



*Education and the Cult of Efficiency**
Raymond E. Callahan
(1962)

Chapter 1: The Prelude 1900-1910

At the turn of the century America had reason to be proud of the educational progress it had made. The dream of equality of educational opportunity had been partly realized. Any white American with ability and a willingness to work could get a good education and even professional training. The schools were very far from perfect, of course: teachers were inadequately prepared, classrooms were over-crowded, school buildings and equipment were inadequate, and the education of Negroes had been neglected. But the basic institutional framework for a noble conception of education had been created. Free public schools, from the kindergarten through the university, had been established.

The story of the next quarter century of American education — a story of opportunity lost and of the acceptance by educational administrators of an inappropriate philosophy — must be seen within the larger context of the forces and events which were shaping American society. For while schools everywhere reflect to some extent the culture of which they are a part and respond to forces within that culture, the American public schools, because of the nature of their pattern of organization, support, and control, were especially vulnerable and responded quickly to the strongest social forces. In this period as in the decades immediately preceding it, the most powerful force was industrialism — the application of mechanical power to the production of goods — and along with that the economic philosophy of the free enterprise, capitalistic system under which industrial-ism developed in America.

The material achievements of industrial capitalism in the late nineteenth century were responsible for two developments which were to have a great effect on American society and education after 1900. One of these was the rise of business and industry to a position of prestige and influence, and America's subsequent saturation with business-industrial values and practices. The other was the reform movement identified historically with Theodore Roosevelt and spear-headed by the muckraking journalists. These two developments, and the vulnerability of the school administrator, contributed to the conditions in American society which explain the tremendous impact of Frederick Taylor and his system of scientific management, and the continuing influence of the business-industrial ideology upon American society and education after 1911.

The rise of the businessman as the figure of leadership in the American community had its roots in the emergence during the seventeenth and eighteenth centuries of the middle class in Europe, where the free enterprise system, with the achievements of science and technology at its disposal, had tangibly demonstrated its advantages. In wealthy America, the tremendous industrial and material growth under the capitalistic system was clearly visible. Visible too, with their vast fortunes, were the great industrial and financial leaders — men such as Andrew Carnegie, John D. Rockefeller, J. P. Morgan, Edward H. Harriman, and the rest. By 1900 these men had been accorded top status by most of their countrymen, and quite naturally their values and beliefs (including the economic philosophy which had made it all possible) were widely admired and accepted. Indeed, the acceptance of the business philosophy was so general that it has to be considered one of the basic characteristics of American society in this period. Calvin Coolidge was not overstating the case when he said in 1925: "The business of America is business."

Doubtless, their vast, accumulated fortunes are enough to explain the prestige enjoyed by the leading businessmen and industrialists, but there were other factors partly responsible for their high standing. One of the most important of these was the McGuffey Readers. Millions of Americans in their formative years learned from these books not only the idea that success was a result of honesty and hard work but the idea that success was *material* success; and the successful individuals used as models were usually bankers or merchants. These ideas were bolstered after 1865 by the tempting, materialistic "success" literature (particularly in popular journals) in which business-men and business values were lauded. Sometimes these materials were written by such influential leaders as Andrew Carnegie or Theodore Roosevelt, but most often they were written by journalists or professional success writers such as Orison Marden.

It was inevitable that these business values would greatly influence the public schools at the turn of the century, but the extent of this influence was furthered by certain aspects of the great reform crusade. This movement was primarily an attempt to cope with the problems which were a product of rapid industrialization: the consolidation of industry and the concentration of wealth; the ruthless exploitation of the country's natural resources; the corruption and inefficiency in government; the tremendous growth of cities; the flood of immigrants who added to the complexity of the social and political problems in the urban areas; and finally, the fear among the middle class that America would react to these problems in an extreme or radical way (this reaction had of course been predicted by Karl Marx and had been realized, to an extent, in the growth of various forms of socialism in America).

That genuine problems existed in American society at the turn of the century there can be no doubt. But the generation of widespread public enthusiasm and indignation necessary to give force to a reform movement in a democratic society required that the public be aroused and informed. This function was performed so effectively by the muckraking journalists through the medium of low-priced periodicals that one historian has stated that "to an extraordinary degree the work of the Progressive movement rested upon its journalism" and that "it was muckraking that brought the diffuse malaise of the public into focus."¹

The vehicle for muckraking was the popular magazine — *McClure's*, *Munsey's*, the *Ladies' Home Journal*, the *Saturday Evening Post*, and later the *American*, which were attractively printed and directed toward popular appeal. (The *Saturday Evening Post*, for example, emphasized business, public affairs, and romance, while the *Ladies' Home Journal's* keynote was "intimacy" — "Heart-to-Heart Talks," "Side Talks to Girls," and "Side Talks to Boys.") Most important, the magazines were low in price, and circulations ran to the hundreds of thousands; two of them, the *Ladies' Home Journal* and the *Saturday Evening Post*, sold over a million after 1910.² By 1905 there were twenty such magazines with a combined circulation of over five-and-a-half-million. These journals were published not by literary men but by business promoters, and their editors were newspaper editors. Whereas the older monthlies had been books in magazine form, the new journals were newspapers in magazine form.

