February 2006



Journal of the American Association for the Advancement of Curriculum Studies

- » JAAACS Home
- » Article Archive
- » Editorial Statement
- » Call for Manuscripts
- » Author Guidelines
- » Editorial Board
- » Review Board
- » Submit An Article
- » Contact JAAACS

Volume 2 Getting it Right: Keeping it Complicated

Susan Jean Mayer Harvard Graduate School of Education

Kieran Egan brings several significant lines of thought together in his recent work, *Getting it Wrong from the Beginning: Our Progressivist Inheritance from Herbert Spencer, John Dewey, and Jean Piaget* (2002). Perhaps most importantly, Egan raises key questions regarding the role of twentieth century developmental research in the conceptualization and promotion of progressive educational practice across those years. In addition, Egan begins an analysis of what can arguably be seen as a reflexive deference to the "natural" drives and proclivities of children on the part of some progressive educators -- be they curricular theoreticians, developmental researchers, or practitioners (Egan does not distinguish). Finally, Egan raises a useful historical question regarding lingering influences of Herbert Spencer's largely discredited scholarship within the world of educational theory.

Regrettably, Egan frames these potentially generative contributions within the stark and more limited argument, implied by his title, that P/progressive educational commitments were predicated upon faulty premises. Those disinclined to relinquish any personal claims on the term 'progressivism' or to reject all that it has historically signified, however, may rest easy: Egan fails to make this case on several grounds. Rather, and as one often encounters in educational theorizing, Egan sets one worn collection of oversimplifications up against a fresh one, this one emphasizing the organizing role of culture in the construction of human understandings.¹

Ironically, it is Egan's title argument that rests on a flawed premise, that is the claim that one can base an adequate portrayal of progressive educational commitments principally upon the work of one man, Herbert Spencer, a speculative philosopher who lived and wrote in nineteenth century England. Egan repeatedly suggests that Spencer, whose educational theories were well regarded and broadly distributed in the decades preceding the work of Dewey and Piaget, surely must have set the tone and measure of all similar thinking that followed. To the contrary, simply by grouping these three men in so provocative a title, Egan risks obscuring profound differences between their scholarly enterprises, as well as the potential relevance of these enterprises for educational theory today.

Whether or not Spencer's scholarship helped to steer the course of

progressive educational theory across this past century, Spencer was certainly not a Progressive himself nor did he serve as a seminal inspiration for either Dewey -- the quintessential Progressive² -- or for Piaget. Indeed, in its earliest formulations, educational progressivism owed nothing whatsoever to Herbert Spencer. Even this claim, more modest than Egan's, begs a question Egan would have done well to address more thoroughly: What is educational 'P/progressivism'? As historian Herbert Kliebard, among others, has clarified, the term has meant many things (Cremin, 1962; Graham, 1967; Kliebard, 2004).

Educational progressivism first grew from late nineteenth-century social reform movements and sought primarily to improve public schooling for the children of the working class (Graham, 1967). Although John Dewey was a friend of Jane Addams, the figure that will first leap to most minds as personifying the social reform zeal of this period (Addams, 2002), academics were not generally associated with the educational progressivism of this time. It was not until after World War I that 'progressivism,' as a social movement, passed into the hands of university scholars and so into extended conversation with the organizing precept of "childcenteredness," Egan's central theoretical concern.

Though Spencer believed that humanity would gradually evolve toward a natural socialist state wherein all, even women and children, would be seen as social equals and the resources of the world would be distributed fairly, he did not favor any type of publicly funded education or assistance to the poor (Richards, 1987). As Spencer saw it, governments were inherently regressive, irredeemably devoted to the maintenance of privilege for the few. To the limited extent that a government ameliorated the condition of its poor and wretched, it only did so in an (often successful) attempt to forestall their ultimate rebellion and the arrival of the utopian socialism Spencer prophesized.₃

So how is it that Egan casts Spencer's work as the conceptual cornerstone of progressive education? Spencer, an English gentleman of indifferent education and idiosyncratic reading habits, devoted the bulk of his life to the production of a multivolume treatment of most of the more troubling philosophical questions of his time (Spencer, 1987). ⁴ This work, entitled *Principles of Psychology*, was tremendously popular in both Europe and America, in part due to Spencer's well received efforts on the lecture circuit. In it, Spencer advanced many of his own intuitive conclusions about contemporary pedagogical issues, including his sense that one must educate based upon the natural inclinations of the child (a notion that is generally traced, as Egan concedes, to the work of the eighteenth-century French philosopher Jean-Jacques Rousseau).

