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Getting it wrong from the beginning

Kieran Egan

What have we been getting wrong from the beginning? And when was the beginning the title refers to? I will argue that we have been getting education wrong from the beginning, and the beginning I am concerned with is that of public schooling in the late nineteenth century. All societies, as far as our anthropology can tell, have had some formal initiation process for the young, and schools have existed in the West for millennia. But the school as we know it was an invention of the late nineteenth century. Before that time education was very largely a process of preparing males for leadership roles in society, whereas the apparatus for schooling everybody for participation in a democracy is quite recent.

In this paper I will argue that the conception of education that continues to shape our schools, and influences what we do to children in its name, was given its modern sense as a result of ideas that were largely formulated in the 1850s. I will try to show the source of many of our present most generally held beliefs about learning, development, and the curriculum, and show that they were based on ideas that were, simply, wrong. These ideas continue to be the source of catastrophic damage and waste of life, and are responsible for the general ineffectiveness of schooling.

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—Herbert Spencer's. He was an odd character, perhaps most vividly captured in Beatrice Webb's *My Apprenticeship* (1926/1971). He stood at the crux of the modern world, when the heroic intellectual activity of Victorians was secularizing the Western world and setting in place the scientific and scholarly agendas we are still very largely following. Spencer was a prolific writer, of immense influence during the nineteenth century. He visited America and gave triumphant lectures, influencing profoundly, among others, educators like Dewey, Thorndyke, Parker, Hall, and many others. As the historian of education Lawrence Cremin put it, describing the revolution that became progressivism: "If the revolution had a beginning, it was surely with the work of Herbert Spencer" (Cremin, 1961, p. 91).

The trouble with Spencer . . . well, there are many troubles, but the particularly relevant trouble here is that pretty well all his ideas were wrong. By the end of the 19th century, he was a deeply disappointed man. His great synthesizing works were dismissed as irrelevant, his evolutionary theory—that preceded Darwin's in publication—remained Lamarckian, the bases of his biological theorizing were shown to be false, his social ideas were accepted only by the most virulently right-wing exploiters (not so small a group, of course). But his educational ideas, based on general principles shown to be false, became the rarely-questioned basis of modern education.

If Spencer has been so influential, why is he so little known?

Before dealing with Spencer's ideas on education, I should address what may seem to be a puzzle. If Spencer is so central to the

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intellectual world collapsed, Charles Eliot of Harvard could note in 1910:

The ideas on education which he put forward more than fifty years ago have penetrated educational practice very slowly—particularly in England; but they are now coming to prevail in most civilized countries, and they will prevail more and more. (Intro. to Spencer, 1911, p. viii)

It is not clear from the syntax of that sentence whether England is to be classed among the civilized countries, but over the past half-century Spencer's educational principles have gained ascendancy in his homeland as well as in North America.

The beginning of public schooling was in the later nineteenth century, and we got wrong the conception of education that determined teaching and the curriculum. Here we are with massive financial and technical resources at hand to educate our children, but we are in a conceptual mess, and the result is ignorance and waste of life in catastrophic proportion.

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Conclusion

So here we are with a general conception of education powerfully influenced by the ideas Herbert Spencer. We have seen that the beliefs on which he based his educational principles were wrong, and yet, ironically, the educational principles have been accepted as almost beyond question.

Beatrice Webb describes her early enchantment with Spencer's ideas, the ferment of intellectual excitement that he created, and then her disenchantment: "My case, I think, is typical of the rise and fall of Herbert Spencer's influence over the men and women of my own generation" (1926, p. 61). Spencer was the victim of one of the crueler but most telling put-down in modern intellectual history. In talking with Thomas Huxley and others, (and reported in 1909 by Karl Pearson) (Abrams, 1968, p. vii) the inexorably philosophic Spencer said "You fellows would little think that I wrote a tragedy when I was young." Huxley immediately said: "I know what it was about." Spencer was surprised at this, and said it was impossible that Huxley could know, as he had never mentioned it to anyone before. But Huxley insisted, and Spencer challenged him to describe it. Huxley replied: "It was the history of a beautiful induction killed by a nasty little fact."

