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The Penetration of Technocratic Logic into the Educational Field: Rationalizing Schooling from the Progressives to the Present

by Jal Mehta — 2013

Context: *No Child Left Behind is only the most recent manifestation of a longstanding American impulse to reform schools through accountability systems created from afar. While research has explored the causes and consequences of No Child Left Behind, this study puts the modern accountability movement in longer historical perspective, seeking to identify broader underlying patterns that shape this approach to reform.*

Purpose and Research Design: *The study explores the question of the short and longer-term causes of the movement to "rationalize" schools by comparing three major movements demanding accountability in American education across the 20th century: the efficiency reforms of the Progressive Era;, the now almost forgotten movement toward accountability in the late 1960s and early 1970s;, and the modern standards and accountability movement, culminating in No Child Left Behind. This paper considers the three movements as cases of school "rationalization" in the Weberian sense, in that each sought to reduce variation and discretion across schools in favor of increasingly formal systems of standardized top-down control.*

Findings: *This impulse to rationalize schools cannot be explained by interest group or partisan explanations since the reformers defy easy ideological categorization. . Instead, the reforms can be understood as a penetration of "technocratic logic" into the educational sphere. In each movement, this process exhibited a similar pattern: (1) the identification of a crisis of quality which destabilized the existing educational status quo; (2) the elevation of a technocratic logic, backed by the knowledge base of a high-high status epistemic community; (3) the rallying of ideologically diverse powerful actors external to the schools behind a commensurating logic that promised control over and improvement of an unwieldy school system; and (4) the inability of education to resist this technocratic logic (and often to be co-opted by it) due to teaching's historical institutionalization as a feminized, weak, bureaucratically-administered field lacking its own set of widely respected countervailing professional standards.*

Conclusions/Implications: *This history suggests that unless teachers are able to develop and organize a stronger field, they will remain at the whim of external actors. It also suggests that top-down accountability-centered approaches are limited if the goal is to consistently produce teaching that can help students engage in higher level academic work. Rather than continuing to pursue these rationalizing strategies, this analysis and emerging international evidence suggest that a more promising approach would be to work towards professionalizing the educational field.*

Educational accountability is not a recent invention. Over the course of the 20th century, there were three major movements demanding accountability in American education: the efficiency reforms of the Progressive Era; the now almost forgotten movement toward accountability in the late 1960s and early 1970s; and the modern standards and accountability movement, culminating in No Child Left Behind. This paper considers the three movements as cases of school "rationalization" in the Weberian sense in that each sought to reduce variation and discretion across schools in favor of increasingly formal systems of standardized top-down control. The impulse to rationalize schools cannot be explained by interest groups or partisan cycles, as those that have purveyed the reforms defy easy ideological categorization.

This paper offers an alternative explanation, rooted in the penetration of a "technocratic logic" into the educational sphere. In this view, education is a weak professional field, susceptible to declarations of crisis that undermine the ability of its professional stewards to retain control over its ends and means. At three different times in the nation's history, ideas of scientific management from other fields, particularly business, have penetrated the educational sphere and shaped leading reform movements. The following analysis breaks this process into four stages: the sources of the educational crises; the reasons behind the importing of technocratic logics from other fields; how such technocratic logics attracted an array of influential political backers; and, finally, the inability of educators to resist these external logics. The combination of the nation's longstanding regard for business methods and values, the seemingly perpetual "crisis of quality" in schooling, and the weak organization of the teaching profession has repeatedly resulted in the insertion of external logics that promise to rationalize the educational field.

The implication of this analysis is that while we often analyze school reform in terms of the effectiveness of particular programs, in a broader view it may be that the organization of the entire sector is problematic. From this perspective, the choice to organize teaching into a bureaucratically-administered hierarchy, in which the teachers' role is to implement programs created by others, rather than as a profession in which members of the field take responsibility for assuring a common standard of quality practice, has had enduring consequences. It has made the principal-agent logic that characterizes accountability regimes seem repeatedly alluring, despite the well-known limitations of this approach (Cohen & Moffitt, 2009; Elmore, 2004; Pressman & Wildavsky, 1973). And it has left educators vulnerable to outsiders seeking to rationalize the field, even though the latter's methods are often unable

to produce improved outcomes. Emerging international evidence suggests that nations that outpace the United States have stronger professions and emphasize professional rather than hierarchical accountability (Tucker & Schleicher, 2010). This model could be a promising path toward large-scale improvement in the United States.

THREE ERAS OF RATIONALIZING SCHOOLING

In the Progressive Era, a group of reformers comprised mostly of businessmen, city elites, and university professors sought to shift power from large, local ward boards that they saw as parochial and unprofessional to smaller boards controlled by professional elites. They empowered the superintendent as the "CEO" of the school system and directed him to use the latest scientific methods and modern management techniques to measure outcomes and ensure efficient use of resources to produce the greatest possible bang for the buck. The newly emerging science of testing was used widely to ensure that teachers and schools were up to standard and to sort students into appropriate tracks, with the aim of "efficiently" matching students with the curriculum appropriate to their ability.

In the late 1960s and early 1970s, a second accountability movement took hold of American schooling, this time at the state level. It sought both to realize a civil rights agenda—improve the quality of schooling for all—and to address conservative concerns—spending public dollars efficiently. Between 1963 and 1974 no fewer than 73 laws were passed to create standards or to utilize scientific management techniques to improve schooling. Frequently overlooked by educational historians in favor of more prominent movements focused on desegregation and open schooling, the template that developed largely under the radar in the late 1960s and early 1970s prefigured the modern movement towards school accountability.

Given this backdrop, the current standards and accountability movement is in fact the third such movement of the 20th century. Launched initially by the famous *A Nation at Risk* report in 1983, a standards movement swept the states in the 1980s and 1990s before becoming part of federal law in the 1994 and 2001 reauthorizations of the Elementary and Secondary Education Act (the 2001 reauthorization became known as No Child Left Behind). As we will see, many of the objections to NCLB—there is too much testing; testing narrows the curriculum; the law unfairly holds schools accountable for events outside their control—are almost exact replays of the criticisms of accountability movements earlier in the century.

These three movements (1900–1920; 1963–1974; and 1983–present) share certain features of organizational rationalization.[1] In the name of efficiency, all three movements sought to reduce variation among schools in favor of greater centralized standardization and control, a hallmark of the rationalizing process. In each of the cases, power shifted upwards, away from teachers and schools, and towards centralized administrators.[2] Similar conceptions of motivation underlay the three sets of reforms, each using some version of standards and testing to incentivize teachers to do the bidding of higher-ups. Each of the movements prized quantitative data, elevating a scientific vision of data-driven improvement over a more humanistic view of educational purposes. Despite the differences in time periods, the essence of the rationalizing vision has remained remarkably unchanged.

There are at least two ways to think about these repeated bouts of rationalizing reforms. One is as three distinct episodes, each of which had its own precipitating events, lead actors, and key ideas. The question from this perspective is whether there are similar patterns across these episodes or similar sets of factors that precipitate or sustain them. A second way is to see the three as part of an unbroken trajectory. Then the question becomes less about what prompts each of them and more about whether something makes American school reform continuously incline toward external accountability-centered approaches. I take up both questions below.

THE USUAL SUSPECTS: INTEREST GROUPS, PARTISAN CYCLES, AND VALUE CONFLICTS

The repeated effort to impose accountability on schools is not easily explained by conventional theories. Consider interest group explanations. Looking across the cases, a bewildering array of actors has been important in championing the reforms: good government reformers and schools of education in the Progressive Era; state departments of education, state legislators, and taxpayers groups in the 1960s/1970s reforms; and presidents, governors, state and federal legislators, foundations, business groups, and civil rights groups in the most recent round of reforms. Business groups, which might be the most natural suspect given the character of the reforms, played a secondary role to governors in the contemporary movement (see Mehta, 2006 for details), and were not a central factor in the 1960s reforms. Schools of education, which were critical champions of the Progressive Era reforms, have been critics of the most recent accountability movement. In short, while various powerbrokers have been involved in each of the reforms, no group has repeatedly been the champion of school accountability efforts.

