PROFESSIONALISM AND PUBLIC SERVICE: THE TAYLOR/BRANDEIS ALLIANCE OF 1910

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INTRODUCTION

The association between Louis Dembitz Brandeis and Frederick Winslow Taylor was sealed on November 21, 1910; on that day Brandeis announced to the Interstate Commerce Commission, a cadre of railroad executives, and their bewildered counsel that judicious use of scientific management would result in "an economy of a million dollars a day." Confident of his bold assertion he then added: "that estimate is, if anything, an underestimate instead of an overestimate." The claim originated with Harrington Emerson, "high priest of efficiency," and Brandeis's star witness in the Eastern Rate Case. He was one of eleven efficiency experts Brandeis called to testify concerning the successful application of scientific management to metal shops, publishing houses, furniture factories, and railroads. Notably absent from the parade of authorities was Taylor, the father of scientific management. He declined to appear before the Commission, he wrote in a letter to James Mapes Dodge (a manufacturer and efficiency enthusiast), because he knew so little about railroad shops that he would "injure, rather than help the cause" and because he had prior commitments. Several days later he commented that the evidence Brandeis would present to the ICC "on the subject of efficiency will be so indefinite and vague that it will not be pos-

sible to seriously influence the present freight rate controversy." Taylor's initial reluctance gave way to enthusiastic support once news of Brandeis's daring claim reached the public; indeed, the efficiency craze precipitated by the Rate Case formed the wave that lifted Taylor from obscurity into the public eye.[1]

Although Brandeis had not originally planned to challenge the railroads on the grounds of efficiency, the executives he cross-examined failed to demonstrate a knowledge of their costs to his satisfaction. Recalling a paper of Taylor's that he had come across some years earlier, Brandeis sought his advice. The two met at Taylor's estate in Philadelphia in early October of 1910 where Brandeis endured Taylor's standard two-hour lecture on what at that time was called simply the Taylor System.[2] Taylor introduced Brandeis to James M. Dodge, Horace K. Hathaway, Frank Gilbreth, and other efficiency enthusiasts who would testify before the ICC. Later that same month a small group of these engineers met with Brandeis--although Taylor himself was not in attendance--at the New York apartment of Henry L. Gantt, a Taylor disciple, to plan their strategy for the Rate Case; from that meeting emerged the phrase "scientific management," which had been used only informally by Taylor prior to the Rate Case.[3] "Following the popularity given to this phrase at the rate

hearings," his biographer notes, "Taylor himself made bold to use it formally; but it can be said that he continued to cherish a certain distaste for it, and this because he feared not merely that it had a pretentious sound, but that its connotations would seem academic to most people."[4]

Brandeis also influenced Taylor's decision to publish his only popular work, The Principles of Scientific Management.[5] With the sensation caused by the Rate Case, the public demanded more information on scientific management; several magazine editors approached Taylor hoping that he would write something for their publications. In January of 1910 Taylor had submitted the first draft of Principles to the Meetings Committee of the American Society of Mechanical Engineers for review; the Committee delayed its decision, much to Taylor's dismay. The delay resulted from a long-standing disagreement between Taylor and the more conservative members of the society. During his presidency of the ASME in 1906 Taylor and his assistant, Morris Llewellyn Cooke, attempted a variety of administrative reforms that would have allowed younger engineers greater participation in the society's activities; Taylor promoted "a new, more objective kind of engineering professionalism," one that emphasized commitment to the public good and social responsibility rather

than the demands of one's employers. The more conservative members--advocates of less participation by younger members and a more limited view of the social role of the engineer--reasserted control over the society after Taylor's term expired. They centered power in committees headed by engineers unfriendly to Taylor's vision of engineering professionalism.[6]

In October Taylor wanted an answer: "the officers of the Society well know that I am personally extremely anxious to have this matter presented to the membership of our Society. This, as they will realize, for no possible commercial reason, but merely for a personal or sentimental one." When the magazine editors appeared requesting an article, Taylor notified the Meetings Committee hoping that public enthusiasm would pressure them into accepting his paper. When the Committee stood firm, Taylor withdrew his paper.[7]

Meanwhile, Brandeis had directed Ray Stannard Baker of The American Magazine to Taylor regarding the possibility of publishing an article on scientific management. Taylor finally had to decide between the The American Magazine and The Atlantic Monthly. He chose Baker's publication, and Principles was serialized in the spring of 1911. Two factors influenced Taylor's choice: first, he observed, The Atlantic Monthly was read mainly

by "professors and literary men," whereas the readership of The American Magazine consisted "largely of those who are actually doing the practical work of the world." Second,

> I am very considerably influenced by the opinion I have formed of the editors who have been here to talk over the subject; and of these Ray Stannard Baker was by far the most thorough and enthusiastic in his analysis of the whole subject. He looked at all sides in a way which no other editor dreamed of doing. He even got next to the workingmen and talked to them at great length on the subject. I cannot but feel, also, that the audience which reads the work of men of his type must be an intelligent and earnest audience.
>
> Mr. _____, who has just been here, suggested that among a certain class of people the American Magazine [sic] is looked upon as a muck-raking magazine. I think that any magazine which opposed the 'stand-patters' and was not under the control of the moneyed powers of the United States would now be classed among the muckrakers. This, therefore, has no very great weight with me.

