CAN SCIENCE PROVIDE BRIDGES AMONG EDUCATORS?[1]

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In 2002, the National Research Council (NRC) released a report, *Scientific Research in Education*, written by an interdisciplinary committee of prominent experts. One of the report's editors, Lisa Towne, presented the report to the Subcommittee of Education Reform of the U.S. House of Representatives during testimony for the reauthorization of support for the U.S. Office of Educational Research and Improvement (OERI). In her presentation, Towne claimed that the NRC committee sought to determine the qualities that the best scientific education research should have and to explain how funding agencies could use those definitions to improve research about schools. She added that the committee's key finding was that scientific research in education was no different from the scientific inquiry scholars undertook in any other discipline. According to Towne, the various forms of scientific inquiry shared the effort to link empirical data to theoretical models, use appropriate methods of discovery, apply rigorous reasoning, strive toward generalization, and encourage debate among scientists about the findings in ways that would encourage the accumulation of scientific knowledge.[2]

In describing how these standards could help develop a culture of scientific research, Towne noted that the NRC committee had suggested adopting six principles in policies. The first was to staff the OERI with scientists qualified to review proposals for research. The second was to create an advisory board of researchers, educators, business people, and policymakers to set a research agenda. Towne added that it was essential to insulate the agency from political interference and to encourage the agency to develop a range of studies that reached from short-term objectives to long-term goals. She asked that the U.S. Congress fund the agency to adequate levels and that it provide opportunities to train new scientific researchers in education. She concluded that if the congressional representatives adopted these measures, they would move the OERI toward invigorating a community of researchers. In this way, the congress could improve educational research by strengthening the field.[3]

In making these recommendations, Towne restated the hopes that educational psychologists had long held. For example, in the last years of the nineteenth century, educational psychologists created what they called a science of education. Their aim was to make education a professional field, thereby freeing teachers and school administrators from political interference, and they believed they could do this by concentrating on studies that might illuminate particular classroom techniques. These researchers claimed that the studies of particular teaching methods would accumulate in ways that offered an objective view of education. Unfortunately, this was not the case. Worse, the

educational psychologists eschewed the general disciplines of philosophy and psychology that could have provided an organizing basis for researchers to advance ideas of education and community.

When Ellen Condliffe Lagemann surveyed the development of educational research, she noted that John Dewey developed an innovative idea that connected educational research with important social changes. Although some educators were enamored of Dewey's ideas, Lagemann contended that Dewey's idea of education was not popular among educators. Although scholars in philosophy, sociology, and social psychology believed that education could advance democracy, Lagemann found that most public elementary and secondary school educators believed that educational scientists such as Edward Lee Thorndike would discover the ways to tailor instruction to the psychology of the child and transmit those insights to teachers. She concluded that scientists such as Thorndike turned the study of education into a technical field separated from philosophy. Since the researchers were to work separately from the teachers, Thorndike's model replaced the idea of community among educators and ultimately reinforced the inferiority of education as a field.[4]

How Could Philosophy Shape Instruction and Reinforce Democracy?

A simple way to consider the ways philosophy could reinforce community among educators is to consider the work of philosophers of education such as William Torrey Harris. In his survey of progressive education, Lawrence A. Cremin claimed that Harris, the fourth U.S. Commissioner of Education, created the first systematic philosophy of education native to the United States. According to Cremin, during the 1880s and 1890s, increasing numbers of children attended schools. Seeking to accommodate the new students, Harris urged that schools adopt regular arrangements, supervise instruction, standardize textbooks, and collect statistics. Since Harris considered these efforts essential for the development of the people and the country, he fashioned his philosophy of education to explain his belief. According to Harris, when students entered graded schools, they undertook sequential academic lessons with regular examinations. This discipline enabled the students to become self-active individuals who could exercise their freedom within their own civilization. Thus, he concluded, the lessons enabled the students to connect their natural selves to the larger society. Difficulties arose when Harris contended that the students' freedom came from voluntarily obeying the constraints of justly organized institutions. In Cremin's view, this contention turned Harris into an apologist for the industrial order that arose during the Gilded Age. Cremin asserted that succeeding educators fought against Harris's ideas because they seemed to reinforce the often grim, factory style schools of the day.[5]

Harris did not construct his philosophy of education on his own. He followed the work of G.W.F. Hegel, a German philosopher active during the late eighteenth century. Imitating Hegel's idealism, Harris claimed that people advanced their understanding in two ways. The first was to undertake analyses of their own ways of thought. The second was that people developed increasingly higher states of consciousness as they immersed themselves in the wisdom derived from the experience of the human race.[6]