The most famous of the muckraking journals, *McClure's*, featured Lincoln Steffens, Ida Tarbell, and Ray Stannard Baker as staff writers. S. S. McClure's innovation was to pay his writers for the research necessary to present a thorough, factual exposure. He claimed that none of the articles by Steffens on bossism and the connection between business and corruption in city politics, by Miss Tarbell on the Standard Oil Company, or by Ray Stannard Baker on the railroads, cost less than \$1,000, more than half cost \$2,500, while each of Miss Tarbell's articles cost about \$4,000.³ But the

expenditure paid off handsomely as circulation increased rapidly.

¹ Richard Hofstadter, *The Age of Reform* (New York, 1955), p. 185.

² Frank Luther Mott, *A History of American Magazines* (Cambridge, 1957), IV, 688.

³ C. C. Regier, *The Era of the Muckrakers* (Chapel Hill, 1932), p. 16.

With *McClure's* demonstration in 1902 and 1903 of the profits of exposure, other popular journals joined in the endeavor. In the next decade, America was flooded with muckraker material as every aspect of American life came under attack to such extent that even the most complacent were prodded into discontent. Some of the muckrakers, such as Steffens, Baker, and Tarbell, combined the accuracy and thoroughness of the research scholar with the qualities of a good reporter, but others were neither so painstaking nor so responsible and many of the articles degenerated into sensationalism. The positive result of this effort was legislation curbing monopolies, controlling child labor, establishing conservation agencies, extending the income tax, and, in general, helping to correct the more flagrant abuses of industrial, democratic America. But there were other outcomes which were not so positive. The irresponsible, shot-gun type of criticism hurt many an innocent victim, among them some dedicated schoolmen. Even more unfortunate, this type of criticism in the popular journals stirred the public to clamor for change and often vulnerable school administrators were stampeded into actions which did great harm to American education.

In the course of the reform movement, much of the exposure and criticism of the muckrakers was directed at big business —the “captains of industry.” Indeed, some Americans, including one prominent businessman, James P. Munroe, went so far as to label these “captains” as “exalted thieves” and “corrupters of public morals.”⁴ The result, as one historian put it, was that some of the guilt was scraped “from that favorite idol of the late nineteenth century, the successful big businessman.”⁵ But, despite the indictment of these business leaders, neither the muckrakers nor Americans generally condemned the capitalistic business system as such. They regarded these evils as the aberrations of a few greedy men and took the view that if these men were controlled, the country would be restored to a healthy condition.

As Richard Hofstadter has pointed out, the muckrakers were moderate men, not radicals, and they were working in a period (despite the problems) of general prosperity. They did not intend to stir the American people to drastic action which would transform American society.⁶ They did not attack the business system; indeed, and very important to our story, their solution to many of the problems was the application of modern business methods. This was especially true in regard to corruption and inefficiency in government. For example, in October, 1906, *McClure's* published an article by one of the leading muckrakers, George Kibbe Turner, entitled “Galveston: A Business Corporation” in which he described the new five-man business corporation-type government in the Texas city. Turner judged the experiment a “brilliant success” on the basis of its financial record.⁷ The following April in an editorial, *McClure's* compared Chicago unfavorably with Galveston and, to prove its point, printed Charles Eliot's statement that “Municipal Government is pure business and nothing else — absolutely nothing else.”⁸ In the next three years *McClure's* printed several articles on the same topic — all of them lauding the new plan and claiming great financial saving, the elimination of corruption, and strong popular support. Meanwhile, the *Outlook* published an article on “The Business Mayor of Scranton” in September, 1906. The new mayor ran on a platform of business, not politics, and governed the city by business rules and business principles. For, the author said, “The city is a corporation; why run it any other way than you would a corporation?”⁹

⁴James P. Munroe, *New Demands in Education* (New York, 1912), p. 127.

⁵Ralph Henry Gabriel, *The Course of American Democratic Thought* (New York, 1940), p. 331.

⁶Hofstadter, *Age of Reform*, p. 195.

⁷Vol. XXVII, pp. 610-20.

⁸Vol. XXVIII, p. 686.