Even were one to grant a particularly Spencerian influence on North American progressive educators in this particular regard, P/progressivism cannot reasonably be conceived as having advanced along this (or any other) single strand of reasoning.⁵ Established scholarship has chronicled the multiple lines of thought and work that converged in the Progressive educational movement and so fed the various pedagogical strands that today might be thought of as "progressive" educational practice (Engel, 2005). These strands carry a mix of theoretical frameworks hewn of the often competing material and philosophical purposes of a new country of diverse peoples coping with the dislocations of the industrial age (Cremin, 1962; Graham, 1967; Kliebard, 2004).

Spencer's appropriation of supportive scientific findings in addressing perennial philosophical issues coupled with his grand conclusions regarding the inevitable moral progress of humanity did certainly excite the popular imagination of his day. Even distinguished scholars (for a time) found Spencer's scope of philosophical ambition tantalizing, particularly in view of the metaphysical challenges that the development of the physical sciences had wrought. ⁶ As suggested, Egan explores aspects of Spencer's social and educational thought that may indeed live on in the popular imagination, influencing pedagogical thought as he claims. In a related fashion, Stephan Gould argued that popular understandings of evolution remain more Spencerian than Darwinian in organizing conception (Gould, 1996).⁷

One must distinguish, however, between the character of prevailing educational perspectives among mainstream developmental researchers, the general public, and progressive practitioners *as well as* between such very broad lines of thought and the considered philosophical positions of scholars such as John Dewey and Jean Piaget. Spencer's belief in a destined socialism, for example, illustrates one defining conceptual chasm distancing him from both Dewey and Piaget: Spencer held to a mechanistic worldview. He assumed that predetermined processes were inexorably drawing humanity toward the socialist idyll he envisioned. Specific descent lines of the species would either adapt in response or perish.

Although Charles Darwin well knew that his society longed to believe in the inevitable moral advance Spencer promised, he never found material justification for it and strove instead to theorize some means by which such a progression might be possible (Gould, 2002, pp. 467-479). In contrast to Spencer, Darwin was a naturalist and so theorized based upon material realities that could be reliably documented. Given the evidence, Darwin concluded that any embedded moral potential in the world could only lie within the latent intellectual propensities of people themselves (Richards, pp. 135-142). It was Darwinian thinking on this fundamental point that conceptually underwrote the work of both Dewey and Piaget.

As Egan explains, Spencer's mechanistic sensibility also held that the existing poor had been positioned in the societal web relative to their current constitutions and capabilities. In dramatic contrast, Kliebard notes that Lester Frank Ward, "who argued in forceful opposition to Spencer's laissez-faire social policy, asserting that "the denizens of the slums are not inferior in talent to the graduates of Harvard college" -- in many respects foreshadowed John Dewey's educational philosophy" (2004, pp.24-27). Despite this sort of pointed critique by those scholars linked to the conceptual wellsprings of Progressivist theory, Egan asks his readers to accept that progressive educational theoreticians, researchers, and practitioners, as a group, internalized the fundamental dynamic of Spencer's reasoning (perhaps without realizing it) given that his work had once enjoyed such enormous play within both popular and academic circles.

Egan pairs this strained assertion with the unreasonable implication that Spencer's several admittedly egregious blind spots necessarily compromise -- not only everything else Spencer said -but also the thinking of any who read Spencer during the heyday of his influence and found elements of his philosophy engaging and perhaps even defensible. Given the scope and seriousness of Spencer's work, so categorical a dismissal seems particularly unjustified. On these grounds, then, Egan rejects the organizing commitments of educational progressivism -- this though psychologically minded scholars such as William James, Dewey, and Piaget explicitly rejected Spencer's methodological commitments in favor of a scientifically grounded functionalism (Plotkin, 2004, p. 45).