For Harris, personal thought offered one method by which people could analyze consciousness. Harris claimed that intellectual growth took place because the levels of mind, which Harris called faculties, were arranged in distinct but advancing stages. For example, in learning about a thing, a person would move from the first step of feeling, to another step of sense perception. The process continued to a third stage of memory, to a fourth stage of common sense, to a fifth stage of reflection, and, finally, to reason. Each stage or step included the content of the previous stage with the higher mode. Thus, for example, the step of memory included the content of the sense perception as well as the recognition that the information came through the senses. The combination of contrasting methods of knowing made it possible for a person to move from one level of thought or faculty of mind to another. That is, when a person contrasted memories of sense perceptions with the information that had come through their emotions, the resulting contrast enabled the person to move to a higher level of cognition. Harris gave the name "self-activity" to this progression through the ways of knowing. It led people to increase their awareness of themselves.[7]

Since thinking moved by its own logic, Harris argued that a study of the faculties of the mind would reveal the goal of the process of knowing. According to Harris, the growth of consciousness implied that people, who were born as animals concerned with material affairs, could become spiritual beings by lifting themselves above their particular existence toward some universal form. This happened when people directed their studies to knowing about consciousness.

It is important to recognize that Harris did not trust scientific analyses or experiments to accumulate in such ways that would advance human understanding of the world. In fact, he held that an objective study of experience, such as a scientist might undertake, would not be helpful. To Harris, scientific studies could not advance knowledge because this type of investigation reinforced the particularity of life.

Harris added a second way that people could analyze consciousness. It was through an understanding of culture. This was the most helpful method of education. According to Harris, children moved towards spiritual dimensions when they acquired the ways that their particular group had moved beyond specific activities. For example, by acquiring language, children learned about the culture of their groups. Since such learning moved toward a quality of

universality, it lifted the children's spirits toward an ethical plane. Although a person could not reach a state of universality because the body remained particular, Harris believed that each of the institutions in civilized society, such as family, school, civil society, and church, had its own role to play in helping people to recognize the rational movement of history and thereby move closer to God (*PFE*, 228–36).

Since culture moved people toward universal understandings, it was the key to self-perfection. Consequently, Harris believed that students could learn the ethical or universal aspects of the culture when they followed academic subject matters arranged in separate but hierarchal order. Such an appropriate curriculum consisted of aspects that transcended experience and therefore were true for all conditions. For example, in kindergarten, the students would encounter a series of objects that illuminated geometric and numerical concepts that would apply to later studies. In the elementary schools, they would begin to encounter the disciplines that would enable them to take up the rudiments of human civilization. Harris divided these school studies into five divisions that he called the windows to the soul. They included mathematics combined with physics, biology, literature and art, grammar as the technical study of language, and history concentrating on the study of institutions. The areas were separate because the student used different ways of thinking within each division. For example, in mathematics and biology, the students had to use the sense of quantity while, in grammar, the students followed a sort of introspection where they looked for the meanings of words and the roles the words played in sentences. As a result, in mathematics and biology, the students could look for equality or difference among objects, but in grammar, they had to look beyond the words themselves to the contexts in which they appeared (*PFE*, 323–26).

Although Harris thought the students should study the same subjects in the different grade levels that extended from elementary schools to universities, he wanted the students to pursue the subjects with increasing depth as they advanced. For example, students in elementary schools encountered arithmetic. In secondary schools, they moved into algebra and geometry. In college, calculus, physics, and chemistry appeared on the curriculums. The effect of such a progression was to strengthen the students' grasp of culture. Thus, for Harris, students who ended their educations at the elementary school barely understood their culture while students who proceeded to college acquired critical, comparative, and conservative attitudes of mind. That is, the college students understood why established institutions existed, and they were less likely to act impetuously than were people who had not attended college (*PFE*, 337–41).

The important point about Harris's philosophy of education is that Harris constructed his view of the aim of education on his understanding of the nature of human consciousness. He thought that when teachers recognized that truth lay beyond human experience, they could organize their courses in line with the

progress of human understanding. For example, he recommended that teachers avoid thinking that the aim of education was to make good citizens or valuable workers. Instead of advocating such practical goals, Harris urged teachers to recognize that the aim of schools should be to enhance the spiritual natures of the students. For Harris, this was the most practical concern for school people because schools improved the students' citizenship or occupational skills by encouraging them to advance to ethical planes of thought. The practical benefits came indirectly from the study of the properly arranged subject matters.