⁹Vol. LXXIV, p. 197.

So the business ideology was spread continuously into the bloodstream of American life. It was strengthened, not weakened, by the muckrakers as they extolled “modern business methods” and “efficiency” and connected these in the public mind with progress and reform. It was strengthened, too, by the vigorous conservation movement because the emphasis upon conservation blended into and reinforced a corollary drive to eliminate waste, and the elimination of waste was connected with modern business methods. It was, therefore, quite natural for Americans, when they thought of reforming the schools, to apply business methods to achieve their ends.

The Schools in a Business Society

The business influence was exerted upon education in several ways: through newspapers, journals, and books; through speeches at educational meetings; and, more directly, through actions of school boards. It was exerted by laymen, by professional journalists, by businessmen or industrialists either individually or in groups (e.g., the National Association of Manufacturers), and finally by educators themselves. Whatever its source, the influence was exerted in the form of suggestions or demands that the schools be organized and operated in a more businesslike way and that more emphasis be placed upon a practical and immediately useful education.

The procedure for bringing about a more businesslike organization and operation of the schools was fairly well standardized from 1900 to 1925. It consisted of making unfavorable comparisons between the schools and business enterprise, of applying business-industrial criteria (e.g., economy and efficiency) to education, and of suggesting that business and industrial practices be adopted by educators. In 1903, for example, the *Atlantic Monthly* published an article which was devoted to an attack on politics in school administration and which recommended the adoption of a business organizational pattern. After warning educators that “school administration should be economical” and that the “peoples’ money should not be wasted,” the author stated, “The management of school affairs is a large business involving in a city of 100,000 inhabitants an expenditure of probably \$500,000 annually; the same business principles adopted in modern industry should be employed here.”¹⁰ Evidence of business influence appeared again in 1905 at the annual meeting of the National Education Association; a symposium was held on the question “What Are at Present the Most Promising Subjects for Such Investigations as the National Council of Education Should Undertake.”¹¹ Significantly, the first topic was a “Comparison of Modern Business Methods with Educational Methods,” and the first speaker, George H. Martin, secretary of the State Board of Education in Massachusetts, told his audience, “the contrast between modern business methods and the most modern methods in education is so great as to suggest some searching questions. In the comparison, educational processes seem unscientific, crude, and wasteful.”¹²

By 1907 there were indications that aspects of the business ideology had been accepted and were being applied by educators themselves. In that year William C. Bagley, one of the leaders in American education for the next three decades, published a textbook on education entitled *Classroom Management*, which was saturated with business terminology. Bagley stated, for example,

that the problem of classroom management was primarily a “problem of economy: it seeks to determine in what manner the working unit of the school plant may be made to return the largest dividend upon the material investment of time, energy, and money. From this point of view, classroom management may be looked upon as a ‘business’ problem.”¹³ In this book, which was written for teachers in training and which went through more than thirty reprintings between 1907 and 1927, Bagley, in stressing the need for “unquestioned obedience” as the “first rule of efficient service,” said the situation was “entirely analogous to that in any other organization or system — the army, the navy, governmental, great business enterprises (or small business enterprises, for that matter).”¹⁴

The commercial-industrial influence was, of course, not limited to the elementary and secondary school but was felt in higher education as well. Business pressure upon these institutions from 1900 to 1910 was in fact greater than it was on the lower schools, although it appears that the higher institutions were better able to defend themselves and that the extent of business influence on higher education was not as great. Even so, the *Atlantic Monthly* stated in 1910, “our universities are beginning to be run as business colleges. They advertise, they compete with one another, they pretend to give good value to their customers. They desire to increase their trade, they offer social advantages and business openings to their patrons.”¹⁵

¹⁰ William H. Burnham, “Principles of Municipal School Administration,” Vol. XCII, pp. 105-9.

¹¹ The National Council of Education was a division of the National Education Association. Its membership consisted of leaders from all branches of the educational system. Its function was to study educational issues and to make policy recommendations.

¹² N.E.A. *Proceedings* (1905), pp. 320-21.

¹³ *Classroom Management* (New York, 1910), p. 2.

¹⁴ *Ibid.*, pp. 262 and 265-66.

¹⁵ John Jay Chapman, “Learning,” CVI, 134.

Although much of the pressure was applied through the journals and through the appearance of businessmen before educational meetings, it also came very directly through school boards, which were dominated increasingly by businessmen. Before 1900, most city school boards had been large, unwieldy organizations governed to some extent by politics. Gradually they were reorganized along lines which paralleled the municipal reform movement, e.g., in Galveston. This meant not only a reduction in membership (in Boston from twenty-four to five) but, in the spirit of municipal reform, a change in composition over to businessmen who were to run the schools along business lines. Thus the superintendent of schools was hired and fired by and responsible to a small group of businessmen.

