement of Science: Science without Legend, Objectivity without Illusions* (New York: Oxford University Press, 1993), 160-61, emphasis added.

3. Kenneth Strike, *Liberty and Learning* (Oxford: Martin Robertson, 1982), 46.