There also have not been clear partisan patterns in movements for school accountability. Tyack and Cuban (1995, p. 45) note that, in contrast to other countries, in the United States "at any one time Democratic and Republican parties have not differed very much in their views of education even if they had quite different policies in other domains." This pattern seems to apply to accountability policies as well: in each era members of both parties were supportive of the reforms, if not always for the same reasons. In the Progressive Era, Republicans and Democrats alike urged that control of schools be put in the hands of centralized professional administrators. In both the 1960s/1970s and the recent movement, liberals have supported accountability as a mechanism for improving school quality for high poverty students, while conservatives have been attracted by its ability to monitor the spending of public dollars.[3] In part because of this bipartisan support, accountability and standards have been able to flourish, regardless of which party was in power, most recently in the championing of standards first by President Clinton and then by

George W. Bush. In each era, the key question is not which party advocated the reforms, but how politicians of both parties came to see accountability as the promised path to school improvement.

Tyack and Cuban (1995) offer a third view of the reasons for cycles of policy talk. Their view is that these cycles are

> An inevitable result of conflict of values and interests built into a democratic system of school governance and reflecting changing climates of public opinion. People are constantly criticizing and trying to improve public education. From time to time, worries about society and schooling so accumulate that widespread educational reform ensues. (p. 41)

This view, while plausible, is at such a high level of generality that it is almost not falsifiable. Perhaps that is unavoidable when trying to offer a workable theory to encompass all of the pendulum swings in American education. When considering a more specific set of reforms, such as the recurring interest in testing and accountability, one can proffer a more specific theory.

AN ALTERNATIVE VIEW: THE POWER OF IDEAS AND THE WEAKNESS OF THE EDUCATIONAL FIELD

The limits of the approaches discussed above suggest a need for a different explanation. The argument that follows advances a cultural approach that draws upon two literatures—one in political science and one in sociology—to develop an argument about how and why rationalizing schools has been repeatedly alluring.

From political science, the argument draws on the literature on the power of ideas or paradigms in the policy process (Beland & Hacker, 2004; Berman, 1998; Campbell, 2002; Davies, 1999, 2002; Hall, 1989, 1993; Mehta, 2010). This literature has emphasized the ways in which how a problem is defined (Rochefort & Cobb, 1994) are critical to understanding how the politics of an issue play out. In other work, I have argued that "paradigms can shape politics" (Mehta, forthcoming; see also Baumgartner & Jones, 1993), meaning that once a problem is defined, it has the power to shape a policy domain, shaping *what* solutions are seen as desirable and *who* participates in the subsequent debate. Ideas are particularly well suited to explaining change (or in this case, multiple episodes of change) because different views of a problem are constantly in the air, and when one achieves particular salience, it can rapidly spark a series of interrelated developments, leading to significant change in a relatively short period of time.

Important to this ideational approach is the way in which successful ideas resonate with the broader cultural context in which they are placed (Ferree et al., 2002). In the case of the logic of managerial accountability, reformers have benefitted from the association with leading business methods and more generally with the high regard for business in American life (Hofstadter, 1963). The two more successful movements—in the Progressive period and from 1980 to the present—have not coincidentally corresponded with two moments in American history in which business was venerated.

From sociology, the argument builds on the literature about fields and professions. Pierre Bourdieu (Bourdieu & Wacquant, 1992) has conceptualized society as a series of fields, with each seeking to develop and extend its logic into other fields. Similarly, Andrew Abbott's (1988) work has seen professions as competing with one another for jurisdictional control. This work builds on those traditions and seeks to link them more directly to politics, suggesting that the way in which a field institutionalizes directly affects its social, cultural, and political power, and thus the degree of respect it garners from other actors. If the power of ideas helps to explain bursts of activity in educational reform, the failed professionalization of teaching explains the continuity in the nature of what is proposed and the recurring inability of educators to resist external reforms.

With these perspectives as background, an examination of the data suggests that across eras, movements to impose school accountability exhibit a remarkably similar process by which a "technocratic logic" comes to penetrate the educational field. The penetration is achieved in four stages: (1) the declaration of a crisis of quality which destabilizes the existing educational status quo; (2) the elevation of a "technocratic" institutional logic, backed by the knowledge base of a high status epistemic community that resonates with the broader climate of the times; (3) the rallying of ideologically diverse powerful actors external to the schools behind a commensurating logic that promises control over and improvement to an unwieldy school system; and (4) the inability of the education field to resist this technocratic logic (and often to be co-opted by it), due to its historical institutionalization as a feminized, weak, bureaucratically-administered, semi-professional field lacking its own widely respected, countervailing professional standards. The ideas' and professions' lenses are connected: the way the educational field has been structured—as a public bureaucracy controlling a weak profession—has made rationalization from above seem repeatedly attractive.

By technocratic logic, I mean technical theories of how to make systems function more efficiently. Technocratic solutions differ from political solutions, which emphasize the inherent trade-offs in different policy choices. While in some sense all policies are political, technocratic solutions promise improved performance through gains in efficiency, effectively masking the need for distributive trade-offs. Technocratic solutions also differ from domain-specific approaches (in this case, education-specific approaches) in that their logic does not draw on knowledge from the sector but rather applies general principles of management to whichever sector may be under consideration. For example, ideas about how to teach reading that are grounded in research on reading or notions of how to run a discussion that are based on the properties of good discussion are approaches that are grounded in field-specific knowledge and practice rather than a broader technocratic logic.

From this viewpoint, what is at stake in the struggle over school accountability is the autonomy of the educational field from experts in other fields who seek to import a logic of data-driven organizational rationalization (the technocratic logic) into the

educational sphere (on logics see Friedland & Alford, 1991). Below I consider questions of why this technocratic logic has been so popular, but also why the educational sphere has been largely unable to resist it. This failure, I argue, relates to the weak way that the profession was historically institutionalized.

The penetration of a logic into a field raises a different set of considerations from the jurisdictional competition perspective originated by Abbott (1988). In jurisdictional competition, two sets of claimants are seeking to do the work of a sector of human activity, such as the competition between psychiatrists and psychologists or between shamans and doctors. In contrast, when the case concerns the penetration of an external logic into a field, there is no prospect that the practitioners in the field will suddenly be replaced en masse by outsiders. What is at stake is subtler but no less significant: that the standards of the field and the activities within it will gradually be transformed into a metric that is foreign to the internal standards or practice of the field (MacIntyre, 1981).

CYCLICAL PATTERNS: CRISIS IDENTIFIED, EXTERNAL LOGIC PROMISES A SOLUTION, POLITICAL ACTORS RALLY IN SUPPORT, TEACHERS UNABLE TO RESIST

THE PROGRESSIVE ERA: CREATING THE FOUNDATION FOR RATIONALIZATION

The first accountability movement came in the Progressive Era. Muckraking journalists framed the problem and provided the impetus for action. The initial spark came from Joseph Mayer Rice's exposé of school practices in 1892. Rice, a doctor by training, traveled to schools in 36 cities over the course of six months, and published a nine-part series in *The Forum* criticizing the dullness of recitation as a method of learning and the failure of superintendents to introduce more effective pedagogical methods to the classroom. Rice reserved much of his outrage for teachers, describing them as incompetents who had gained their positions through patronage. To these criticisms he added a comparative research method that sought to explain why third-grade reading and math were taught more effectively in some schools than in others. In the two decades that followed, many of the themes that Rice had initially championed were repeated by other muckrakers, and the idea that the schools were inefficient and corrupt was widely repeated in the low-price popular magazines, whose combined circulation by 1905 was 5.5 million.[4]

In education reform, as in other fields, the muckrakers played a critical role in spurring action. Richard Hofstadter has argued that, "to an extraordinary degree the work of the Progressive movement rested upon its journalism."[5] For example, in the legislative fight over centralization in New York, a senator cited Rice's indictment of the school system to demonstrate that the results "were far below the standard in other cities; that the methods employed in the classroom were nothing short of 'dehumanizing'; that the whole system was not only antiquated but actually pernicious."[6] Reformers also used other critiques of schools to their advantage, such as Leonard Ayres' study of "retardation" in the schools[7] and the dismaying results of army IQ tests.[8] David Tyack's work on centralizing education reforms in four cities reaches the following conclusions about the patterns of reform:

> Like reforms in public health, city government, or police and welfare work, urban educational reform followed a familiar pattern of muckrakers' exposure of suffering, corruption, or inefficiency; the formation of alliances of leading citizens and professional experts who proposed structural innovations; and a subsequent campaign for 'non-political' and rational reorganization of services.[9]

With the problem defined as inefficiency and variation in performance, it was not surprising that Taylorism appeared as an attractive solution. The Taylor system of industrial management hit the public eye in 1910, with a promise to increase efficiency, raise profits, and eliminate waste through a careful accounting of the costs and productivity of the various components of the production process. Perhaps the most famous manifestation of the efficiency movement were time-motion studies, which sought to capture in minute detail the differences between more and less effective workers, and to use these findings to boost productivity.