All these changes were to have important and far-reaching consequences for the schools and especially for the administrators. The self-image of these men began to change. All through the nineteenth century leading administrators such as Horace Mann, Henry Barnard, and William T. Harris had conceived of themselves as scholars and statesmen and, in professional terms, the equal of the lawyer or the clergyman. After 1900, especially after 1910, they tended to identify themselves with the successful business executive. That this business orientation was a prerequisite for success and tenure on the job was clear, and the schoolmen knew it. As early as 1900, for example, the President of the National Educational Association prophesied that “the real educational leaders of the age whose influence will be permanent are those who have the business capacity to appreciate and comprehend the business problems which are always a part of the educational problem.”¹⁶

Another aspect of the impact of business upon education before 1911, and one that illustrates the nature and strength of that impact on the one side and

the responsiveness of educators on the other, was the effort to make the curriculum of the schools more practical.¹⁷ While the most specific outcomes of this pressure were the establishment of vocational schools and vocational courses in the existing secondary schools and the decline of the classical studies, the utilitarian movement pervaded the entire school system from the elementary schools through the universities. A less tangible but more important corollary of the practical movement was a strong current of anti-intellectualism which, when it was given expression, generally appeared in such phrases as “mere scholastic education” or “mere book learning.”

¹⁶ N.E.A. *Proceedings*, p. 58.

¹⁷ The word “practical” was generally used in its narrow sense to mean immediately useful. When applied by businessmen and often by educators to the work of the school, it meant changing the program to serve the needs of business and industry.

The emphasis upon the practical was of course quite natural to a people who had been engaged in carving a civilization out of a wilderness. Americans, generally tracing their ancestry from the underprivileged of Europe, had little tradition of learning or scholarship, and the opportunity that excited them in the industrial age in their richly endowed new land was economic opportunity — the acquisition of material wealth. When they were fabulously successful (as the great leaders such as Carnegie, Rockefeller, and Vanderbilt were) and reflected upon their pattern of success, they were aware — and through their writing and speaking they made America aware — that the secret of their success was not learning, at least not book learning, but energy, initiative, and, as they would say, good old common sense. These tendencies were reinforced as they reacted against the obvious condescension and even scorn manifested toward them by the educated, cultured group that did exist in America, particularly in New England.

One of the leading critics of the traditional curriculum and one of the strongest proponents of practical education was one of the most influential men in America in the late nineteenth and early twentieth century — Andrew Carnegie. He believed men had been sending their sons to colleges

to waste energies upon obtaining a knowledge of such languages as Greek and Latin, which are of no more practical use to them than Choctaw. . . . They have in no sense received instruction. On the contrary, what they have obtained has served to imbue them with false ideas and to give them a distaste for practical life. I do not wonder that a prejudice has arisen and still exists against such education. In my own experience I can say that I have known few young men intended for business who were not injured by a collegiate education. Had they gone into active work during the years spent at college they would have been better educated men in every true sense of that term. The fire and energy have been stamped out of them, and how to so manage as to live a life of idleness and not a life of usefulness has become the chief question with them. But a new idea of education is now upon us.¹⁸

Carnegie was right about a new idea of education being upon America. The century was little more than a year old when the Governor of Michigan welcomed the delegates to the N.E.A. convention in Detroit by stating that “the demand of the age is for a practical education” and he was glad to note that Michigan educators were “herding all their energies in that direction.”¹⁹ Evidence to support this was quickly supplied by the State Superintendent of Public Instruction in Michigan, who followed the Governor to the rostrum, saying: “The character of our education must change with the oncoming of the years of this highly practical age. We have educated the mind to think and trained the vocal organs to express the thought, and we have forgotten or overlooked the fact that in about four times out of five the practical man expresses his thought by the hand rather than by mere words.”²⁰

¹⁸ Andrew Carnegie, *The Empire of Business* (New York, 1902), pp. 79-81.

¹⁹ N.E.A. *Proceedings* (1901), p. 52.

²⁰ *Ibid.*, p. 55.

Year by year after 1900, the pressure for a more utilitarian education continued. By 1907, school superintendents were being praised by the President of the Commercial National Bank in Chicago for their contribution to America's great material progress. As a guest speaker at their annual convention, he told them this progress was "a result of getting away, to an extent, from the mere scholastic education, and developing the practical side, making the school the place to learn how to manufacture. . . ."²¹ The tempo was increased in 1908 as businessmen appeared before educators at the annual meeting of the National Education Association advising, urging, and warning them to continue to make education more practical. One businessman urged educators to incorporate commercial and industrial subjects in the elementary school since seven out of ten students did not go on to high school. "The best education for this 70 per cent," he said, "is utilitarian first, and cultural afterward."²² He recommended that business English be substituted for composition and that students be taught business principles, contracts, and elementary bookkeeping.