While Spencer's huge reputation and his magnificent theoretical structures came crashing down under the discovery of nasty little facts, the educational ideas derived from his flawed theoretical structures soldiered on. It took time for them to gain a hold, particularly on American education, but once they did they proved themselves immensely tenacious. As his reputation in the wider

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construction of the schools of today, and has consequently had a profound influence especially upon everyone educated in America, how is it that his name is almost forgotten, even within educational discourse?

Herbert Spencer's name is perhaps known in a vague way by many professors of education, but most teachers have never heard of him. If he is mentioned in textbooks, it is usually in a casual footnote, or in a reference to his extreme answer to his still disturbing, though daft, question, "What knowledge is of most worth?" Even those I have mentioned as profoundly influenced by him—Dewey, James, Parker, Hall, Thorndike—are niggardly with acknowledgements to Spencer, and his name appears in their writings most commonly when they are refuting one or other of his prodigal ideas. How could someone virtually no-one today reads be the source of ideas nearly everyone in Education accepts without question? How can an obscure Victorian provide a key to understanding the ineffectiveness of much modern schooling? If his ideas were so wrong, surely the experiments of a pragmatic educational system over the past century or more will have exposed the error?

Spencer's voluminous writings bring to mind what was one of the most famous Victorian cartoons to appear in the British humor magazine, Punch. The cartoon was known as 'the curate's egg'. At two ends of a long table sit a weedy, nervous young curate and a portly, domineering Archbishop. They are having boiled eggs for breakfast, and the wavy lines rising from the curate's egg indicate it is bad. The Archbishop says, "Ah, Arbuthnot, your egg appears to be bad." The diffident curate replies, "Oh no, my Lord. Parts of it are excellent."

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Spencer's work, as the century wore on, came to be seen as curate's egg-ish. Parts of it may have been excellent, but the bad parts were found so unpalatable that his great influence dissipated rapidly. I will mention six reasons for this decline, focusing particularly on those connected with educators' reluctance to acknowledge him as their source.

First, those who enthusiastically adopted Spencer's educational ideas for the new public schools faced the embarrassment that Spencer himself argued resolutely against any provision of education by the state, especially for the lower classes. To people like John Dewey, who were concerned deliberately to expand public schooling, using the state's control of schooling to reconstruct society through educational reform, Spencer's views were, to say the least, inconvenient. This was especially so because the general principles from which he derived the progressive educational ideas they liked were also the principles on which he founded his opposition to public schooling. His version of social evolution led him to believe that the weak, poor, and unintelligent should be discouraged from breeding, and education and other social welfare programs only served to maintain incompetents and so slow down the beneficent progress nature has in store for us.

Second, the ideas commonly labeled "social Darwinism" might be better called "social Spencerism." "The survival of the fittest" was originally Spencer's term, even though Darwin did later use it in a limited way. Spencer extended the idea of the survival of the fittest from natural selection to pretty well everything in sight. When he applied it to society and economic systems, he argued for what has been called, by a British Prime Minister, Edward Heath, "the

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But whatever conclusion or impasse we might reach from that argument, Spencer's utilitarian influence on the curriculum was allied with his principle that children's learning must always be effortless if it is to conform properly "to the methods of nature" (1911, p. 52). Learning must also be pleasurable because, "the rise of an appetite for any kind of information implies that the unfolding mind has become fit to assimilate it, and needs it for the purposes of growth" (1911, p. 51), and the satisfaction of any natural appetite gives pleasure. Applying these criteria means constantly revising curricula to exclude elements that are not learned effortlessly and pleurably. The result of applying these criteria has been the catastrophic "dumbing-down" of the curriculum, particularly in the early years of schooling.

The combined requirements of utility of content and effortless and pleasurable learning results in often highly intelligent students who are, in Lord Clark of *Civilization's* phrase, "ignorant as swans."