As noted above, Egan's attention to the organizing role of culture in the intellectual development of the young does provide instructive counterpoint to what may be fairly seen as an overemphasis on the "natural" capacities and proclivities of children within certain strands of progressive educational theory. Here Egan joins in conversations inspired by the Western academy's integration of Soviet and Post-Soviet psychological scholarship in recent decades. Even neo-Piagetians now read Lev Vygotsky, leading light and founder of the scholarship upon which Egan primarily draws (Tryphon & Voneche, 1996; Smith et al, 1997).⁸ Egan's analysis helps to highlight the need for developmental learning theory, as a field, to grapple at a deeper level with the profound, if ultimately impenetrable, relations between patterns of individual development and of cultural organization.

Studying and theorizing the various ways in which emerging human capacity and cultural context intertwine as children grow supports the work of educational theorists in myriad ways. Indeed, one might even go so far as to argue that such a focus *defines* the work of progressive practitioners, given that such educators have traditionally concerned themselves with adapting cultural activities to the classroom in order to provide dynamic, investigatory contexts within which developing human capacities might expand and deepen. Dewey put it this way:

The problem is to find what conditions must be fulfilled in order that study and learning will naturally and necessarily take place, what conditions must be present so that pupils will make the responses which cannot help having learning as their consequence. (From the essay, "Progressive Education and the Science of Education" cited in Brown, Finn & Brown, 1988, p. 167)

Progressive education, of course, did come to be largely defined by its commitment to activity in the classroom (Kliebard, 2004; Beck, 1942). In Dewey's view, culturally relevant activities provide a compelling means of acculturating children into the purposes and methods of the larger community (Dewey, 1990, pp.132-138). As two of the current scholars Egan cites, Alex Kozulin and James Wertsch, both emphasize, "cultural tools" are appropriated within the context of this type of activity (Kozulin, 1998; Wertsch, 1997). Surely Egan agrees. Why not, then, note the broadening consensus in regards to this historically P/progressive understanding? Given how overwhelming the project of theorizing education for democratic purposes has proven, it is curious that a theorist with Egan's clear concern for improving school practice would not seek to identify places where such practical convergences -- perhaps even a theoretical coherence -- seem possible.

Dewey lived to witness the intellectual dissipation to which sentimental deference to the shifting moods and fickle attention spans of children could lead and well realized that his name was often used to justify what he considered to be an irresponsible abrogation of the teacher's pedagogical responsibilities. It seems unjust, however, in addition to incorrect, to lay blame for such extremism at his door, particularly as he went to such pains to articulate the need to balance the demands of the child's nature with the demands of society writ large (Dewey, 1963, 1990).

Egan's critique of the myopia that has pervaded a great deal of mainstream learning research across the past century repays the critical reader's close attention, yet here again, his conclusions are troubling. Egan condemns progressive educators' unrealized *and unrealizable* "belief that the scientific study of the nature of human learning will lead to principles for effective teaching" (p.74). It is hard to know what Egan, clearly an enthusiast of Vygotsky's psychological research and theorizing, means to propose. While dismal returns on nearly a century of educational psychology (Lagemann, 2000) have understandably alienated many from the work of crafting a credible science of learning, this attitude seems surprising from Egan. To what would he have pluralistic democracies of the twentieth-first century turn? Whose ancient wisdom, whose "impressionistic reflections" (p.112) should one privilege?⁹

While one must distinguish Dewey's vision of useful educational research from much of contemporary educational psychology (Shaker, 2004), it is certainly true that Dewey found the scientific method, with its material footing and collaborative organization, integral to all democratic process and believed specifically in the relevance of psychological research to progressive educational theorizing. In an early paper, he cited findings of German psychologist Wilhelm Wundt indicating that nerve system activity in frogs evidences "purposive adaptation to the stimulus" (from Dewey's "Soul and Body," 1886; cited in Westbrook, 1991, p. 25). Dewey viewed such findings as clearly incompatible with the deterministic explanations of Herbert Spencer and others. That even simple life forms could be seen to orient themselves purposefully toward given ends suggested to him that an innate orientation toward intelligent adaptation propelled biological growth and development.