Perhaps the climax of the utilitarian movement occurred in 1909, when the Superintendent of the Illinois Farmer's Institute, speaking before the N.E.A., connected utilitarianism with morality, fired some anti-intellectual salvos, and judged vocational efficiency above citizenship. Education, he said, should direct the desire of youth toward "acquisition by earning." Then he told his audience that

Ordinarily a love of learning is praiseworthy; but when this delight in the pleasures of learning becomes so intense and so absorbing that it diminishes the desire, and the power of earning, it is positively harmful. Education that does not promote the desire and power to do useful things — that's earning — is not worth the getting. Education that stimulates a love for useful activity is not simply desirable; it is in the highest degree ethical. . . . Personally I would rather send out pupils who are lop-sided and useful, than those who are seemingly symmetrical and useless. A man without a vocation is more to be pitied than "the man without a country." . . . And the country of which he is an inhabitant is to be commiserated, too.²³

If educators had any doubts by 1910 of what was expected of them, those doubts should have been resolved at the N.E.A. meetings held in that year. First, the results of a survey which had been conducted by the President of the State Normal School at Peru, Nebraska, were presented to them at one of the general sessions. In an analysis of the responses to a question concerning the greatest weakness in the public high school, the first two answers listed by the surveyor as typical were to the effect that "the work is theoretical, visionary, and impractical."²⁴ Then secondary teachers and administrators were told by one New York high school principal, "My girls want to study the social amenities that make life more pleasant and enjoyable, they want to know more about algebra, more of present-day Italy than of ancient Rome. They want to get in 1910 something they can use in 1911."²⁵ And the head of the mathematics department of another New York high school told his audience that "the most urgent question before the mathematics teachers of today is, What mathematics is practical? All over the country our courses are being attacked and the demand for revision is along the line of fitting the mathematical teaching to the needs of the masses of pupils."²⁶

²¹ N.E.A. *Proceedings* (1907), p. 166.

²² N.E.A. *Proceedings* (1908), p. 888.

²³ N.E.A. *Proceedings* (1909), pp. 492-94.

²⁴ N.E.A. *Proceedings* (1910), p. 104.

²⁵ *Ibid.*, p. 455.

²⁶ *Ibid.*, p. 515.

There were educators — generally high school teachers or principals and college professors — who opposed the extreme emphasis upon the narrowly practical and utilitarian in education. One of these, Thomas J. McCormack, a high school principal from LaSalle, Illinois, told the Department of Secondary Education of the N.E.A. that a deeper meaning for the word “practical” must be sought and he reminded them that in their “inordinate zeal to practicalize and popularize education” they were forgetting that the purpose of education was “to make men and women as well as engineers and ropestretchers.”²⁷ Another principal, from Chicago, Oliver S. Westcott, speaking before the same group a few years later, urged his colleagues to give the “almighty dollar at most but secondary influence in regulating our education curriculum.”²⁸ These were more than voices in the wilderness, for they represented the view of a large segment of American educators, and it was this group (with the help of World War I) that succeeded in fighting off the attempt to fasten the German pattern of vocational education upon American schools. Yet they could not stem the tide of narrow utilitarianism for, as the Superintendent of Schools of New Orleans pointed out, “We are living in a practical, money making age. . . . The big thing today is the reward, the dollar, and it is paid for practice and not for the theory and training behind the practice.”²⁹ What must have represented a typical view of the reconciliation of these men with the realities of American life was presented by a superintendent from Hartford, Connecticut, in 1912. Noting that some educators were concerned about the decline of the classics, he went on to say, “we can also see, however, that the so-called ‘practical sense’ of our people is very strong. The demand for a short, cheap, effective training to meet the demands of the field, shop, conveyance, trade, home, is a real demand. Given a demand, we are disposed in America to meet it.”³⁰

²⁷ N.E.A. *Proceedings* (1910), p. 506.

²⁸ N.E.A. *Proceedings* (1914), p. 451.

²⁹ *Ibid.*, p. 264.

³⁰ N.E.A. *Proceedings* (1912), p. 175.

Along with these demands to make the academic program practical went an intensive campaign to introduce and extend vocational education in the public schools. Although the adoption of the German system with its early differentiation between academic students and vocational students was avoided, the drive for vocational education was quite successful.