How did Dewey Build Bridges Between Ideas of Knowledge and Curriculum?

As Cremin pointed out, Dewey disagreed with Harris. As Harris had done, Dewey constructed his ideas of teaching from his views of consciousness and truth. Dewey accepted the German idealism that fueled Harris's thought and agreed that educators had to understand the nature of consciousness. The important difference was that Dewey rejected any notion of truth as a transcendent body of ideas separate from sense experiences. In this regard, Dewey translated the concept of consciousness into the concept of experience. In spite of this similarity, Dewey did not seek to investigate the world; he wanted to know how people should think. Thus, in a manner similar to Harris's view that a study of consciousness could lead to the recognition of the absolute truth, Dewey claimed that a study of experience revealed the best way to direct experience toward more and better or wider experiences. In this way, Dewey changed the concept of consciousness into the ability to solve problems, and, like consciousness, this experience took place within a person. Such a conclusion led Dewey to agree with Harris that truth was the process of rationality. For Dewey, at best, truth was the scientific process that brought about the growth or expansion of experiences.

When Dewey made experience the important object of study, he claimed that it involved action and thought. Noting that people could not profit from moving from one experience to another in some random fashion, Dewey contended that people had to think if they would learn from experience. Thus, experience had an active phase and a passive part. The active phase involved some effort to try something. The passive part was undergoing the changes that resulted. When people could connect these different aspects to realize that certain actions led certain consequences, they could direct their experiences in fruitful directions. Defining thinking as the recognition of these connections, Dewey concluded that the scientific method was the most effective way to predict the consequences of an action and to determine the influences those consequences would have. Although such a method could not predict all the consequences, it provided such a careful survey that it was superior to simple trial and error based on guesswork.[8]

In fairness, although Harris had believed that reason transcended experience, he had valued science. According to Harris, science was the systematized results of observation that followed three separate stages. The first was the observation of things and facts. The second was the investigation of interrelations. The third step was an effort to show how all of nature was part of a process of evolution. In this last step, Harris turned science into philosophy that sought the first principle or organizing idea of existence. In this step, science moved beyond experience to reveal the origin and destiny of the universe. The important aspect of Harris's ways of thinking was that he claimed the shift from science to philosophy could not come from the other steps. He argued that an inventory of events could not lead to an understanding of the origin of those events. Instead, since Harris thought all of nature was moving in the direction of rationality, he suggested that theology could show that God created nature to develop spiritual creatures who would share in His blessedness (*PFE*, 376–83).

Although Dewey did not bring up the existence of God when he discussed the ways that people should think, his method implied that God had created nature and that human beings should cooperate with nature. Although Dewey recognized that nature could harm human beings, he seemed to believe that nature would allow people to learn and grow because people could use their intelligence to alter natural conditions in ways that enhanced human life.[9]

Since Dewey had faith in the goodness of nature, he disliked philosophical theories that separated the workings of the human mind from the events in the world. In what might have been a criticism of Harris, Dewey claimed that a tendency to focus on consciousness had developed in the sixteenth century when intellectuals sought to avoid the domination of religion that had restricted their freedom of thought. To avoid censorship, these philosophers had retreated into their minds where no one could dictate any conclusions. Dewey added that, on the educational side, the fear of intellectual imposition came out in philosophers such as Michel Montaigne and Frances Bacon who urged people not to accept any idea from authority. One solution to the problem appeared in German idealism. Dewey claimed that Hegel had taken Rene Descartes's view of reason as the most important quality and integrated the reason present in the human mind with a quality of reason that permeated nature. In this way, Hegel overcame the problems that arose from separating consciousness from nature. Nonetheless, Dewey disliked the fact that Hegel claimed social institutions resulted from the workings of an absolute mind. To Dewey, in this way, Hegel reinstated the principle of authority.[10]