Applied to the school system, scientific management meant an increased focus on cost accounting, empowering superintendents to use their discretion to increase the productivity of teachers and the system as a whole, and using measurement and testing to compare, improve, and standardize practice across districts. One prominent strand of accountability, then as now, was its focus on financial *account*ing. This took the familiar form of demands for improved record-keeping, but it also took more novel forms, such as the system proposed by Newton (Massachusetts) superintendent Frank Spaulding and Chicago professor John Franklin Bobbitt to calculate the costs that school districts were incurring per subject per hour. Spaulding claimed, for example, that he didn't know whether music was more valuable than Greek, but he knew that Greek cost more than music and was therefore a less efficient use of resources.[10] Bobbitt conducted a survey of 25 high schools in seven states and used the data to specify the range of costs appropriate for a given subject; he excoriated the schools that fell above that range and hence were wasting valuable taxpayer money.

It was a short step from financial accounting to arguing (exactly as is argued today) that schools needed to be held accountable for the results they produced. The answer, as laid out by Bobbitt, was an adaptation of the Taylor system that looked much like what we call today standards-based reform. The first stage was setting standards externally to the school itself. Standards would serve both as a goal against which success could be measured and as a way of motivating schools to higher levels of performance. A second stage was measuring whether the students had achieved the standards. This could be accomplished through testing (standardized mathematics tests and handwriting scales were particularly popular standardized tests in use at the time), or simply

through accurate accounting, such as counting the number of mathematical calculations that an eighth-grader could complete in a minute with a given level of accuracy. In Bobbitt's view, with goals clarified and a system of measurement in place, the teacher could know "whether she is a good teacher, a medium teacher, or a poor teacher," and supervisors would have "incontestable evidence of inefficiency against the weak teacher who cannot or refuses to improve."[11]

The recommendations of Bobbitt and Edward Cubberley, a Stanford education professor who was another prominent advocate of reform at the time, were widely adopted, particularly in the large cities. National Education Association meetings, the primary gathering point for educators at the time, increasingly focused on discussions of efficiency in education, with titles like "By What Standards or Tests Shall the Efficiency of a School or System of Schools Be Measured?" By March 1913, the *American School Board Journal* reported that teacher rating scales were used "almost without exception" in large cities. Edward Thorndike of Columbia's Teachers College devised standard tests to evaluate students' achievement in reading, math, spelling, handwriting, and other school subjects, and in 1921 educational sociologist Ross Finney reported that, "at the present time scales and tests are used in all but unprogressive schools everywhere." As of 1916, Cubberley reported that efficiency bureaus, which coordinated teacher and student testing, had been established in Boston, New York, New Orleans, Detroit, Kansas City, Rochester, and Oakland; by 1934 about 60 of the larger systems had adopted the school research bureaus.[12]

The political success of the efficiency movement rested in part on its consistency with prevailing cultural assumptions. In the years between 1910 and the Great Depression, when the status of business was at perhaps an all-time high, the scientific efficiency models were spread widely through popular newspapers and magazines, and were applied to everything from farms to families to churches.[13] Science and efficiency seemed to provide a way to instill order in a period of rapid change spurred by massive industrialization and immigration. As Herbert Kliebard has written, "Of the varied and sometimes frenetic responses to industrialism and to the consequent transformation of American social institutions, there was one that emerged clearly dominant both as a social ideal and as an educational doctrine. It was social efficiency, that, for most people, held out the promise of social stability in the face of cries for massive social change, and that doctrine claimed the now potent backing of science in order to ensure it."[14]

Such a climate heavily tilted the playing field in favor of the reformers, creating the politics needed to move and sustain the accountability movement. On one side was an elite comprised of "good government" reformers, foundations, business elites, university presidents, and professors of education, who sought to take a localized and highly varied system of schooling and transform it into what Tyack (1974) famously called "the one best system." These "administrative progressives" sought to wrest control away from a ward-based system of local politics that seemed to reformers to be resistant to newly developing models of scientific management and efficiency. The reformers sought to concentrate administrative power in the superintendent, a figure akin to the chief executive officer of a business, and oversight power in a small, ostensibly "non-political" school board, largely comprised of themselves or other men of similar class background. In these aims they were quite successful. The average size of school boards in large cities was reduced from an average of 21.5 in 1893, to 10.2 in 1914, and then to a median of 7 by 1923. Both case studies and larger-scale investigations suggest that school boards after centralization were largely composed of business and professional men.[15]

The reformers faced significant opposition on both political and intellectual grounds. In their goals of "removing schools from politics" and centralizing authority in city elites, not surprisingly they faced opposition from the local wards, which were losing power in the centralizing wars. The divisions between city elites and community locals often mirrored divides between classes and between WASPs and immigrant Catholics; the less powerful groups in these disputes were not impressed by the claims of the "professionals" to be removing school administration from politics. As the battles raged, city by city, to consolidate school boards in the hands of business and political elites, opposition from teachers, labor unions, and other local constituencies was significant and sometimes victorious.[16]

The desire of reformers, particularly school boards and superintendents, to standardize, measure, and direct the work of teachers and students through systems of testing and accountability also received political and intellectual criticism. Teachers, for reasons both self-interested and philosophical, resented their loss of autonomy, the influence of outsiders in criticizing and rating their work, and the imposition of a factory model onto the process of learning. Centralizing movements were one impetus for early teacher organizing in Chicago and elsewhere.[17] The *American Teacher,* the official journal of the American Federation of Teachers, printed the following message on its front page in March 1916: "If efficiency means the demoralization of the school system; dollars saved and human materials squandered; discontent, drudgery and disillusion—we'll have none of it!" As one articulate teacher opposing the reforms put it in a 1912 issue of *American Teacher*, the efficiency reforms represented the commercialization of education:

> We have yielded to the arrogance of 'big business men' and have accepted their criteria of efficiency at their own valuation, without question. We have consented to measure the results of educational efforts in terms of price and product—the terms that prevail in the factory and the department store. But education, since it deals in the first place with organisms, and in the second place with individualities, is not analogous to a standardizable manufacturing process. Education must measure its efficiency not in terms of so many promotions per dollars of expenditure, nor even in terms of so many student-hours per dollar of salary; it must measure its efficiency in terms of increased humanism, increased power to do, increased power to appreciate.[18]

However, then as now, ultimately the reformers were victorious, for reasons consistent with the idea-centered theory laid out above. The muckrakers' framing of the crisis as one of inefficiency and lack of standardization in process and outcome paved the road for Taylorism. Taylorism was attractive because it emanated from a higher-status field, sought to standardize a lower status one, and was consistent with the broader cultural regard for business methods and values. This framing of the problem brought in a wide variety of powerful allies within cities, who sought to empower superintendents to be the educational equivalents of captains of industry. Resistance thus was limited to the non-professional class and to teachers; they were ultimately no match for the reformers, who had greater political power and a solution consistent with the framing of the problem. Later accountability movements would both mirror many of these patterns and build upon the district-level pattern of rationalization created by the Progressive Era reformers.

THE 1960S AND 1970S: THE NASCENT STATE ACCOUNTABILITY MOVEMENT; THE BRIDGE TO THE PRESENT

A second accountability movement emerged four decades later. Reform was again precipitated by mounting criticism of schools. Two strands were prominent: one focused on whether schools were performing basic functions; the other on whether schools were meeting their responsibilities to poor and minority children. Bestsellers like Arthur Bestor's *Educational Wastelands: The Retreat from Learning in our Public Schools* (1953) and Rudolph Flesch's *Why Johnny Can't Read* (1955) bemoaned the excesses of pedagogically progressive education and urged a return to basics like phonics and standards. The launching of Sputnik in 1958 appeared to validate these critics and led almost immediately to an increased emphasis on math and science education. Meanwhile, civil rights advocates, beginning with *Brown v. Board of Education* and continuing through the civil rights movements of the 1960s, were pointing to the ways that schools had traditionally not served minority students. The passage of the Elementary and Secondary Education Act in 1965 began to address some of these concerns and also prompted legislators such as Robert Kennedy to ask whether the new programs were going to achieve the results they intended.[19]

Further focusing attention on the discrepancy between programs and results was the release of the "Coleman report" in 1966. Commissioned by the U.S. Office of Education in accordance with the Civil Rights Act of 1964, the study was expected to show that differences in the resources available to minority students would explain the differences in outcomes between them and more advantaged students. Instead, the report found that differences in outcomes were more attributable to differences in family background and peer composition than to school resources per se. The study has been called the "most significant educational study of the 20th century"[20]; its impact on policy thinking continues to be felt to the present day. The significance of the report, as James Coleman himself noted in an essay five years after its release, is that it "has had its major impact in shifting policy attention from its traditional focus on comparison of inputs (the traditional measure of school quality used by school administrators . . .) to a focus on output, and the effectiveness of inputs for bringing about change in output."[21] The accountability movement that would emerge in the years that followed took this disjuncture as its raison d'être, seeking to ensure that school spending would efficiently lead to better outputs. While the crisis in the Progressive Era was identified by muckraking journalists, in the 1960s it was the publication of a social scientific report that focused attention on the gap between inputs and outputs.