On numerous occasions after 1865, businessmen and educators had indicated an interest in developing industrial courses and vocational schools. This interest had been strong enough to be taken into consideration by the Committee of Ten, which had been appointed by the National Education Association in 1892, to study the secondary school program. The committee’s recommendations, while broadening the curriculum from its classical base, did not recognize the importance or the necessity of industrial courses or an industrial curriculum. The need that existed was met partly by importing skilled labor. As American industry became more technical, the need for skilled workmen increased and the existing sources of skilled labor were deemed inadequate. Even so, it is doubtful whether the concern of manufacturers would have been as great if Germany had not emerged as an industrial competitor to the United States.

Beginning in 1905, the tempo of the drive for vocational training increased as businessmen began to express their fear of German industrial

competition. Almost invariably these men attributed the German success to excellent industrial education and attributed our failure to inadequate provision for such schooling. So, they argued, we should adopt Germany's system of industrial education. This argument was presented to American educators at the N.E.A. Convention in 1905 by Frank A. Vanderlip, vice-president of the National City Bank of New York:

In the group of great industrial nations, there has come forward in recent years one that has taken place in the very front rank among industrial competitors. That nation is Germany. . . . I have had a somewhat unusual opportunity to study the underlying causes of the economic success of Germany, and I am firmly convinced that the explanation of that progress can be encompassed in a single word — schoolmaster. He is the great corner-stone of Germany's remarkable commercial and industrial success. From the economic point of view, the school system of Germany stands unparalleled. . . .³¹

In 1907 the same views were presented again and American educators were reminded of the needs and pressures of business and industry by one of their own group, L. D. Harvey, superintendent of schools in Menomonie, Wisconsin:

Manufacturers and men of affairs have noted the marvelous strides Germany has made in recent years in the industrial world, and have studied the reasons and have found them not in the advantages which Germany possesses in raw material, in means of transportation, or in other of the material things which we possess to a degree far in excess of any other country in the world, but in the development of the educational system of Germany on technical and industrial lines, and they are *demanding* a modification of our educational system on similar lines.³²

In 1909 the drive for vocational education reached its peak, and it was discussed in almost every session of the annual meeting of the N.E.A. As one speaker put it, "the program of this association bristles with the topic."³³ In that year, too, educators indicated that they would bow to the pressure when the United States Commissioner of Education told the N.E.A., "there can be no doubt that industrial education is needed to perpetuate the prosperity of our industries. This aspect of the case has been widely discussed and may simply be taken for granted here."³⁴ Even the National Association of Manufacturers was satisfied with the progress that had been made; its Committee on Industrial Education reported in 1909, "Industrial education has taken a firm and lasting hold upon the people of this country, and we are pleased to come before you with the encouraging news that its progress and growth during the past year have been greater than during the year previous."³⁵ The association continued, however, to press schoolmen to establish more trade schools in the years that followed.

³¹ N.E.A. *Proceedings* (1905), pp. 141-44.

³² N.E.A. *Proceedings* (1907), p. 311. (Italics mine.)

³³ N.E.A. *Proceedings* (1909), p. 616.

³⁴ *Ibid.*, p. 288.

³⁵ N.A.M. *Proceedings* (1909), p. 18.

Evidence that the pressure did continue and that it had originated and been maintained primarily by industrialists is provided by an article written in 1913 by William H. Maxwell, superintendent of schools in New York City. In an angry and defiant reaction to unfair criticism and to pressure groups, Maxwell first attacked the "arrogant unreasonableness" of certain educational theorists who periodically made sweeping indictments of the schools and then offered their pet solutions. But nothing, he said, had been as arrogant as the agitation with which the educational world is now seething for the introduction of

industrial or trade teaching in the public schools. That agitation, as every one knows, originated with the manufacturers. They had practically abandoned the apprenticeship system of training workmen. No longer training their own mechanics, they have found it difficult to obtain a sufficient supply of skillful artisans, unless they import them from Europe at great expense. Out of this dilemma the exit was obvious — persuade the State to assume the burden. It was only a new application of Colonel Sellers' definition of patriotism — The old flag and — an appropriation! — let the State do the work that is so oppressive to us. And, as a first step to secure their ends, they and their agents in unmeasured terms denounced the public schools as behind the age, as inefficient, as lacking in public spirit. And why? Because the public schools are not training artisans — are not doing the work that had been done by employers of labor for thousands of years. The arrogance of the manufacturers was two-fold — first, in condemning the schools for not doing what thinking men had never before considered it the duty of the schools to do and what the traditions of thousands of years laid it upon the manufacturers to do; and, second, in demanding that the State, after taxing consumers for fifty years, through a protective tariff, in order to fill the pockets of manufacturers, should then proceed to pay the bills for training their workmen. To condemn a great industry — schoolteaching — for not doing what hitherto it had never been expected to do, and to clamor not only for protection from competition but for relief at the hands of the state from the duty and expense of training artisans — could arrogance farther go?³⁶

Statements like this were rare. For the most part educators and especially school administrators complied with alacrity to the demands for vocational training. The immediate result of this drive was that American education was pushed further into the training of clerks and factory workers and by that much away from the liberal education of free men. It also made school administrators more aware of the power of business in American society, and it served to condition them to the pattern of capitulation which was to become prevalent in educational administration between 1911 and 1925.