Despite his criticisms, Dewey followed Hegel's method of integrating apparently different concepts. Unlike Harris, though, Dewey argued that types of thinking did not need to change in order to advance toward the truth. That is, while Harris thought scientific thinking changed into philosophy as it advanced, Dewey claimed that scientific thinking maintained a consistent form

when it became philosophy. Since one definition of philosophy was that it was an outlook on life, Dewey argued that philosophy might arise from the desire to report particular facts with scientific thoroughness and objectivity. Thus, for Dewey, philosophy was the willingness to view discoveries as opportunities to learn in the same way that unbiased curiosity fostered scientific explorations. A second definition of philosophy was that philosophy was thinking that had become self-conscious. Dewey turned this definition to mean that philosophy was the search for the ways that thinking could direct experiences. Thus, in these definitions, Dewey refused to distinguish between practical impulses and spiritual ideas in the search for truth. For Dewey, when people moved from science to philosophy, they did not change their method of thought at any point along the way.[11]

How Can Philosophy Blend Curriculum Theories, Social Concerns, and Teaching Methods in Ways that Reinforce Community and Democracy?

Comparing the different ways that Harris and Dewey treated four points illustrate the ways that philosophy could build bridges among concerns with curriculum, teaching, and social progress. Although the ideas of Harris differed from those of Dewey, they treated conceptions of the subject matter, views about manual training, the need for social organization, and the value of examinations in similar ways. The following paragraphs in this section will explain each in turn in order to show how philosophy can reinforce notions of community and democracy.

First, although Dewey adopted Harris's view that the subject matters of school should introduce children to the wisdom of humankind, Dewey did not look upon the subject matters as a means to lift students to spiritual realms. Instead, Dewey thought the academic subjects represented efforts that people had made in the past to overcome obstacles. For Dewey, the subject matters were the accumulations of the outcomes of the efforts, the strivings, and successes of the human race generation after generation. In order for people to profit from these accumulations of experience, scholars had arranged the information logically in textbooks. Thus, for Dewey, these texts served as maps indicating how the students could undertake activities in the most fruitful ways possible. For the teacher, the texts could indicate the directions that the students' present experiences should move in order for them to lead to more experiences that would broaden the students' outlooks and enhance their desires to learn.[12]

When Dewey defined subject matters as resulting from human experiences, he made a technical definition of education possible. For him, education was the reconstruction of experience in ways that led from the children's present experience out into the organized experiences found in the subject matters. As this definition implied, there were no discontinuities between the experiences the children had in schools and the subject matters

found in the schools. Since the content of the texts was the record of the experiences of the human race generation after generation, teachers could arrange lessons so that children reconstructed those experiences (*CC*, 11).

The second point comparing Harris to Dewey was the view toward manual training. Manual training was a model of education that taught children to learn with their hands at practical activities such as sewing or carpentry. What is interesting in this case is that both Harris and Dewey believed that schools should concentrate on academic subjects; however, they disagreed on how to direct children's attention to the academic subjects. Harris chose to limit the emphasis that manual training had in schools. Dewey began the lessons with some sort of manual training, yet he led the students quickly to investigations into the subject areas.

While Harris agreed that students should develop some sorts of manual skills to earn their livelihoods, he believed that the best places to learn these skills were in the workshops and in the commercial establishments. Harris made some provision for acquiring these skills in schools, but he refused to consider such activities as substitutes or as enrichments to academic affairs. Harris thought that manual training taught specific useful skills while he believed that academic studies could lift people beyond their mortal conditions to an understanding of universal categories. Thus, Harris believed that manual training and academic training contained different types of understandings and aimed for different goals (*PFE*, 266–67).

Holding the view that manual training and academic subjects were qualitatively different, the best that Harris could do was to seek to limit the intrusion of manual training into schools. For example, Harris's ideas dominated the report of the National Education Association's Committee of Ten that appeared in 1893 and its report of the Committee of Fifteen that appeared in 1895. Although both of these reports emphasized that academic subject matters were the basis of school studies, they acknowledged that manual training and vocational training had places in elementary and secondary schools.

In this regard, Dewey could be more consistent. Sharing Harris's view on the importance of academic subject matters, Dewey placed manual training at the center of the school curriculum and turned it to serve the cultural insights that Harris wanted schools to convey. Dewey could do this because he believed that the subject matters came from experiences and students could learn them through experiences. To illustrate this view, Dewey gave the name "occupations" to the lessons that derived from his conception of manual training. Even though the name conjured images of vocational training, Dewey was careful to note that these lessons would not be the means to provide practice in technical skills to shape carpenters, cooks, or tailors. To Dewey, the occupations in schools helped children understand how scientific thinking had changed society. As a result, in an activity such as sewing, the students' efforts,

such as trying to use pieces of wool, cotton, and flax as part of clothing, led them to determine how technical inventions, such as the cotton gin, changed the ways that people carried on daily activities, such as manufacturing clothing (*CC*, 9 and 19–21).