As I have intimated, the conceptual confusion born of scientific advance generally -- and of Darwin's work in particular -- generated tremendous existential doubt in many quarters, particularly among those who felt the need to reconcile contradictions between religious and scientific claims. Dewey can be seen here as joined in a pervasive nineteenth and early twentieth century preoccupation with one of this project's central concerns, one also pursued, as we have seen, in the work of Spencer and Darwin. In the absence of theological certainties about humanity's destiny, these scholars sought for meaning and purpose in the natural world. Of these three, however, only Spencer reclaimed a moral coherence in final terms, by theorizing it according to the methods of speculative philosophy.

For Dewey, as it was for Darwin and would be for Piaget, any theorized meaning and purpose in the universe needed to be grounded in credible documentation of the natural world. For these scholars, that meant locating any possibility of larger meanings within the intelligence of life forms themselves and, in the case of people, in at least a latent capacity to appreciate shared ends and purposes. The central challenge and promise that lay before the citizens of the industrializing world was, as Dewey saw it, to recognize the extent to which material progress had caused greater and greater numbers of people to share in a "common good" and thereby a "common duty" (Westbrook, p. 38). Based upon the *possibility* that Americans, in particular, were positioned to appreciate this reality, Dewey theorized the *possibility* of social progress.

A distinct, but related, line of thought led Piaget to believe that logical reasoning provided necessary and sufficient means for the construction of adaptive, or moral, understandings in the social realm. Fostering people's increasingly nuanced intellectual accommodation of the realities of others represented his best hope for humanity, and he devoted his long and generative career to establishing that people are designed to reason together about the world in increasingly complex ways (Chapman, 1988, 1986; Vidal, 1998, 1994, 1987). In the process, he demonstrated that one builds one's capacity for formal logic over time and in relation to one's experience of material reality, a theory with which findings of his, as well as those of subsequent developmental researchers, have made it senseless to quibble.¹⁰

Egan does not fundamentally disagree. He states that "human beings go through a long process of what we now commonly call development; during this process our interests and abilities change in both gross and subtle ways, and there seem to be regularities in the ways people go through varied scenes of life (p. 79). Developmental theory, in fact, provides the foundation for Vygotsky's claims regarding the need for educators to think in terms of a 'zone of proximal development' (Vygotsky, 1978). The lower end of this performance zone is defined by the type of developmental constraints that Piaget investigated and theorized. Piaget would not have denied that learning could be promoted within certain parameters;¹¹ he simply was not interested in thinking about it.¹² Piaget's lack of attention to the nurture of learning was a function of his abiding absorption with the processes whereby biological means and constraints interact with material reality in the construction of human sense and meaning of the world. As a result, one may argue (as Vygotsky did in *Thought and Language* and others have since) that Piaget under-theorized the role culture necessarily plays in fostering particular types of abstract thought. Others might argue that Piaget's conception of abstract thinking was itself simplistic, given his exclusive attention to mathematical and formal logical reasoning at this level.

One must bear in mind, though, that mathematical thought and formal logic had made the construction of modern Western reality possible. Piaget's worldview was fashioned by (and helped to fashion) this sensibility. As a Protestant French Swiss scholar born in the waning years of the nineteenth century, Piaget came of age in an intellectual climate that harbored a particularly passionate relationship with the liberating power of reason. The post-modern criticism that so complicates contemporary sensibilities had not yet arrived.¹⁴

Unseating Rome as Western civilization's supreme moral and intellectual arbiter, though, has naturally come with its costs, and the persisting inability or unwillingness of some to constrain and instruct children adequately may be one of them. Establishing one's own moral authority as a parent or an educator may not prove to be the straightforward matter of reasoning everything out logically that Piaget proposed (Piaget, 1965). Cultural traditions carry their own authority -- an authority based in understandings that have been forged through a complex interplay of human capabilities, needs, and material circumstances over thousands of years. Egan is right to suggest that it is only in claiming one's share of such traditions that one becomes educated. Piaget and Dewey were also right to insist that independent reason, collectively harnessed, must fundamentally drive this engagement.