Setting the Stage for the Efficiency Expert

At the end of the decade, after years of being subjected to the steadily growing business influence and about the time that the momentum of reform had reached its peak and Americans had become accustomed to a critical view of all their institutions, the schools, especially in the larger cities, were facing problems that would have taxed a professionally excellent, richly endowed educational system. No such system existed, and the schools and teachers available were overwhelmed by the new problems which developed. Some fourteen million immigrants had come to America between 1865 and 1900. After 1900, they came at a rate of about one million a year. The majority of these people remained in the eastern cities, where their children were entered — with increasing frequency because of the improvements in child labor laws and compulsory school attendance legislation — in the public schools. Coming predominantly from the poorest socioeconomic groups in southern and eastern Europe, these uprooted, non-English-speaking children from semiliterate families with diverse cultural backgrounds constituted an educational problem unparalleled in human history.

The physical problems alone were tremendous, for this increased school population meant that thousands of additional classrooms and teachers were needed. Even without the flood of immigration, greater expenditures for education had become necessary because of the normal growth of population and the increasing responsibilities placed upon the schools. Obviously taxes had to be increased to meet even the minimum essentials. Unfortunately, this need for large increases in school funds occurred not only at a time when the country had been roused to a concern for economy and conditioned to suspect that all public institutions were inefficient and wasteful but also in an infla-

tionary period in which the cost of living had risen more than 30 per cent. The result was that hard-pressed educators needing additional funds were forced to deal with a suspicious, economy-minded public wanting to cut costs.

Into this difficult and potentially explosive situation an American educator — not a businessman or muckraking journalist — threw an incendiary bomb in the form of an allegedly scientific study of retardation and elimination, published in 1909, *Laggards in Our Schools*. The author, Leonard Ayres, had collected his data from school records and reports and from statistics collected and published by government agencies. They showed, Ayres said, that the schools were filled with retarded children and that most students dropped out of school before finishing the eighth grade. By retarded children, he meant children who were over-age for their grade regardless of how well they were doing in their work. He claimed that the extent of retardation varied from 7 per cent in Medford, Massachusetts, to 75 per cent for Negro children in Memphis, Tennessee, with the average being about 33 per cent for all pupils in public schools.³⁷ The figures indicated, he said, that “for every child who is making more than normally rapid progress there are from eight to ten children making abnormally slow progress.”³⁸ Although his data showed only that large numbers of children were over-age for their grade without regard for the social or educational reasons, he held the schools responsible, charging that their programs were “fitted not to the slow child or to the average child but to the unusually bright one.”³⁹

³⁶ *Educational Review*, “On a Certain Arrogance in Educational Theorists,” XLVII (February, 1914), 175-76.

³⁷ Leonard Ayres, *Laggards in Our Schools* (New York, 1909), p. 3.

³⁸ *Ibid.*, p. 5.

³⁹ *Ibid.*

Ayres did more than simply report the percentages of “retarded” children in the schools. He was one of the first educators to picture the school as a factory and to apply the business and industrial values and practices in a systematic way. He used the normal year-by-year progress through the schools as a criterion for measuring the relative “efficiency” of a school and he developed a system for presenting this “efficiency” in percentage form. This measure, which he labeled an “Index of Efficiency,” was determined through the following procedure:

1. If we can find out how many children *begin* school each year we can compute how many remain to the final elementary grade. Such a factor would show the relation of the finished product to the raw material.
2. The number of beginners tells us of the number of children who under conditions of maximum theoretical efficiency should be in each grade. Hence we may readily calculate the size of the school system under ideal conditions and compare it with the actual size. Pursuing our industrial analogy still further, this gives us the relation of the actual plant in size to the theoretical requirements. This we may call the economic factor.
3. Comparing not theoretical but actual size with the actual not theoretical product, we reach an index of efficiency which will express both the educational and economic results in combination and give us a means of rating different school systems on the basis of efficiency.