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ultimate criterion for selecting content for the curricula must be its utility in the assumed future life of the student.

The twentieth century saw the proponents of Spencer's conception of utility and his priorities of self-preservation, securing the necessities of life, good citizenship, and so on, grow increasingly important. So Social Studies largely displaced History, classical learning of any kind has largely disappeared in favor of more utilitarian studies, the arts in general have given ground to practical preparation for everyday life, literature receives less time than functional literacy activities and so on. Spencer's success is measured in the degree to which schools and those who work in them are no longer seen as central institutions in the cultural life of the society at large. Indeed, it seems fair to say that those involved in the institutions of schooling increasingly show a somewhat anti-intellectual bias.

The answer is not more of the old traditional curriculum. That simply perpetuates the fruitless and dreary polemics of twentieth-century educational discourse. Anyway, I am not here interested in answers, so much as to identify or at least plausibly suggest how we have got it wrong from the beginning. In the case of the curriculum what we got wrong was accepting that the important question was "what knowledge is of most worth?" and the catastrophe has followed accepting Spencer's belief that a fundamentally utilitarian criterion would allow us to answer it.

And what is wrong with such a question, and a dominant criterion of utility determining the curriculum? I read yesterday about the poet Joseph Brodsky teaching a class at a leading American college and coming to a reference to Ovid. He asked who was familiar

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unacceptable face of capitalism"—that is, the exploitation of the poor, weak, and defenseless by the rich and powerful for the latter's private profit. This aspect of Spencer's supposedly scientific writings helped account for his great popularity with one segment of American society. William Sumner (1840–1910), president of Yale University, enthusiastically used these ideas of Spencer's to argue for the freedom of capital from state regulation. Association with a ruthless program of exploitation and suppression of working people, and with a program of unstinting support for a power élite, hardly endeared Spencer to socialists like John Dewey or to any of those wanting to use the new schools to further democratic ideals. Thomas Huxley summed up Spencer's social ideas as "reasoned savagery" (1951, p. 181).

Third, even at the level of curriculum development, where Spencer's focus on the whole life of the child and on learning things of practical value was warmly embraced, his own application of the principles produced an exclusively science-based curriculum, even in primary school. This reflected Spencer's own peculiar education by his father, but it seemed simply eccentric to those who were planning to prepare the young for all aspects of life in an expanding American society.

Fourth, some of Spencer's fame grew from his having devised theories about evolution even before Darwin published his arguments and evidence. Indeed, "evolution" was Spencer's term; Darwin at first wrote of "descent with modifications" or "natural selection." Neither had the snappy neatness of Spencer's preferred term, which became the one generally accepted, even by Darwin. The problem was that Spencer never really understood Darwin's

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idea of natural selection. He seems to have seen Darwin's theory as simply one particular mechanism—a clever one undoubtedly—whereby evolution proceeded, and as just one small addition to his own vastly more comprehensive philosophical theory of evolution.

Spencer's scientific understanding never advanced beyond a rather crude Lamarckian view. Jean Baptiste de Lamarck (1744–1829) had proposed (in his 1809 *Philosophie Zoologique*) a groundbreaking theory of evolution; he argued that changes occurred in species as a result of acquired characteristics being inherited by future generations. So if a species moves to a new environment in which, say, a tail no longer serves a useful purpose, the tail will disappear over generations and other features that are more used will be enlarged or expanded in some way. This inheritance of acquired characteristics was used, classically, to account for the giraffe's neck having stretched over generations so they could better reach the high shoots of tall bushes and small trees.

Lamarck's general idea of species-change has become very widely accepted, as has Darwin's explanation of how it occurs. By the end of the nineteenth century, when Darwin's theory had become more widely understood, those most committed to evolution considered Spencer outdated, eccentric, and ignorant. So evolution's most outspoken champion became a decided embarrassment. William James, in his 1890 *Principles of Psychology*, took issue with Spencer about evolution, pointing out that he simply misunderstood it.