As to the dispiriting limits of modern developmental research both as a "genuine science" and relative to hopes that it might provide meaningful guidance in the art and craft of educating, Egan is not alone in blaming Piaget: Piagetian theory, after all, inspired the enterprise. The major flaw with this reasoning is that, once again, its elements remain inadequately defined and differentiated. American developmental research has been shaped by multiple research traditions, including behaviorism, and has yet to come to terms with the demanding implications of Piagetian research method (Mayer, in press). Piaget may have idealized formal abstract reasoning, yet his belief in the internal coherence of children's very different forms of reasoning led him to craft a wholly original means by which one might apprehend aspects of their worldviews (and, by extension, of the subjective realities of others).

The theoretical world to which Piaget devoted his labors may have moved on (as progressives of every variety always look for such worlds to do), one must nonetheless mark the enormity of Piaget's accomplishment. He and his colleagues at the Jean-Jacques Rousseau Institute sought, discovered, and documented a reliable coherence in the thought of even very young children at a time when other psychologists were merely measuring shortfalls between children's thinking and their own (as many still do). It is not apt to speak of Piaget having a low opinion of children's reasoning (p.106); such a claim can only rest on the thin play his work has seen in most corners of the North American academy.

Conclusion

While one must respect and may indeed welcome Egan's willingness to submit embedded progressive (and mainstream developmental) assumptions to critical review, one must at the same time object to the reductive spirit in which his analysis has been framed. That such matters are complicated should go, by now, without saying (Pinar, 2004, 1988). In recent years, curriculum theorists have turned to chaos and complexity theory in hopes of discovering models and metaphors that might suggest, in more evocative fashion, a meaningful interplay of the field's multiple necessary dimensions (Doll, Fleener, & St. Julien, 2005). ¹⁴

Into so daunting a conceptual morass steps Egan, brandishing an inadequate characterization of what progressivism has meant in the context of North American education and arguing that its commitments have obscured more than they have revealed. In response, I have argued that educational theorists cannot afford to think in the dichotomous terms Egan provides. Even *were* one to reduce progressive educational theory to a unilateral concern with the "natural" capacities and proclivities of children, such thinking has nonetheless made a significant contribution towards the construction of a working set of democratic educational principles. Nature and nurture do, after all, remain inextricably bound, and from our various places in the midst of the mix, the best we can do is to poke along certain of our own edges, attending at the same time to the sensitive investigations of others. Dewey put it this way:

And certainly in such an undertaking as education, we must employ the word "science" modestly and humbly: there is no subject in which the claim to be strictly scientific is more likely to suffer from pretence, and none in which it is more dangerous to set up a rigid orthodoxy, a standardized set of beliefs to be accepted by all (cited in Brown, Finn & Brown, 1988, p.161).

As scholars of the social and physical sciences now overwhelmingly recognize, everything any of us can say about anything remains irrevocably partial and contingent. Although this reduces us all to the difficult and often perturbing work of allowing our own conceptualizations to be altered by those of others, both Dewey and Piaget offered cogent arguments for embracing this enterprise. Both men believed that by struggling with the intellectual accommodations that democracy requires people could, not only better their chances at sustaining their civilizations across an uncertain future, but perhaps even become better themselves. Unlike Herbert Spencer, both men also believed that by envisioning education in new ways democracies might further such goals.

References

Addams, J., (2002). *On education.* New Brunswick, NJ; Transaction Publishers.

Beck, R. H., (1942). *American progressive education, 1875-1930*. Dissertation presented to Yale University. Ann Arbor, MI: University Microfilms.