With this production-function frame set, a technocratic logic emerged again, this time from the Department of Defense. The Defense Department had initially pioneered many of the techniques that would come to be associated with rationalizing education. Building on the district-level accountability movements created in the Progressive Era, the goal this time around was to extend the reach to the state level by developing statewide goals, assessments, and accountability systems. A review of the literature in 1974 found that the educational accountability movement had generated more than *4,000* books and articles on the subject, many of them "how to" works on ways to introduce management techniques into education.[22] At least 73 state laws seeking to create educational accountability were passed. An analysis of these laws suggests that they featured the following techniques of scientific management: planning, programming budgeting systems (PPBS), management-by-objectives (MBO), operations analysis, systems analysis, zero-based budgeting, and program evaluation and review technique (PERT), among many others.[23] Generally speaking, the aim was to identify learning objectives, to collect data on the fulfillment of these objectives, to evaluate the role that each part of the system was playing in achieving the objectives, and to both exert pressure on schools and to reallocate funding in the hope of producing better results. The U.S. Office of Education Associate Commissioner Leon Lessinger, who was perhaps the most well-known proponent of educational accountability in the early 1970s, outlined the rationale for accountability in terms highly reminiscent of Taylorism: "Once we have standardized, reliable data on the cost of producing a variety of educational results . . . our legislators and school officials will at last be able to draw up budgets based on facts instead of on vague assertions. Through knowledge gained in the process of management, we will also be able to hold the schools accountable for results."[24]

Like Bobbitt before him, Lessinger also saw in industry a model for reform. He writes, "in business we judge the effectiveness of a firm by its profit, by investment return, and by other financial indicators. In a non-profit agency such as a school, we judge its effectiveness according to the benefits experienced by its clients (or in the case of education, its students)." Resisting claims that professional knowledge or expertise should insulate educators from the judgment of outsiders, Lessinger asserts that professionals are judged by one standard—results: "Ultimately there is only one test of professional competence: proof of results. For example, if an attorney loses as many cases as he wins, he will soon have none but the most ignorant impecunious clients. Neither special education nor experience by itself validates his claim to special wisdom." Channeling Bobbitt and Spaulding, Lessinger advocated a measure that would allow managers to evaluate the costs of educating a student per year per subject: "For example we do not

know what the average cost of increasing a youngster's reading ability by one year is; all we know is what it costs to keep him for one year with a textbook and a teacher . . . It would make much more sense if we moved from the concept of per-pupil cost to the concept of *learning-unit cost*, and focused on the cost of skill acquisition rather the cost of maintaining children in schools."[25]

This model of change shared Taylorist assumptions of schools as primarily organizational entities that could be engineered for higher productivity. Thomas James, an astute critic of the 1960/1970s accountability reforms, wrote in 1968 that a "new cult of efficiency" was emerging, paralleling the Progressive Era reforms. James highlighted the role of efficiency experts at the Defense department, and then argued that a "newer priesthood of economists and political scientists" had "joined the engineers in advising government about improving schools. . . . The models they use are, like those of engineers, adapted from among those long used to describe physical, mathematical, and mechanical relationships."[26]

Again the opposition to the reforms came from teachers and humanistic educators. Teachers argued that accountability measures would unfairly evaluate them for outcomes only partially under their control, and that an emphasis on testing would narrow the curriculum and undermine important educational goals. A *New York Times* article published in 1974, "Accountability Plan Angers Teachers, With Many Foreseeing Threat to Jobs," quoted a range of teacher objections to accountability plans. A teacher union representative in Ohio argued that unless certain conditions were met, "we don't have enough control over the situation to be held accountable for the final product." The NEA commissioned a study that denounced a Michigan accountability program as "ill-conceived" and "counter-productive." Meanwhile, Del Gardner, a teacher in Bakersfield, California, said that an accountability program in his district had gotten "the teachers . . . so involved with testing . . . that they had little time for anything else. It was a misuse of testing and a misunderstanding of what accountability is all about."[27]

While teachers rebelled against the impact of testing on their daily lives, some educators were more concerned with the effect of accountability programs on the nature of education as a whole. In an essay titled "Accountability from a Humanist's Point of View," C.A. Bowers of the University of Oregon warned that accountability movements played to populist views and risked that schools, rather than fostering students' abilities to think critically, would simply respond to the most powerful segment of the public. In terms very similar to the 1912 critique of Taylorism, Bowers argued:

> I suspect that another reason the advocates of accountability have not talked about education as an intellectual experience is that they have committed themselves to a quantitative system of measurement. There is some usefulness in knowing the rate at which a person can perform a skill. But I am not sure that we can measure objectively and quantitatively what students learn in the social sciences and humanities unless they are rendered lifeless by being reduced to names, dates, and places. . . . Educational measurement encourages teachers to offer a simplistic view of life, conditions students to look for the right or wrong answer without doing the hard work of thinking and wrestling with ambiguities, and allows the educator to maintain the illusion that he is conducting his enterprise on a scientific basis.[28]

What differentiates the second movement from the earlier and later ones is that it was only partially successful. States did pass laws to create assessments and thousands of books and articles were written about educational accountability, but the outcome was not the remaking of schools and systems evident in the Progressive Era and the present. The most detailed evidence on this state standards movement comes from a series of reports by the Educational Testing Service and a consortium called the Cooperative Accountability Project.[29] The picture that emerges is of an early phase of a standards-based package. As of 1973, there were 42 state testing programs in 33 states, but most tested only in one or two grades.[30] A section of one of these reports titled "what's happening with educational accountability" found that states had consistently completed the early, more informational steps of the accountability model (developing objectives, conducting a needs assessment), but had not moved to the later, more contentious aspects of the model (making consequential decisions on the basis of measured results). The activities in the states corresponded to this division: 38 states determined desired outcomes and 44 states conducted a needs assessment, but no state fully implemented a model that moved all the way to using data for consequential decision-making.[31]

Why was this movement less successful than the one that preceded it and the one that followed? Consistent with the explanation developed above, in this case the precipitating crisis and proposed solution were not able to mobilize a sufficient array of political backers to move the agenda. While governors, legislators, and courts were consumed by highly visible fights over divisive issues like desegregation and community control, the standards movement was mostly a project of good government officials within state departments of education. In this period, the movement toward standards and, particularly, accountability was delimited by the inability of proponents, in E.E. Schattschneider's term, to *widen the conflict* and create significant political momentum behind the proposed reforms.[32] Survey evidence reflects that State Departments of Education initiated 29 of the state programs; the legislature initiated only five; and in eight states there was a combined effort with multiple actors, often including the State Department of Education. The funding for these programs came largely from the federal government or jointly from the federal and state governments, and only rarely from the state governments.[33] It is perhaps not surprising that state accountability systems, largely initiated by State Departments of Education and paid for by the federal government, were unable to gain more traction, as they frequently had neither political nor financial support from the states that in theory were sponsoring them. While teachers unions consistently opposed these reforms and put considerable resources into defeating them, no similarly powerful group spoke up in their favor.[34]

It is also worth noting that the "climate of the times" in the late 1960s was not as favorable to accountability logics as the

Progressive period or the more recent one. Notions of free schooling and even deschooling were at their height, ideas that were the antithesis of the "ordered" schooling that standards and accountability proponents envisioned. At the same time, movements to desegregate schools or to give communities greater control over them generated much greater political passion during this period than staid visions of more efficiently administered schooling.