Fifth, on the scientific side matters became even worse for Spencer. In 1853, the ideas of the German physicist, Hermann von Helmholtz (1821–94), about energy expenditure were translated

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leisure enjoyably came in for much derision. Spencer broached the topic, and provided an answer, in his celebrated essay, “What knowledge is of most worth” (1859).

With his usual brio, he argued that we must sweep away the old curricula: “Men dress their children's minds as they do their bodies, in the prevailing fashion” (1911, p. 2). Instead of following fashions, we need to begin by considering what is most important in life, and prepare children for that. What is important? Well, he ranks in order self-preservation, securing the necessities of life, bringing up children well, producing good citizens, and, last, prepare them as adults to enjoy nature, literature, and the fine arts. And what knowledge will best support these aims for education? Well, the new scientific knowledge relevant to each.

So the prevailing curriculum based in Latin, Greek, and history was to be swept away. It took some time, but it has pretty well gone. History was, to Spencer, a “mere tissue of names and dates and dead unmeaning events . . . it has not the remotest bearings on any of our actions” (1911, p. 10). In general he despised the classical bent of the middle-class education most of his contemporaries, but not himself, had suffered. Such an education provided a mass of irrelevant knowledge: “So terribly in our education does the ornamental over-ride the useful!” (1911, p. 14).

Spencer's answer to his question of what knowledge is of most worth was, simply, Science. He meant it in the widest sense, but most of his followers found that they could not follow him all the way. Even if they did not accept his answer, they did accept the correctness of his question for designers of a new and modern curriculum, and they accepted also his basic principle—that the

leisure enjoyably came in for much derision. Spencer broached the topic, and provided an answer, in his celebrated essay, “What knowledge is of most worth” (1859).

With his usual brio, he argued that we must sweep away the old curricula: “Men dress their children's minds as they do their bodies, in the prevailing fashion” (1911, p. 2). Instead of following fashions, we need to begin by considering what is most important in life, and prepare children for that. What is important? Well, he ranks in order self-preservation, securing the necessities of life, bringing up children well, producing good citizens, and, last, prepare them as adults to enjoy nature, literature, and the fine arts. And what knowledge will best support these aims for education? Well, the new scientific knowledge relevant to each.

So the prevailing curriculum based in Latin, Greek, and history was to be swept away. It took some time, but it has pretty well gone. History was, to Spencer, a “mere tissue of names and dates and dead unmeaning events . . . it has not the remotest bearings on any of our actions” (1911, p. 10). In general he despised the classical bent of the middle-class education most of his contemporaries, but not himself, had suffered. Such an education provided a mass of irrelevant knowledge: “So terribly in our education does the ornamental over-ride the useful!” (1911, p. 14).

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It is noteworthy that the terms Spencer used—adaptation, assimilation, the mind’s growth by taking in aliments, etc.—find a place in the Piagetian scheme. And one might incidentally note that Spencer’s profound influence on the American James Mark Baldwin was passed to the French psychologist Pierre Janet, with whom Baldwin worked in Paris. The young Jean Piaget’s writings were, in turn, significantly influenced by Janet.

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What, then, happens to Spencer’s beneficent nature and its guarantee of progress? Later in the century, as Beatrice Webb touchingly chronicles, Spencer was a deeply depressed and disappointed man. As she puts it:

In answer to my inquiry [about why Spencer found the new physics so disquieting] my friend Bertrand Russell suggests the following explanation: ‘I don’t know whether he was ever made to realize the implications of the second law of thermodynamics; if so, he may well be upset. The law says that everything tends to uniformity and a dead level, diminishing (not increasing) heterogeneity’ [Letter from Bertrand Russell to Beatrice Webb, 4 June, 1923] (Webb, 1926/71, p. 109n).

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We know he was made to realize the implications by the Irish physicist, John Tyndall, and Spencer's shaken reaction is on record; he was indeed deeply disturbed, and remained so more or less till his death.