Brown, S. & Finn, M., eds., (1988). *Readings from progressive education: A movement and its journal.* Lanham, MD: University Press of America.

Chapman, M. (1986). "The structure of exchange: Piaget's sociological theory." *Human Development*, 29(2), 181-194.

Chapman, M. (1988). *Constructive evolution: Origins and development of Piaget's thought.* Cambridge: Cambridge University Press.

Cremin, L., (1962). *The transformation of the school: Progressivism in American education, 1876-1957.* New York: Alfred Knopf.

Dewey, J., (1990/1900&1902). *The school and society* and *The child and the curriculum*. Chicago: The University of Chicago Press.

Dewey, J., (1963/1938). *Education and experience*. New York: Free Press.

Dewey, J., (1958/1929). *Experience and nature*. New York: Dover Publications, Inc.

Doll, W., Fleener, J., St. Julien, J., eds., (June 2005). *Chaos, complexity, curriculum, and culture: A conversation.* New York: Peter Lang.

Egan, K., (2002). *Getting it wrong from the beginning: Our Progressivist inheritance from Herbert Spencer, John Dewey, and Jean Piaget.* New Haven: Yale University Press.

Engel, B., ed. (2005). *Holding values: What we mean by progressive education*. Portsmouth, NH: Heinemann.

Gould, S. J., (2002). *The structure of evolutionary theory.* Cambridge, MA: Harvard University Press.

Gould, S. J., (1996). *Full house: The spread of excellence from Plato to Darwin.* New York: Harmony Books.

Graham, P., (1967). *Progressive education: From Arcady to academe: A history of the Progressive Education Association.* New York: Teachers College Press.

Inhelder, B., Sinclair, H., & Bovet, M., (1974). *Learning and the development of cognition.* Cambridge, MA: Harvard University Press.

Kliebard, H., (2004). *The struggle for the American curriculum 1893-1958.* Third Edition. New York: Routledge & Kegan Paul.

Kozulin, A., (1998). *Psychological tools: A socio-cultural approach to education.* Cambridge, MA.

Lagemann, E. (2000). *An elusive science: The troubling history of educational research.* Chicago: The University of Chicago Press.

Mayer, S., (In press). "The early evolution of Jean Piaget's clinical method." *History of Psychology*.

McDermott, J., (1981). *The philosophy of John Dewey.* Chicago: Chicago University Press.

Piaget, J., (1965). *The moral judgment of the child*. New York: Free Press.

Pinar, W., (2004). *What is curriculum theory?* Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Pinar, W. (1988). *Contemporary curriculum discourses.* Scottsdale, AZ: Gorsuch, Scarisbrick, Publishers.

Plotkin, H., ed., (2004). *Evolutionary thought in psychology: A brief history.* Malden, MA: Blackwell, Publishing.

Richards, R., (1987). *Darwin and the emergence of evolutionary theories of mind and behavior.* Chicago: University of Chicago Press.

Rogoff, B., (2003). *The cultural nature of human development*. Oxford: Oxford University Press. Shaker, P., (2004). "*Left Back*: punditry or history?" *Journal of curriculum studies*; v.36, no. 4, 495-507.

Smith, L., Dockrell, J. & Tomilson, P., (1997). *Piaget, Vygotsky and beyond: Future issues for developmental psychology and education.* London: Routledge.

Spencer, H., (1897). *The principles of psychology.* Two volumes. New York: D. Appleton.

Spencer, H., (1966). *Herbert Spencer on education*. New York: Teachers College Press.

Tryphon, A. & Voneche, J., (1996). *Piaget-Vygotsky: The Social Genesis of Thought.* East Sussex, UK: Psychology Press.

Vidal, F. (1987). "Jean Piaget and the Liberal Protestant tradition." In M.G. Ash & W. R. Woodward, (Eds.), *Psychology in twentiethcentury thought and society, (*pp. 271-294). Cambridge: Cambridge University Press.