Thus, Dewey thought manual training could enable children to understand the technological and social changes that had taken place in the past hundred years, it could help the students to acquire the moral training once available in farm life, and it could open children to the wide range of experiences made possible by industrial life. Manual training could aid in achieving these three goals, he added, if teachers conceived of work, such as weaving or of sewing, in its social significance (*CC*, 12–14).

When Dewey thought manual training could be adapted to teach the children about the industrial progress of human society, he believed that it could serve as the gateway to learning how to use the scientific way of thinking that had caused the enormous changes in social life. It was science, Dewey noted, that enabled people to harness the forces of nature, to develop vast manufacturing centers, gather populations into cities, and distribute products throughout the world (*CC*, 37–38).

Although Dewey wanted lessons to begin with the students' impulses, he sought to direct those instincts to a better form of expression. As a result, Dewey sought to lead the children through some sort of progression that seemed to recapitulate the progress of human society. For example, he noted that thoughts of hunting with a bow and arrow fascinated young boys. As a result, he offered the children opportunities to make stone arrowheads. This exercise led to a study of the composition of different types of rocks and eventually to the construction of a furnace to smelt iron. In these activities, the students followed their interest in hunting to the study of geology as they tried to shape stones. As the students sought to improve upon stone arrowheads, they investigated physics as the students tried to regulate the drafts and the fuel for the furnace to smelt iron and make metal implements. Such movements from activities to subject matters were possible, Dewey contended, because since the subject matters were records of how previous generations had tried to overcome problems, the subject matters were tools the students could use to advance their own efforts (*CC*, 47–54).

The third point was the need for social order. Dewey believed that when children carried out the occupations, they cooperated with other students while the teachers acted as guides offering suggestions and asking questions that enabled the children to realize their aims. Since the students proceeded from their own instincts, they learned to form plans and to follow procedures to reach their aims, and to adjust their aims to fit the changing conditions. In the process, the students learned to apply themselves to their tasks, thereby developing the diligence or character-training children had learned when life was lived on farms. At the same time, they learned to work with other students

in ways that advanced their own goals and those of the other students as well. The lesson was that social organization enhanced their own freedoms to do things (*CC*, 29, 37–38, and 40–41).

While Harris justified the existing social arrangements, Dewey had similar notions. For Dewey, the occupations imposed organization on everybody. Although Dewey acknowledged that a busy kitchen could appear disorganized because bustle and confusion accompanied any activity, he claimed that the type of order permeating these occupations came from the effort to achieve a goal. There was something to do. It required a division of labor. The students had to cooperate. They had to select leaders and designate followers. While this order differed from the organization found in a school where forty or fifty students had to learn set lessons, the occupations provided the chance for the children to develop what Dewey called the spirit of cooperation and community life. It was a form of discipline (*CC*, 15–18).

In general, Dewey did not consider human freedom or the tolerance of differences to be good things for their own sakes. That is, although Dewey was a proponent of academic freedom, he did not believe that human beings had the right to freedom as part of their essential dignity. Philosophers, like Harris, who held idealistic or religious ideas made arguments about human dignity. Although Dewey did not mention dignity, he considered human freedom an essential aspect of social progress because free people could develop their skills and abilities fully. For Dewey, individual improvement and social progress abetted each other. A person living with others thought more deeply about his or her experiences, because a person who lived alone had no reason to reflect on his or her past. In fact, Dewey contended that social life existed in the transmission of ideas until those ways of thinking became common possessions. Although this meant that a person derived his or her human capacities by his or her membership in a group, Dewey was careful to caution against any excessive pressure on individuals to force them to conform to some shared set of ideas. Dewey pointed out that individual variation was the means by which the society advanced because people who held different perspectives could suggest new ideas to solve pressing and common problems, and the members of the group could test those suggestions. Thus, he concluded, a democratic society had to protect intellectual freedom for it to progress.[13]

The last point of comparison concerned regular examinations. Although Harris approved of the graded schools with separate classes for separate studies conducted by teachers who held examinations or recitations, Dewey disapproved of recitations as opportunities for students to show how much they had learned. Nonetheless, Dewey wanted some regular form of evaluation. He achieved this by capitalizing on what he considered the children's impulses to communicate. As part of the occupations, the students would talk about what they tried to do, explain the successes they had, and describe the ways they could improve the work. Other students could join in the conversation making

the discussion into what Dewey called a social clearinghouse that corrected misconceptions and opened new lines of inquiry (*CC*, 55–56).