Sixth: another embarrassment for the educational reformers was Spencer's belief in recapitulation. This was his fourth guiding principle for educators: "the education of the child must accord both in mode and arrangement with the education of mankind, considered historically" (Spencer, 1859/1911, p. 60). Spencer had also believed that this principle had been shown to operate in biology, drawing again on von Baer. He followed the mid-nineteenth-century belief that each human fetus in its development went through—recapitulated—all the stages of development of our species, from simple-celled creatures, through gilled fish-like ancestors, and so on, to the present. Like so much of the primitive science Spencer picked up, this too was shown to be false.

But there was clearly ambivalence about this idea among those Americans who influenced the new schools. G. Stanley Hall was an enthusiastic believer in educational recapitulation. He believed, with Spencer, that the child's learning should follow the process whereby the different forms of knowledge had been built up during cultural history. John Dewey was also clearly attracted to recapitulation early in his career. He notes that there "is a sort of natural recurrence of the child mind to the typical activities of primitive people" (in Gould, 1977, p. 154). Even later, Dewey occasionally used recapitulationist arguments to support his curriculum proposals, e.g. "It is pertinent to note that in the history of the race the sciences grew gradually out from useful

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processes. His application of it to the mind followed much the same pattern. He conceived of the mind as following a process of gradually increasing heterogeneity from birth to adulthood—in much the same way that is common in developmental psychology and educationalists today. The mind is assumed to be an organ with a program that it spontaneously follows, as long as it is provided the appropriate environment and food. Spencer, that is, articulated explicitly a conception of the mind based on his biological conceptions. "If it be true that the mind like the body has a predetermined course of evolution—if it unfolds spontaneously—if its successive desires for this or that kind of information arises when these are severally required for its nutrition—if there thus exists in itself a promoter to the right species of activity at the right time; why interfere in any way?" (Spencer, 1966, p. 67). The job of the educator, then, is simply to "systematize the natural process" in order to aid "self-evolution" (Spencer, 1966/1860, pp. 84, 85).

One result of such a view is that the teacher becomes a facilitator of a process that will unfold ideally if given the right conditions. The educator is not to shape the mind with knowledge, but to support with appropriate food/knowledge its spontaneous development. Such a view also has obvious and radical implications for the curriculum, as we shall see below.

During the twentieth century, Jean Piaget, most notably, has continued the quest to expose some putative spontaneous process of intellectual development. I am inclined to echo Jerry Fodor's observation about the modern pursuit of Spencer's dream that exposing the nature of students' psychological development will be

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The second basis for Spencer's educational principles was his evolutionary ideas. These too were wrong. While Spencer drew on Darwin, he remained always a little irritated that Darwin should have gained such celebrity, as his evolutionary theory was, in Spencer's view, less general and powerful than his own. Spencer never really grasped Darwin's theory, or, rather, never grasped that it undermined the Lamarckian ideas Spencer held to his death.

The combination of von Baer's idea and Spencer's version of evolution led him to conclude that the fundamental law of life, the universe, and everything was “progress”. In a celebrated essay written in 1851, “Progress: Its Law and Cause,” Spencer had shown to his and many other's satisfaction that “progress is not an accident, not a thing within human control, but a beneficent necessity (1966, p. 60). He had established that this beneficent necessity was “displayed by the progress of civilization as a whole, as well as in the progress of every nation; and is still going on with increasing rapidity” (1966, p. 19).

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Heaven knows that Dame Nature herself in ontogeny [the development of the modern individual] abbreviates and skips and distorts the order of the appearance of organs and functions, and for the best of reasons. We ought to make an effort, as she does, to omit the useless and antiquated and get to the best and most useful as soon as possible. We ought to change what is to what ought to be, as far as we can (1913 I, p. 105).