Overall, the contours of the second accountability movement resemble the earlier and later ones in a number of key respects: a crisis that defines the problem as a need to improve the relationship between inputs and outputs; proponents who argue that data, quantification, and objectivity could create standardization across an unwieldy school system; and critics who argue that the measurable is crowding out the meaningful and that managerial systems from above are likely to alienate those actually doing the work in schools. The one major difference between this movement and the ones that came earlier and later is that it was not the most powerful reform movement in its own time. It was clearly overshadowed by explosive nation-wide battles over desegregation and community control. As such, it never achieved the broad and deep political momentum needed to more fully implement an accountability model. But it did create a series of assessments and a policy template that would be used and revived when standards-based reform gained political momentum in the 1980s and 1990s. It served as a bridge between the district-level rationalization of the Progressive Era and the modern state and federal accountability movement.

1980S TO THE PRESENT: COMPLETING THE RATIONALIZATION OF AMERICAN SCHOOLING

The third and final school accountability movement began in the 1980s and has continued to the present. It too was launched by a well-known report questioning the quality of American schooling. In this case, a report of the National Commission on Educational Excellence, *A Nation at Risk,* famously declared the American school system a "rising tide of mediocrity" that imperiled the nation's economic future. In support of its case, the report cited a variety of academic indicators, most notably high levels of illiteracy, poor performance on international comparisons, and a steady decline in SAT scores from 1963 to 1980. Quoting analyst Paul Copperman, the report claimed that this would be the first time in the history of the country that the educational skills of one generation would not be equal to those of their parents. Contrasting this declining educational picture with the centrality of skills and human capital in the knowledge-based post-industrial economy, the report linked the future of the nation's international economic competitiveness to the reform of its educational system (National Commission on Educational Excellence, 1983).

It is difficult to overstate the impact of *A Nation at Risk*. The U.S. Government Printing Office received more than 400 requests for copies in a single hour the following day and distributed more than six million copies over the course of the next year. The press interest was insatiable: *The Washington Post* published almost two articles per week on *A Nation at Risk* in the year following the report's release.[35] More than 250 state commissions (an average of 5 per state!) were created to analyze state education policies and to make recommendations for action.

Looking back two decades later, a series of essays assessing the report's impact suggested that it stimulated the movements for standards-based reform at both state and federal levels in the 20 years that followed its publication (Gordon, 2003; Mehta, 2006). By polemically documenting the failings of American schooling and linking this crisis of educational quality to economic concerns, *A Nation at Risk* both stimulated action and defined the educational problem as centrally an economic one.

The key to this impact was that *A Nation at Risk* generated a powerful and multi-faceted constituency for change. By framing the problem as an urgent economic one, it raised the salience of education for governors, state legislators, and business groups, each of which became much more involved in the educational arena. While the policy proposals on standards were a virtual replay of what had been suggested during the late 1960s, the politics this time were entirely different, as a much more powerful constituency was now backing the movement.

For liberals, school accountability promises standardization in the sense of greater equity—the hope is to diminish the variation in school quality across poorer and richer areas. Data, particularly disaggregated data, will shed light on the failings of schools to serve minority students; this information, it is hoped, will lead to a greater infusion of resources and/or improved practice. At the same time, while advancing equity, school accountability is a technocratic solution that does not fundamentally upset the geographic distribution of advantage; timid politicians can take small steps towards equity without fundamentally threatening advantaged suburban constituents.[36]

For conservatives, the promise is less in standardizing practice and more in imposing accountability. Conservatives repeatedly stress the importance of accountability in ensuring that the school system delivers commensurate to the money invested in it. Particularly in recent years, the growth of teachers unions and their support for the Democratic Party have enhanced conservative desires to hold the educational establishment, or "blob," accountable for results. In this respect, conservative support for accountability is in part a response to the growing power of teachers as a political force. Some conservatives have also seen accountability as a way for Republicans to "issue trespass" on an issue that has traditionally been in the Democratic column.[37]

Civil rights advocates and business groups have also been unlikely allies in the most recent round of standards-based reform. While not all civil rights groups have supported the initiatives, others have viewed the reforms as a way to make schools, particularly those that house poor and minority students, respond to external policies which have had little impact on their practice. For example, the Citizens Commission on Civil Rights released a report that sharply criticized the lack of implementation of the 1994 ESEA. Arguing that states were subverting the law's intention, the Commission noted: "Many states and local officials have

received the impression that the new Title I is largely a deregulation law that will free them from bothersome federal conditions, and have failed to understand that the trade-off in the law is higher standards and accountability for results."[38] Business groups, for their part, have also advocated for standards through the Business Roundtable, with the rationale that economic competitiveness is largely built by more highly skilled workers. While business groups and civil rights groups usually lie on opposite sides of the partisan divide, both have supported standards and accountability as a mechanism to get schools to educate students to higher skill levels.

The support from powerful constituencies has created a landslide of political support for standards and accountability in recent decades. Forty-two states had embraced standards before they became a part of federal law through the Elementary and Secondary Education Act in 1994. No Child Left Behind passed with overwhelming support from both House and Senate in 2001. Everyone from Bill Clinton and Edward Kennedy on the left to George W. Bush and John Boehner on the right has at one time been a strong champion of standards and accountability. The cleavages have been less partisan and more institutional, arraying not left against right, but rather those seeking to create systemic change from the center against those in the field trying to resist it.

But where did standards-based reform come from? Yet again, those who sought to reform education turned to an external field for an approach to rationalization, this time drawing on management theorists. In this round, no fewer than three different sets of ideas vied for control.

The first vision drew on management theorists who, ironically, were trying to move away from the command and control structures created during Taylor's age. The work of the management theorists, including Edward Deming, Peter Drucker, and *Reinventing Government* gurus David Osborne and Ted Gabler (1992), argued that the large bureaucracies formed in the industrial age were anachronistic in a rapidly moving, consumer-driven, information-age economy. Granting greater power to frontline workers would allow them to respond more quickly to changing circumstances since they have more information about local conditions. Furthermore, giving workers greater authority would improve morale, generate feelings of ownership, increase commitment, and raise productivity. In terms of education reform, the theory implies that schools should be governed by a structure that is "tight on ends and loose on means": government would hold schools accountable for producing results but would leave them free to devise the means. In 1986, the National Governors Association produced *Time for Results*, a document that embraced this "horse trade" and which many continue to see as the governing principle of the standards movement (Carnegie, 1986).

The second vision was authored by Mike Smith and Jennifer O'Day, and it aimed to rationalize the entire system but for professional purposes. Smith and O'Day (1991) were wary of the idea that schools, if given freedom to innovate, would produce needed change at scale. Instead, they proposed to organize the entire system around standards: standards would define what students would learn, what teachers should be able to do, how teacher preparation institutes should aim their efforts, and how professional development initiatives should be oriented. Smith and O'Day, respectively a professor and a graduate student at Stanford, were sympathetic to professional models of reform—they wanted teachers to teach using the most advanced methods available in the field—but they also shared the systematizing instincts of the Taylorists to use standards to create standardization of practice across the nation's many schools.

The third vision is the one that has prevailed in No Child Left Behind. If the Smith and O'Day vision was one of collective professional responsibility, the alternative view emphasized lay accountability. From this perspective, the problem is less in what teachers do not know and more in the lack of incentives motivating them to act. Prominent conservative Chester Finn laid out this view in his 1991 book titled, not coincidentally, *We Must Take Charge*. Finn emphasized that the primary problem of the system was that incentives were not designed around results. He quoted favorably a line by then Secretary of Education Lamar Alexander: "Teaching is the only profession in which you are not paid one extra cent for being good at your job." Painting with a broad brush, Finn argued that schools are like other public-sector enterprises—slow, inefficient, and focused on not rocking the boat rather than on creating innovative practice.[39] Underlying this range of arguments is a view of human nature which holds that people are basically motivated by external incentives: "When it comes to academic learning, I believe that external consequences are the main determinant of how hard most of us work and how much we accomplish."[40] In this view, using data to enforce accountability to the public is the key to system improvement.

All three of these visions have made some inroads in the years between 1986 and the present, and the standards and accountability movement has drawn support from people who believe in each of them. But No Child Left Behind represents the triumph of the third view, the one closest to original Taylorist precepts. The rate of improvement expected in No Child Left Behind reflects legislators' impatience with the failings of educators, and the system of escalating consequences for failing schools is consistent with the motivational view of lay accountability. The requirement for annual testing has led to the use of multiple-choice, off-the-shelf tests, contrary to the hopes of those like Smith and O'Day that more complex assessments could spur more advanced methods of teaching.