This is a striking quotation, both because it suggests that Brandeis helped shape Baker's approach to Taylor and because it gives the impression that Taylor knowingly played an active role in the "progressive" project of "muck-raking" journalists and the people's lawyer.[8]

While it appears as though they assisted each other during the Rate Case, their relationship seems to have been rather tenuous. This only makes sense in light of their distinctive historical legacies. Brandeis is remembered as the people's lawyer, a crusader for social justice, fighting against the predations of oversized corporations. Although current wisdom has often portrayed him either as an ideologue or a simpleton, few doubt his sincere desire to help the people--whomever they may have been. Taylor, by contrast, is cast in a somewhat darker light. His work helped no one but businessmen. Taylorism stands as merely another form of management control over the work place, causing de-skilling and unemployment. Taylor himself appears as a compulsive systematizer who referred to men as oxen or gorillas and fought to kill the unions: a social Darwinist with a stopwatch.[9]

This curious relationship between Brandeis and Taylor occurred at a time when the growth of big business called forth new strategies of professional adaptation. This paper suggests that the key to understanding the

Taylor/Brandeis alliance of 1910--both the similarities in their approaches to big business and the tenuousness of their agreement--lies in their attempt to elaborate inherited professional philosophies in light of the changing markets for their services. A concern for power and independence--the entrepreneurial dimensions of their work--underlay their professional aspirations. By 1910, they had translated those aspirations into ideological terms that portrayed the professional environment generated by big business as unjust and a threat to liberty. This translation process reveals that although professionalization united Taylor and Brandeis, the nature of the strategies they developed to cope with the growth of large corporations precluded anything other than a temporary alliance.[10]

I

Taylor's ideas on business and society were the products of his intimate association with Philadelphia's factory environment of the last quarter of the nineteenth century. Two important changes in that environment shaped the development of his thought. First, factory size increased dramatically. Midvale Steel of Philadelphia, where Taylor worked from 1878 to 1889, employed about 450 men during the 1880s; Bethlehem Steel, where Taylor did

consulting work between 1898 to 1901, employed over 3,000 workers in 1900. The increased size of the firm generated both managerial and social problems; although Taylor's initial work centered on the changing relationship between workers and managers, intra-managerial conflict would figure more prominently into the character of his ideas. Second, industrial development fueled the growth of professional engineering. Between 1880 and 1920, the number of engineers in the United States exploded from 7,000 to 136,000, an increase of almost 2,000 percent. The founding of professional engineering societies preceeded this dramatic growth: the American Society of Civil Engineers in 1852, the American Institute of Mining Engineers in 1871, the American Society of Mechanical Engineers in 1880, and the American Institute of Electrical Engineers in 1884. "As a result," notes Bruce Sinclair, the ASME, "which had been dominated by men who owned and managed their own firms, became increasingly populated by men who were employees of such firms...." The changing composition of the engineering population gave rise to new professional philosophies which differed from those appropriate to the entrepreneurial origins of engineering professionalism.[1]

The factory environment Taylor entered in 1874 as an apprentice pattern maker and machinist has been dubbed

"the foreman's empire" by Daniel Nelson. As a microcosm of the entrepreneurial firms in which individual capitalists directly supervised the men they employed, the foreman's empire was held together by personal relations between the foreman and his men. Acting as a sub-entrepreneur the foreman made production decisions, and determined the cost and quality of the work his men turned out. Within his shop the foreman

> made most of the decisions about how the job was to be done, the tools and often the materials to be used, the timing of operations, the flow of work, the workers' methods and sequence of moves. In all fields he was accountable for what, in fact, the workers did. Finally, in personnel matters--the hiring, firing, supervising, motivating, and disciplining of factory workers--the foreman had virtually complete control.

When Taylor moved to Midvale Steel in 1878, he quickly rose to the position of subforeman of the machine shop.[2] He soon realized that additional training would be required for further advancement. He therefore made plans to obtain an engineering degree, which he received in June 1883. The importance of this progression lies in the fact that Taylor started his management career in what would

later be designated a line function; he had direct control over the production process with wide discretionary powers over his men and the work they did. His engineering education allowed him to bring scientific expertise to his managerial role; Taylor became a technically trained manager, which, as he correctly observed, was necessary for his advancement beyond the position of foreman.[3]