The additional embarrassment about Spencer's recapitulationism was its casual brutal racism. His theories helped those in whose interests it was to view other races as inferior “savages”, comparing such adult “savages” with modern children: “During early years every civilized man passes through that phase of character exhibited by the barbarous race from which he is descended. As the child's features—flat nose, forward-opening nostrils, large lips, wide-apart eyes, absent frontal sinus, etc.—resemble for a time those of the savage, so, too, do his instincts. Hence the tendencies to cruelty, to thieving, to lying, so general among children” (1911, p. 108). Spencer used such absurd observations to justify “superior” people's right to govern “inferior” people, and, of course, to decide

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By the first decades of the twentieth century, then, if you were an educator attracted by Spencer's principles, you would not likely be keen to declare yourself a follower of Spencer. The accompanying baggage would be too burdensome. While American educators might have been ready to still acknowledge Spencer in the 1880s, it became increasingly convenient to cite homegrown American authorities who expressed his ideas without reference to him.

Biologized minds and learning

Let us take the conception of learning that Spencer inferred from his philosophical researches, which he would prefer to call scientific. In a brief paper I cannot hope to be more than suggestive about this and the following claims, so I will just try to locate the points at which Spencer's seductive errors have led modern educators massively astray.

Like everyone else remotely involved with children and their education, Spencer observed that children in "the household, the streets and the fields" (1911, p. 24) learn all kinds of things effortlessly, with eager pleasure, yet these same children often have great difficulty learning quite elementary things in formal

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(Given his contentious relationship with George Elliot, and the rival claims about who turned down whose proposal of marriage, it does not require straining to see elements of Spencer in Mr. Casaubon's discovery of "the key to all mythologies" in *Middlemarch*.)

When this key to all the process of nature was applied to education it allowed Spencer to articulate those principles that, as far as I have been able to tell, are still believed as unassailably true by very many teachers and professors of education. So it still seems accepted that we should proceed from the simple to the complex, and from the concrete to the abstract, and from the empirical to the rational. Also in education: "children should be led to make their own investigations, and to draw their own inferences. They should be told as little as possible, and induced to discover as much as possible" (1911, p. 62). Finally, we must always ask, "Does it create a pleasurable excitement in the pupils?" (1911, p. 63). He believed that to "tell a child this and to show it the other, is not to teach it how to observe, but to make it the mere recipient of another's observations."

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He uses the rhetoric of progressivism we have come to find so familiar, along with its binary distinction between good, active, child-centered teaching and bad, passive, traditional teaching. With the progressivist vision before us, the schools will be transformed and children once “stupified by the ordinary school-drill—by its abstract formulas, its wearisome tasks, its cramming—have suddenly had their intellects roused by thus ceasing to make them mere passive recipients, and inducing them to become active discoverers” (Spencer, 1996, p. 96).

Unilinear development

In 1851 Spencer read a review of W.B. Carpenter's *Principles of Physiology*. In his autobiography many years later, Spencer describes this review as an “incident of moment” in his intellectual life. The review introduced him to the decades old ideas of K.E. von Baer, and particularly Baer's claim that all living organisms develop from a condition of homogeneity to one of increasing heterogeneity. The “incident of moment” was Spencer's recognition that this formula could be applied to the evolution of inorganic no less than to organic material, and to individuals today no less than to species in the past. Indeed—it could be applied to everything! It was

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Spencer believed that his studies in evolutionary theory and biology had given him the answer: “Grant that the evolution of intelligence in a child . . . conforms to laws; and it follows inevitably that education cannot be rightly guided without knowledge of these laws” (1911, p. 23). So when children fail to learn in schools, the fault lies in methods of instruction or in the knowledge selected for the curriculum that did not conform with the laws whereby children's intelligence worked.

The answer was to devise methods of instruction, learning environments, and a curriculum that did conform with the underlying laws of children's learning and development. Once methods and curricula more hospitable to children's learning were in place, their natural desire for knowledge would be released, and an educational revolution would take place.