The triumph of the lay accountability view is perhaps not surprising when viewed within the broader political climate of the times. The post-Reagan period has been characterized by high levels of skepticism about governmental efficiency and renewed emphasis on ensuring that every public dollar is well spent. In such a climate, lay accountability is consistent with the conservative will to hold public sector employees accountable; the position is also attractive to middle-of-the-road Democrats, who seek to shed the "tax and spend label" and demonstrate their populist bona fides by ensuring that government employees deliver the return that the public expects. In a period which featured declining trust in government and rising neoliberalism, it is not surprising that

efforts to rationalize schools and hold them accountable to the lay public have found multiple political champions.

As in the two earlier periods, opposition to the lay view of accountability has come from teachers and schools. They have yet again argued that quantification elevates the measurable over the meaningful, that schools share with society responsibility for student outcomes, and that the expected rates of progress are not realistic. But from 1983 to the present, these objections have been largely sidelined, as central actors have pushed to rationalize the system from the top. Only when faced with the prospect that 70% or more of schools would be designated as failing under NCLB has the Obama administration finally begun to change course by offering waivers to states, allowing them to opt out of No Child Left Behind. No Child Left Behind completed the rationalization of schooling nationwide, but it has proven unable to achieve the results its proponents (from the Progressives to the present) promised.

AN IMPORTANT UNDERLYING STRUCTURAL REALITY: THE ORGANIZATION OF EDUCATION AS A BUREAUCRATIC HIERARCHY RATHER THAN A DOMAIN OF PROFESSIONAL CONTROL

If the pattern of each of these movements is one of ideas sparking a political drive for external accountability, there are also underlying structural realities that can help us to understand why similar ideas have been repeatedly alluring. Among these elements are: (1) a decentralized system within a weak welfare state and a highly unequal social geography which produces widely varying student outcomes, which, in turn, supports calls for greater standardization; (2) a widespread political timidity that seeks to avoid divisive questions of distributive justice and sees technocratic solutions as a politically easier path to improving student outcomes; and (3) the organization of education not as a field under professional control but rather as a bureaucratically-administered hierarchy, a model conducive to the principal-agent claims that are the essence of school accountability regimes. Since the first two points have been extensively covered in the literature, I focus here on the last point, the way in which the profession was organized. [41]

School teaching, like the similarly feminized semi-professions of nursing and social work, never developed the characteristics that defined the more traditional professions (Etzioni, 1969; Lortie, 1975). Primary and secondary school teaching in the United States does not possess the characteristics that are common in more fully professionalized fields: lengthy training, social closure over who can enter its ranks, or a pedagogical knowledge base that is widely respected by the public. Initially a career option primarily for women before they had children, teaching in the Progressive Era was incorporated within a bureaucratic-management model in which teachers reported directly to administrators and established little professional control of their own. While loose coupling (Meyer & Rowan, 1977; Weick, 1976) preserved some professional autonomy at the classroom level, teachers have not taken collective control of their practice and remain institutionalized within a hierarchical bureaucracy. Teaching, as a field that was almost exclusively public, was also under the thumb of the state from the start, which further weakened its ability to assert independent professional power (Krause, 1996; Light, 1995). In contrast to stronger professions that came to take control of their own affairs, education has been uniquely vulnerable to administrator-led rationalization.

At the same time, it is possible to imagine ways in which teaching could have been organized as a stronger profession. However, historical factors, especially the circumstances of its organizational imprinting (Stinchcombe, 1965), led to the weak institutionalization of American teaching. As previously discussed, one set of actors was a cadre of elites in the Progressive Era who believed in a Taylorist model of management and was able to transform a diffuse set of one-room schoolhouses into a “one best system” of bureaucratic efficiency under the thumb of a CEO-like superintendent (Tyack, 1974). But another set of actors was also important (and influenced many of Tyack’s lay reformers): university departments of education and the models of educational administration they propagated.

At the turn of the century, the field of education was just emerging as a university subject, usually housed as a sub-discipline within the philosophy department. Faculty in many top-flight universities considered the study of education not worthy of the title of either art or science. They were particularly skeptical that the largely female-dominated field of teaching was worthy of the professional training accorded to the male-dominated fields of law, medicine and engineering.[42]

Given this climate, deans and department chairs of education like Edward Cubberley (at Stanford), James Earl Russell (at Columbia), and Hubbard Judd (at Chicago) shifted the study of education away from a diffuse humanistic focus towards a more practical and specialized focus on educational administration, with training grounded in emerging findings from science. At Teachers College, Russell became

> one of the foremost advocates for a professional science of education. He believed that professional knowledge could enhance teaching, an improvement which would, in turn, foster a more generous attitude toward education among both academics and the public at large.[43]

The training of administrators provided an opportunity for education departments to produce a new class of male professionals whose role was widely being discussed as equivalent to that of a CEO. This role allowed education departments to see their field as more on a par with professions like medicine, law and engineering, and to eliminate the stigma that came with training a largely feminized profession. As Cubberley described it in his classic textbook, *Public School Administration*:

> School supervision represents a new profession, and one which in time will play a very important part in the development

> of American life. In pecuniary, social, professional and personal rewards it ranks with the other learned professions, while the call for city school superintendents of the right type is today greater than the call for lawyers, doctors or ministers. The opportunities offered in this new profession to men of strong character, broad sympathies, high purposes, fine culture, courage, exact training and executive skills . . . are today not excelled in any of the professions, learned or otherwise.[44]

Cubberley continued by suggesting that superintendents should be expected to complete college and one year of graduate school, and many should continue to the Ph.D., while teachers needed only a high school education and a two-year training program. For a university discipline seeking to gain its footing, developing a science of school administration that required extensive training, overseen by a largely male administrative corps, provided a way for education departments and schools to claim greater equivalence with higher status fields like medicine and law.[45]

In choosing this direction, education schools embraced a hierarchical and differentiated model of research, administration, and implementation that provided much of the template for the accountability movement. A largely quantitative and statistical research program would be carried out by scientists in the university, who would convey it to highly trained school administrators, who would implement it, with teachers as the final link in the chain, operating at the bottom of the totem pole. As testing expert Edward Thorndike encapsulated this hierarchical approach in his 1906 text *The Principles of Teaching*: "It is the problem of the higher authorities of the schools to decide what the school shall try to achieve and to arrange plans for schools' work which will attain the desired ends. Having decided what changes are to be made they entrust to the teachers the work of making them."[46] It is not surprising that, with this template in mind, what emerged was a program of scientific efficiency that allowed superintendents to supervise, evaluate, and compare the work of different teachers and schools, with the goal of using comparative data and research to establish best practices for improving performance and the efficiency of administration.

John Dewey provided an alternative model for organizing schooling and research, but the rejection of his approach reveals the strength of countervailing institutional imperatives. In Dewey's famous laboratory school, the school itself served as a primary locus for research. In his view, there was no need to partition the roles of researcher and teacher; instead he argued that both were interested in the same subject: improving learning. Rather than have "one expert dictating educational methods and subject-matter to a body of passive, recipient teachers," Dewey advocated "the adoption of intellectual initiative, discussion, and decision throughout the entire school corps." But while his ideas were widely discussed, Dewey's model of research as a function shared between researchers and schoolteachers was rejected by university education departments, which were seeking to elevate themselves precisely by distancing themselves from teachers. As Ellen Lagemann puts it:

> His position was very much at odds with the hierarchy then developing among educational institutions, a hierarchy in which mostly male university scholars of education would generate the knowledge needed by mostly male school administrators, who would, in turn, be responsible for dictating and supervising the instructional methods to be used by teachers in schools, especially the mostly female teachers involved at the elementary levels.[47]

This hierarchical structure has remained in place in the years since and has left teachers with little collective ability to respond to movements seeking to impose principles of rationalization. Although there have been similar initiatives directed at higher education, those have proven much weaker. Higher education developed a guild-like structure, which enabled faculty to retain considerable collective control over their core professional activities (for a detailed discussion, see Mehta, 2012).[48] In contrast, in K-12 education, teachers responded to their lack of power by following an industrial union model, which, while improving their pay and working conditions and strengthening their political power, actually reaffirmed the distinction between labor and management that principal-agent style accountability rests upon. Efforts by teacher union leaders like Albert Shanker, Bob Chase, Adam Urbanski, and others to move away from a hierarchical model and give teachers more responsibility for their practice have been unsuccessful in significantly changing the overall structure. Administrators have been largely unwilling to yield power, and teachers have been reluctant to move away from the industrial union model with the protections it affords (see Mehta, 2006 for more details).