Vidal, F., (1994). *Piaget before Piaget.* Cambridge, MA: Harvard University Press.

Vidal, F. (1998). "Immanence, affectivité, et démocracie dans *Le jugement moral chez l'enfant.*" *Bulletin de Psychologie,* 51(5), 585-597.

Vygotsky, L., (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press

Vygotsky, L., (1987/1934). *Thought and language.* Cambridge, MA: MIT Press.

Wertsch, J., (1985). *Mind as action.* Oxford: Oxford University Press.

Westbrook, R., (1991). *John Dewey and American democracy.* Ithica, NY: Cornell University Press.

Endnotes

- 1. Egan's emphasis reflects a broader surge of academic interest in the work of Lev Vygotsky and other Soviet and post-Soviet theorists of learning and development since this work's translation and dissemination in the West beginning in the 1960s.
- 2. Historian Pat Graham, in her book chronicling the thirty-six years of the Progressive Education Association, puts it this way, "Throughout the ideological oscillations of the concept "progressive," at least two elements remained constant: an appreciation of innovation in education and an acknowledgement of John Dewey's status as prophet and elder statesman of the progressive education movement" (1967, p.13).
- 3. Those familiar with the work of Karl Marx will notice theoretical parallels between the two men in this regard. Spencer wrote at a time when English aristocrats were indeed scrambling to avoid the fate of their French cousins (See Richards, 1987, pp. 253-267).
- 4. See also Spencer, 1966.
- 5. Not that Egan keeps it simple: claims and perspectives are mingled and equated one to the other in a dizzying array. Spencer is not simply claimed (basically) to have

underwritten the thought of Dewey and Piaget. We also see the likes of Paul Goodman, a radical educator from the 1960s, John Bransford, a contemporary cognitive scientist, and Whole Language learning all rolled in with each other and with Spencer as well (pp.49-51).

- 6. William James, whose concerns bridge those of Spencer with those of twentieth-century progressive educators, was initially intrigued by Spencer's work, but ultimately wrote his own two-volume *Principles of Psychology* (1890) to replace Spencer's two-volume set of the same title (1872).
- 7. As Egan points out, Spencer gave 'evolution' its name, one of which Darwin never approved as it suggests a forward momentum in which Spencer believed, but for which Darwin never found evidence.
- 8. Vygotsky himself placed his thinking into thoughtful juxtaposition with that of Piaget. His review of Piaget's first book, *Language and Thought of the Child*, begins with the lines: "Psychology owes a great deal to Jean Piaget. It is not an exaggeration to say that he revolutionized the study of the child's speech and thought" (Vygotsky, 1987/34, p.12).
- 9. I do not mean to suggest that traditional wisdom and personal intuition do not play a valuable and, in any event, unavoidable role in all educational processes. Rather I am suggesting that social science has a role to play in arbitrating the claims of competing perspectives and worldviews within pluralistic democracies.
- 10. One certainly can object, as many have, to many of Piaget's specific claims and emphases and to certain of his organizing premises. (See, for example, Rogoff, 2003).
- 11. Certainly, Piaget's understanding of this process did, though, differ from Vygotsky's.
- 12. It was Piaget's close collaborator, Bärbel Inhelder, who initiated a research program in the early 1960s to investigate learning within a developmental framework and the means by which it might be most effectively promoted (Inhelder, Sinclair, and Bovet, 1974).
- 13. Another point of historical perspective: all "rote learning" cannot be considered equal. Contemporary minds cannot without study appreciate the classroom conditions to which Spencer, Piaget, and Dewey objected; similarly, important differences existed between the 'rote studies' each of these three men referenced.
- 14. The American Educational Research Association now has a special interest group devoted to chaos and complexity theory. Curriculum theorists focus on the overall quality and organizing characteristics of educational experiences and so consider social, moral, psychological, aesthetic, and epistemological dimensions.

Contact information: Susan Jean Mayer Harvard Graduate School of Education mayersu@gse.harvard.edu

Copyright for articles published in this journal is retained by the authors, with first publication rights granted to the journal.