The progressivist movement in particular, but many others too, bought this fool's gold, caught Spencer's disease, and the twentieth century saw immense amounts of time, energy, ingenuity, and money expended on trying to make learning in schools match children's spontaneous learning in household, street, and field—what today we might call learning “street smarts”. The Holy Grail

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of progressivism—to let the metaphors run free—has been to discover methods of school instruction derived from and modeled on children's effortless learning, and so bring about the revolution promised by Spencer and by progressivists throughout the twentieth century. Despite all the ingenuity and effort, the revolution hasn't shown the faintest signs of occurring.

So what is the error? If one was to try to model human conceptual development, it would be tempting to say that evolution equipped us with two kinds of learning. There is, first, that largely effortless learning of our early years, which we use to pick up a language and conceptions of our society and the cosmos, and appropriate behavior within them. It seems to work a bit like cement or plaster-of-Paris; at first it is enormously flexible, able to adapt to widely varied external constraints, and then gradually it sets and becomes rigid. It also seems to be focused on very specific objects—like language, or social behavior, etc. The second kind of learning remains flexible throughout our lives and is a kind of all-purpose utility, but it is much more laborious and slow. The difference between the two is often said to be evident in the efficiency with which we learn a language and adapt to social customs in our early years, in contrast with the relative difficulty and inefficiency with which we learn a new language and adapt to new social customs later in life.

Jerry Fodor (1983), for one example, suggests we might see the mind as having particular input systems and a somewhat distinct central processor. The input systems are relatively specific to particular parts of the normal brain, they are focused on such things as touch, hearing, seeing, and language, and they are fast

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of progressivism—to let the metaphors run free—has been to discover methods of school instruction derived from and modeled on children's effortless learning, and so bring about the revolution promised by Spencer and by progressivists throughout the twentieth century. Despite all the ingenuity and effort, the revolution hasn't shown the faintest signs of occurring.

So what is the error? If one was to try to model human conceptual development, it would be tempting to say that evolution equipped us with two kinds of learning. There is, first, that largely effortless learning of our early years, which we use to pick up a language and conceptions of our society and the cosmos, and appropriate behavior within them. It seems to work a bit like cement or plaster-of-Paris; at first it is enormously flexible, able to adapt to widely varied external constraints, and then gradually it sets and becomes rigid. It also seems to be focused on very specific objects—like language, or social behavior, etc. The second kind of learning remains flexible throughout our lives and is a kind of all-purpose utility, but it is much more laborious and slow. The difference between the two is often said to be evident in the efficiency with which we learn a language and adapt to social customs in our early years, in contrast with the relative difficulty and inefficiency with which we learn a new language and adapt to new social customs later in life.

Jerry Fodor (1983), for one example, suggests we might see the mind as having particular input systems and a somewhat distinct central processor. The input systems are relatively specific to particular parts of the normal brain, they are focused on such things as touch, hearing, seeing, and language, and they are fast

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and “stupid”—we can't not hear or not learn a language in normal conditions. The central processor is “smart” and is slow and general in both brain location and operations. This allows very fast responses to some things by the “stupid” brain systems and slow contemplation and analysis by the other. Fodor notes that “it is, no doubt, important to attend to the eternally beautiful and true. But it is more important not to be eaten” (1985, p. 4)

Well, we might wisely be cautious in inferring such a sharp distinction in kinds of learning as we are still unsure about the underlying cognitive reality such distinctions refer to.

I use Fodor's terms here as a short-hand way of indicating the error I think has been repeatedly made, even though there may be good reasons to question much of Fodor's model, as Karmiloff-Smith (1992) for one among many, has argued. But his model is useful just to indicate why one might begin to worry about the “common-sense” objective of making children's learning in schools better conform with their learning in households, streets, and fields. What Spencer is requiring, in Fodor's terms, is to make the central processor work like an input system. It won't and can't. The century and more of attempts to make school-learning more like children's early effortless learning, has been misdirected.

Spencer's assumptions that there is only a single kind of learning leads to the belief that all school learning must be equally effortless as language learning, and it should be invariably pleasurable. If these two criteria are not satisfied in any learning experience, then there is something wrong with the method of teaching, or the environment in which it is taking place, or with the curriculum. He stated his position as follows:

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