Given education's institutional structure, public school administrators, for their part, have been carriers of external technocratic logics, occupying middle management positions between teachers and schools and the politicians who oversee them. Today in particular, districts are awash in management positions like chief accountability officers, whose central function is to develop rationalizing logics. While accountability movements do not pose the jurisdictional competition that Abbott (1988) chronicles, they do represent something potentially just as significant: the widespread embrace of an external technocratic logic by many of the most powerful people in the profession.

If resistance and capitulation are the two most visible responses to technocratic logic, there is also a third option which some leaders of the profession have sought to pursue. These leaders have their own critique of the failings of the educational field—that precisely because it was not institutionalized into a stronger profession it has weak norms of collective practice to guide school improvement. These leaders share the desire of the Taylorists to institute "systemic reform" (Smith and O'Day, 1991), but they are much more committed to using professional knowledge about teaching and learning as a guide for change. Correspondingly, their diagnosis of the problem focuses less on the need to motivate teachers to work harder for improvement, and more on the need to increase their knowledge and skills as the key to progress in schooling (Elmore, 2004). In essence, there are two seemingly similar, but in fact highly divergent, views of "standards" as the key to reform: the currently prevailing "hard" version, which emphasizes

the need for competition, seeks to hold professionals accountable to the public, and exerts pressure to change a moribund public system; and a "softer" view, which emphasizes the need for professional collaboration, wants the public to gain enough confidence in the field to defer to professional knowledge, and sees increasing the knowledge and skill of practitioners as the key to successful reform. The outcome of this struggle will be the difference between, on the one hand, the penetration of the education field once again by an external technocratic logic, and, on the other, the leaders of the field effectively using the external desire for system-wide change to help professionalize the field.[49]

DISCUSSION AND CONCLUSION

The most recent standards and accountability movement is actually the third movement of its type in the 20th century. While the context of these accountability movements has gradually shifted upward from local to state to federal intervention, in their ethos and theory of action they share characteristics similar to the process of rationalization that Weber presciently identified.

The recurrent instinct to rationalize schools is not easily explained by partisan or interest group theories. A wide range of different actors has supported the reforms, including liberals and conservatives, civil rights advocates and business groups, state departments of education and university departments of education. There is no single set of initiating actors important in all three cases. Business groups, which one might imagine would be lead actors, have taken a back seat to political actors in the most recent reforms, and were not involved in the 1960s movement. Other theories that emphasize that value conflicts among the public might lead to the cycling of reforms are plausible but vague: they do not offer a specific explanation for the recurrence of accountability-centered movements.

The penchant for rationalizing schools is better understood as a process by which a technocratic logic comes to penetrate the educational sphere. Looking across the cases, we see a recurring pattern: schools are declared to be in crisis by an authoritative source; a high status epistemic community offers a solution premised on what it claims are scientifically validated premises of management practice; a wide variety of actors external to the schools supports such a logic as a way to control schools and create greater standardization from the outside; objections from teachers, who resent accountability and see aspects of their professional autonomy being compromised, do not prevail because of the low status and weak institutionalization of a feminized profession. Despite major differences in the three movements under study, these patterns remain remarkably consistent across periods.

The theory outlined above can explain the distinctive political cleavages created during episodes of accountability-centered reform. There is no one recurring lead proponent of the reforms because technocratic logic appeals to a wide variety of external actors for different reasons. Liberals see in it a way to create greater equalization of schools across a highly decentralized landscape. Conservatives see in it a way to assure that public dollars are being spent efficiently, and to motivate a recalcitrant sector to reform. The cleavages of rationalizing movements are less left vs. right than top versus bottom, or outsiders versus insiders. The commensurating logic of measurement-driven change unites those who are outside of schools and seek to change them against teachers who are being held to account.

While business *groups* have not been the lead actors in each round of reforms, business *logic* is common across the cases. Higher status epistemic communities, often tied to industry or using ideas derived from industry, have repeatedly overwhelmed a weakly institutionalized professional field. Particularly in the Progressive Era and the present, these ideas from the business community have resonated widely with policymakers and the broader public. The education sector has proven no match for these higher status epistemic communities, and many educators, particularly administrators, have implemented logics imported from other sectors. While educational accountability has previously been discussed largely in terms of equity, issues of professional jurisdiction are also at stake.

One obvious question is why these movements have needed to recur, given that each was fairly successful in accomplishing its aims. The most straightforward answer is that they have taken place at different institutional levels: the Progressive Period created an early system of standards, tests, and accountability at the district level; the reformers of the late 1960s and early 1970s sought to extend these efforts to create state standard-based reform; and then the reformers from the 1980s to the present created a much more robust system of state-level accountability, which in turn provided the foundation for federal reform through No Child Left Behind. It is less that the previous movements were defeated and more that the newer movements sought to build upon and supersede earlier ones by extending the reach of school accountability movements at higher levels.

It is worth noting that while rationalizing reforms have been recurrently popular throughout the United States over the past century, there is no iron law of school rationalization, and other approaches have also gained favor. At different times, school accountability approaches have had to compete with movements for desegregation, community control, and a variety of market-based strategies, among many others. Despite the claims of reformers that standards would commensurate all of the important goals of schooling, there have been periods in which the state-centered scientific management approach has not been at the top of the agenda, as shifts in values have prioritized other approaches to improve schooling (Labaree, 1997). The most recent decision of the Obama administration to let states apply for waivers that would allow them to opt out of key provisions of No Child Left Behind may indicate that the current emphasis on state and federal school accountability is finally beginning to run its course. At the same time, the growing momentum behind Common Core standards may presage yet another round of external standards-driven change.

Teaching needs to strengthen its professional core if it does not want to be repeatedly vulnerable both to external movements for accountability and the infusion of external technocratic logics. The recent tendency to appoint people with little to no education experience to run major school systems is only the most current manifestation of a century-long pattern. Whether fair or not, unless educators develop the characteristics associated with more developed professions—a robust knowledge base, a method of selecting, training, and licensing that produces skilled practitioners, and ongoing standards for monitoring practice—American education will remain at the whim of external actors and logics seeking to control the field.

Professionalizing teaching could also change the relationship between schools and policymakers. Schools and teachers are weak actors, as this essay has emphasized, with respect to *policy decisions* about school accountability in part because they lack the collective credibility that comes with a stronger profession. But they have had considerable impact in the *implementation* of school accountability. As other studies have suggested, when the aims of policymakers outstrip the capacity of local actors to realize them, those actors have a variety of ways of using their power as street-level bureaucrats to resist, dilute, game, become overwhelmed by, or otherwise subvert policymakers aspirations (Booher-Jennings 2005; Elmore, 2004). One aspiration of a more professionalized system is that policymakers and schools would not see one another as enemies; they would work collaboratively to enable teachers rather than developing policies that provoke active resistance from the very people who are expected to implement them.

Such an approach is also needed because the literature on implementation suggests that the task of teaching and the organization of school systems are fundamentally impervious to top-down rationalization, especially if the goal is to teach to high-level skills.[50] American schools are famously organized into loosely coupled systems (Weick, 1976), and classrooms, especially good classrooms, are staffed by able teachers who can successfully navigate and manage the literally hundreds of decisions that need to be made over the course of even a single class (Huberman, 1993). For these reasons, efforts to rationalize teaching from above have repeatedly not achieved what its proponents have promised. As in many fields with complex work, a professional approach that focuses on developing usable knowledge, strengthening training, providing clinical opportunities for learning, and then relying on the established skill of practitioners is in the long run the more promising approach (Mehta, Gomez, & Bryk, 2012).

What is particularly complicated here is that while a technical analysis of the needs of teaching suggests the need for a more professional approach, the political winds over the past 30 to 40 years have been shifting against the notion of professional control. Scholars of the professions have noted that the highpoint of guild power of the major professions was the mid-1960s; market critiques and populist attacks have weakened its hold in the years since (Krause, 1996). The challenge for K-12 education in this environment is to draw upon the virtues of professionalism—developing expert knowledge in their fields, working within a normative code, and holding all practitioners to the standards of the field—while at the same time navigating political waters that are increasingly skeptical of the whole notion of professional control.