What Effects Did the Growth of a Science of Education Have on the Ability of Schools to Reinforce Democracy?

When educational psychologists, such as Charles Judd and Thorndike, sought to create a science of teaching, they chose to borrow from different sets of intellectuals than Harris or Dewey had used. In part, the educational psychologists followed directions that fit the popular ideas of the Victorian era. As Daniel Walker Howe showed, the late nineteenth century was a period wherein scientists on both sides of the Atlantic cooperated in their efforts to understand human nature and to offer practical suggestions to improve society. The exchange came from a faith that practical techniques could bring about moral progress. To some extent, it characterized the Victorian era, and it contributed the rise of universities and the development of professionalism in the United States.[14]

The problem with such a view was that instead of joining professionals in a research community, their motives separated them from each other and from the society that they hoped to serve. This happened because the ideal was overly individualistic. For example, in the nineteenth century, academics claimed that scientific investigation was an altruistic occupation akin to religion. However, when Burton Bledstein investigated the rise of universities, he found that selfish motives inspired university professors and members of the middle class. According to Bledstein, the rapid changes of society in the last half of the nineteenth century brought about the growth of industries and the development of means of transportation. The new economy threatened farmers and owners of small businesses, which had served the middle classes. Bledstein argued that those members of the middle class turned to American universities to secure their status. Perceiving that professional work was remunerative, they felt that the work was secure and beneficial to society because universities advanced the image of professionals as people trained in scientific knowledge who offered public service. As a result, middle class youth enrolled in the universities, graduated with degrees, joined the professional associations, and moved their careers relentlessly upward.[15]

The same problems remain with the NRC model of scientific research. Separated from ideals of democracy or improved social organization, the scientific advances are likely to support efficiency or effectiveness. Although the advocates of scientific research express their ideals in terms of caring and helping, the aim of the NRC report is to advance research, not community. Thus, as Bledstein might point out, these aims could assist a group to consolidate its hold on resources and to move the careers of the members relentlessly forward. In short, it does not seem that a science of education as conceived by educational researchers will enhance democracy as much as it will advance the status of researchers.

Notes

1. The following essay is adapted from a book entitled *A History of Education* that Allyn and Bacon will publish in 2007. The editor at Allyn and Bacon granted permission to offer the paper to *Philosophic Studies in Education.*

2. Lisa Towne, "Scientific Research in Education and the Reauthorization of the Office of Educational Research and Improvement," Statement before the Subcommittee on Education Reform Committee on Education and the Workforce United States House of Representatives, http://www7.nationalacademies.org/ocga/testimony/Scientific_Research_in_Education.

3. Ibid.

4. Ellen Condliffe Lagemann, "The Plural Worlds of Educational Research," *History of Education Quarterly* 29, no. 2 (1989): 185–214.

5. Lawrence A. Cremin, *The Transformation of the School: Progressivism in American Education, 1876–1957* (New York: Alfred A. Knopf, 1964), 14–20.

6. Lawrence A. Cremin, *American Education: The Metropolitan Experience, 1876–1980* (New York: Harper and Row, 1988), 157–64.

7. W.T. Harris, *Psychologic Foundations of Education: An Attempt to Show the Genesis of the Higher Faculties of the Mind* (New York: D. Appleton and Co., 1899), 228–29, 233–34, and 239–40. This work will be cited as *PFE* in the text for all subsequent references.

8. John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Macmillan, 1966), 139–51.

9. Arthur G. Wirth, *John Dewey as Educator: His Design for Work in Education, 1894–1904* (New York: John Wiley and Sons, 1966), 8–9.

10. Dewey, *Democracy and Education*, 291–305.

11. Ibid., 323–26.

12. John Dewey, *The Child and Curriculum and The School and Society* (Chicago: University of Chicago Press, 1956), 12, 16, and 20-21. This work will be cited as *CC* in the text for all subsequent references.

13. Dewey, *Democracy and Education*, 4–6 and 304–5.

14. Daniel Walker Howe, "American Victorianism as a Culture," *American Quarterly* 27, no. 5 (1975): 507–32.

15. Burton J. Bledstein, *The Culture of Professionalism: The Middle Class and the Development of Higher Education in America* (New York: W.W. Norton and Co., 1978), 333–34.