To illustrate, suppose we had a factory which instead of utilizing all its raw material (100 per cent) embodied only 50 per cent in its finished product. It appears that the 50 per cent is the measure of its efficiency. But suppose the plant is not economically organized. Suppose that for a theoretical product of 100 per cent it requires an organization represented by 8000 units, but it actually comprises 9000 units, an organization which may be represented by 9/8 or 112.5 per cent of the standard. What then is its real efficiency? Its plant is 9/8 as large as it should be theoretically. From the viewpoint of plant then, the efficiency is 8/9. But its product is only $\frac{1}{2}$ as large as it should be. From the viewpoint of product then the efficiency is only $\frac{1}{2}$.

Looking at our plant now from the two viewpoints, it is obvious that its efficiency is expressed by the product of these fractions or $\frac{1}{2} \times \frac{8}{9} = \frac{4}{9} = 44.4$ per cent.

Now suppose these conditions are found not in a factory but in a school system. For each 1000 children who enter only 50 per cent reach the eighth grade. The efficiency from the viewpoint of product is $\frac{1}{2}$ or 50 per cent. Moreover, instead of finding 8000 pupils in the eighth grades we find 9000. From the viewpoint of plant, efficiency is $\frac{8}{9}$ or 88.8 per cent. The figure representing the efficiency of the school system is then $\frac{1}{2} \times \frac{8}{9} = \frac{4}{9}$ or, in terms of percentages, 44.4 per cent.⁴⁰

Ayres did more than use this as a hypothetical illustration. He applied it to the school systems of fifty-eight cities, which he named. The schools were rated according to their "efficiency" and then the financial consequences of the inefficiency were presented. It turned out that the most "efficient" school system was spending \$24,033 or 6.5 per cent of its annual budget on repeaters, and the least "efficient" was spending \$120,584 or 30.3 per cent on these students.⁴¹ In preparing these findings, the only evidence Ayres had was the grade and age distribution of the children; he did not have data on when the children had started to school. Thus, if a school had pupils who were eight years old and in the first grade or ten years old and in the second grade, the institution was noted as being inefficient, with the degree of inefficiency depending on the number of such children. But obviously this mechanical analysis did not necessarily indicate academic failure. Non—English-speaking immigrant children regardless of their age had to be placed in a lower grade than their age would ordinarily warrant. The same problem would occur when a family moved from a rural area into a city or from certain areas of the south to the north. There were numerous other reasons which were social and economic in nature and beyond the control of the school, to explain why, in 1907 and 1908, many children were over-age and did not fit into a neat, mechanical age-grade schedule.

That Ayres had an opportunity to make a genuine contribution to the solution of educational problems is evident in his report. Although he ignored or discounted the social and economic conditions which contributed to the complexity of the education problems, he did note the deplorably overcrowded condition of the schools, citing several newspaper comments which indicated that elementary classes of over one hundred children were common. But instead of pointing out that the schools were caught in a vicious circle, with overcrowding causing retardation and retardation contributing to overcrowding, he centered his attention on "the money cost of the repeater" and charged, "It cannot be denied that we are spending money in teaching large numbers of children the same things over again."⁴² This "wasteful process of repetition," he claimed, cost the American taxpayers "about twenty-seven millions of dollars in our cities alone."⁴³ Since this material was written by a prominent educator and presented in a form that gave it the appearance of scientific respectability, it is not surprising that an economy-minded public was critical of its schools and their administrators.⁴⁴

⁴⁰*Ibid.*, pp. 176-77.

⁴¹*Ibid.*, pp. 96-97.

⁴²*Ibid.*, p. 90.

⁴³*Ibid.*, p. 95.

⁴⁴Ayres was especially prominent in education between 1910 and 1916. In 1915 he was appointed to direct the giant survey of the Cleveland public schools. In 1920 he left education to accept an appointment as vice-president of the Cleveland Trust Company. An account of his further activity in studying retardation is presented in chapter vii.

The concern with the money cost of the repeater and the mechanical conception of education manifested in the "index of efficiency" represented ominous warnings to American education. Certainly Ayres' book, together

with the other developments described in this chapter, helped set the stage for the spectacular debut of the efficiency expert on the American scene in the fall of 1910. The dominance of businessmen and the acceptance of business values (especially the concern for efficiency and economy); the creation of a critical, cost-conscious, reform-minded public, led by profit-seeking journals; the alleged mismanagement of all American institutions; the increased cost of living: all these factors created a situation of readiness — readiness for the great preacher of the gospel of efficiency, Frederick W. Taylor, and his disciples. And school administrators, already under constant pressure to make education more practical in order to serve a business society better, were brought under even stronger criticism and forced to demonstrate first, last, and always that they were operating the schools efficiently.

* Scanned from: Raymond E. Callahan, *Education and the Cult of Efficiency*, Chicago: University of Chicago Press, 1962, pp. 1-18.