Emerging international evidence suggests that a more professional approach would not only increase teacher autonomy but also improve student outcomes. While this research is only in its early stages, initial conclusions indicate that professionalizing teaching is an important next step in improving outcomes. As OECD PISA Director Andreas Schleicher and Marc Tucker summarize lessons from a comparative analysis of the PISA:

> The education development progression is characterized by a movement from relatively low teacher quality to relatively high teacher quality; from a focus on low-level basic skills to a focus on high-level skills and creativity; from Tayloristic forms of work organization to professional forms of work organization; from primary accountability to superiors to primary accountability to one's professional colleagues, parents and the public; and from a belief that only some students can and need to achieve high learning standards to a conviction that all students need to meet such high standards.[51]

Policy in the United States has made this shift with respect to its ends—all students need to achieve to high levels—but its means are still grounded in trying to tighten the screws on a Progressive-era Taylorist bureaucracy. If the goal in the long run is not simply to hold schools accountable but to enable them to consistently produce at higher levels of practice, the United States will need to move away from its recurring emphasis on scientific methods of control from above and embrace the more professional path characteristic of top-performing nations.

Notes

1. Some commentators have seen the latter two movements as part of one long move toward educational accountability that began in the 1960s. In one sense, this is true— the state standards movement of the late 1960s and early 1970s led to the minimum competency testing movement in the later 1970s, which in turn led to a more developed state standards movement in the 1980s. However, as documented below, the state standards efforts in the 1960s and early 1970s were only marginally successful at building a needed political constituency, and by the end of the 1970s there was little enthusiasm for large-scale school reform at the state and particularly federal levels, especially among Republicans. *A Nation at Risk* then launched a third round of school reform that built on some of the *policy* templates created in the 1960s, but this time with a much wider set of *political* backers. Given that the purpose of this article is to understand how educational accountability movements are launched, it makes sense to treat the two more recent cases as separate episodes since each had its own history, set of initiating events, and set of actors. The latter movement was also much more successful than the former.
2. In the Progressive period, the main shift was from one-room schoolhouses to urban systems.
3. Obviously, there were minority elements within both parties that resisted accountability movements. In the recent round, the

most notable critics within the parties have been states-rights conservatives (who see in accountability unwarranted expansion of state and federal power), libertarian conservatives (who see it as unwanted bureaucracy), and some liberals (who see it as overly focused on testing to the neglect of resources or other supports that would improve the lives of high poverty students). For more details on these political cleavages, see Mehta (2006).
4. Callahan (1962, p. 3).
5. Hofstadter (1955, p. 185).
6. Tyack (1974, p. 151).
7. In his 1909 book, *Laggards in Our Schools, Leonard Ayres* contended that schools were squandering resources by having students, particularly immigrant and minority students, repeat grades and eventually drop out. Ayres classified students as "retarded" if they were over age for their grade level, and constructed an "index of efficiency" that measured how effectively schools were moving their students along and how much money was being wasted on repeaters. While in the 19th century holding children back had been seen as a sign of high standards, in the new context of an expanded student population and limited resources, it was seen as a waste of valuable tax dollars.
8. Giordano (2005, p. 55).
9. Tyack (1974, p. 128).
10. Callahan (1962, p. 159). Although later scholars have heavily scrutinized Callahan's arguments on the connections between business methods and school administration, his basic conclusions have emerged largely unscathed (Eaton, 1990).
11. John Franklin Bobbitt, quoted in Callahan (1962, p. 82).
12. Callahan (1962) on the 1916 data; for the 1934 data see Resnick (1980).
13. Callahan (1962, p. 43). See Porter (1995) for examples of how cost-benefit thinking has been applied across a variety of (non-economic) dimensions.
14. Kliebard (1995, p. 76)
15. Tyack (1974, p. 127).
16. Tyack (1974, pp. 147-167).
17. Murphy (1990, pp. 23-45). While in this piece I emphasize the desire for order and standardization as the impetus for reformers' and teachers' under-professionalization as the reason for their inability to resist, it is also possible to see the Progressive Era efficiency movements as a struggle for control between increasingly powerful superintendents and newly organized teachers. In this reading, even if the initial impetus for rationalization was the muckraking by Rice and others, the ongoing struggle is one in which administrative authority seeks to expand to resist intensifying efforts at teacher control. I thank a manuscript reviewer for suggesting this alternative interpretation.
18. Callahan (1962, p. 121).
19. Kennedy is quoted from the transcript of the hearing on the ESEA, Senate Education Subcommittee, 89th Congress. Quotation is accessed online at: http://drcookie.blogspot.com/2008/06/robert-f-kennedy-at-1965-hearings-about.html.
20. Barbara J. Kiavat, "The Social Side of Schooling," *Johns Hopkins Magazine,* April 2001.
21. Coleman (1972, pp. 149-150).
22. Browder (1975, p. 1).
23. Wise (1979, p. 12). Also see Wise (1979) for definitions of these various terms.
24. Lessinger (1970, p. 10).
25. Lessinger (1970, p. 11).
26. James (1976/1968, pp. 40-41).
27. Gene I. Maeroff, "Accountability Plan Angers Teachers, With Many Foreseeing Threat to Jobs," *New York Times*, July 6, 1974, p. 20.
28. Bowers (1972, p. 29).
29. See Educational Testing Service (1973), Hawthorne (1974), and Hawke et al. (1975).
30. Educational Testing Service (1973).
31. Hawke et al. (1975, p. 27).
32. Schattschneider (1960).
33. Hawke et al. (1975).
34. Murphy and Cohen (1974).
35. Guthrie and Springer (2004, p. 12).
36. McGuinn (2006).
37. Of course, some states rights conservatives have opposed testing for its role in expanding federal power, and some libertarian conservatives have seen it as expanding bureaucracy in place of needed markets. For more details on these schisms, see Mehta (2006).
38. Citizens' Commission on Civil Rights (1998, p. 2).
39. Finn (1991, pp. 47-149).
40. Finn (1991, p. 125).
41. On the ways in which decentralization has both inspired and frustrated efforts for greater centrally driven standardization of outcomes, see Cohen and Moffitt (2009). On the ways in which policymakers use technocratic logics to avoid discussions of distributive justice, see Orfield and Yun (1999) and Kozol (2005).
42. As Harvard President Charles Eliot said, speaking for the Harvard faculty, "The faculty in common with most teachers in England and the United States feel but slight interest or confidence in what is usually called pedagogy." Similar attitudes were found at Stanford, where the Department of Education survived only due to its support from Stanford President David Starr Jordan; Jordan told Cubberley upon his arrival in 1898 that, if the decision had been left to the faculty, the department would have been abolished entirely At Columbia, President Seth Low was able to persuade the trustees to bring Teachers College within the

umbrella of the university, but, as Dean of Teachers College James Earl Russell put it, not "as a professional school on par with the others . . . [but] as the stepchild of the University Department of Philosophy and Education." (Lagemann 2000, p. 63).
43. Lagemann (2000, p. 64).
44. Callahan (1962, p. 218).
45. As Joncich and Guthrie (1988, p. 100) aptly sum it up: "Male teachers who stayed too long in the classroom—in the regular company of women and children—might even raise doubt about their manliness and, therefore, their suitability for dealing with the local power brokers on school boards and in chambers of commerce. Were these the men to save school administration and educational research careers from the threats of feminization, the men able to deal with businessmen and civic leaders in the hurly-burly world of *realpolitik*? Clearly not. Instead, graduate students in education must be drawn early from their classrooms or recruited from among the graduating seniors of high status colleges."
46. Thorndike as quoted in Lagemann (2000, p. 60).
47. Lagemann (2000, p. 51).
48. While American higher education has had comparatively greater professional power, the claim is not that higher education is always a beacon of professional power nor that it is impervious to state rationalization. The growth of adjunct faculty has significantly eroded the traditional power conferred by faculty governance in American higher education. The inroads of accountability movements into state universities in England reveal that states can intrude even into strong professional domains. The claim here is simply that, all else being equal, state efforts to impose accountability will be weaker when the profession that contests them is stronger. This is consistent with the framework offered by Krause (1996), who sees a tripartite division between states, markets, and professions, and suggests that which is more powerful in a given place and time is dependent upon specific historical factors.
49. See also Holmes Group (1986); Carnegie (1986).
50. I think this is one way to read one aspect of the Cohen and Moffitt (2009) argument.
51. Tucker and Schleicher (2010, p. 231).

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