Such training put Taylor in league with a group of engineer-entrepreneurs, members of a shop-culture elite, who had worked with their hands as skilled mechanics, received some technical education, and then demonstrated their business acumen by running successful companies. Such men had a profound effect on Taylor. According to Taylor's biographer, William Sellers, the co-owner of Midvale, was probably Taylor's only source of "direct inspiration": a bold innovator with a deep respect for shop ways.[4] Taylor liked to recount the days when men like Sellers, true captains of industry, dominated the factory:

> ...the captains of industry are born, not made. The great captains of industry were usually physically large and powerful. They were big-hearted, kindly, humorous, lovable men, democratic, truly fond of their workmen, and yet courageous, brainy and shrewd; not with the slightest vestige of anything soft or

> sentimental about them. Ready at any minute to damn up and down hill [sic] the men who defied them, and throw them over the fence, they were men who would not hesitate to joke with the apprentice boy one minute and give him a spanking the next. Such men would be recognized in any age and in any country as real men, fit to be the leaders of other men.

Although bordering on mythological in Taylor's recollection, the engineer-entrepreneurs of Philadelphia's factory environment passed on to him an ideological legitimation of the inequalities of power and position experienced on the shop floor.[5]

Presumably, the shop-culture engineer (and engineer-entrepreneur) had worked alongside men of lower social standing; they had put in the same hours, done the same work, been subjected to the same rigors, and earned their positions of power and authority. "In the shop," observes Monte Calvert, both the engineer and the machinist

> started as apprentices and worked side by side at the bench. Each gained the respect of the other and shared a common belief in the dignity of hand labor. The engineer who "graduated" from this system had an intimate knowledge of the technicians below him that was often lost in

> the later stages of industrialization. Here the engineer learned to establish relationships with his men without falling into the twin pitfalls of excessive familiarity or arrogant aloofness....
>
> Theoretically the shop provided complete upward mobility from the lowliest apprentice to the engineers who ran the shops and the entrepreneurs who owned them--often the same person. In practice some men entered the shops fully expecting to become mechanical engineers because of their extensive social and business connections, and the routine of rising up the ladder step by step from apprenticeship had the air of ritual about it.

The shared experience of the shop served as a symbolic leveling: everyone, regardless of their social background, started as an apprentice or a laborer. Though some men might remain workers while others moved into managerial or entrepreneurial roles, the resultant inequalities could be attributed to the outcome of keen competition among equals.[6]

Although this shop-culture ideology might have performed a hegemonic function with respect to the workers, it was more important for men like Taylor who were

actively working their way up the managerial hierarchy. Shop culture allowed the aspiring engineer to conceive of his role as a largely independent one. As Samuel Haber has observed, "The engineer apparently would not simply do his client's bidding. He saw himself as standing closer to the doctor who gave the patient what he needed than to the merchant who gave the customer what he wanted." Because the gradations between laborer, mechanic, foreman, supervisor, and owner appeared to be based solely on differences of natural ability, experience, or knowledge, the hierarchical relationships within the factory could be attributed to meritocratic differences alone, rather than any social factors. Because he was the son of a prominent Philadelphia family, Taylor's ritualized rise through the factory legitimated both his authority over his workers and his subordination to his supervisors. The "social intimacy" (to borrow Copley's phrase) between his family and his employer--including the fact that Taylor and Clarence Clark, the son of the co-owner of Midvale Steel, were "chums" and won the 1881 United States doubles tennis championship--can only have contributed to the impression that gradations in knowledge and experience alone separated the factory-owner from his employee. Indeed, Taylor and Clark planned to take over Midvale one day, a dream that collapsed in 1886 when Clark's father sold his

share of the company to Charles Harrah, Sr.[7]

The social relations of the shop-culture factory environment thus lent credibility to a classically liberal world view. This atomistic social outlook attributed legitimate social and economic differences to the unhindered operation of the just laws of nature. Individuals had different abilities which would, under the proper conditions, yield different levels of success; if each was allowed to develop those talents in a freely competitive environment, one could be assured that the resulting inequalities were justly distributed. That socially privileged individuals like Taylor rose through the ranks faster than the average laborer upset the balance little because the level to which they rose depended solely on their own abilities; social position merely expedited the inevitable. Shop culture, through the process of symbolic leveling, bolstered the impression that the inequalities of power, authority, and economic reward were essentially just, and thereby inspired a certain degree of harmony among workers, managers, and owners.[8]

The specific tenets of shop culture were less important to Taylor's development than its general function: legitimating inequality. In many respects Taylor helped to undermine the conditions necessary to sustain the shop ideal. Nevertheless, Taylor's principal project

in the formulation of scientific management was the translation of the shop world view into "scientific" terms. His experiences at the ASME, at the Manufacturing Investment Company, and as a consulting engineer (particularly at Bethlehem Steel) played a decisive role in that translation process.

When Taylor joined the ASME in 1886 the society began to discuss the role of the engineer in addressing the labor problem: a perception on the part of managers of labor's general unruliness which threatened the efficacy of attempts to raise output. The ASME discussions reveal an important feature of mid-1880s engineering culture. ASME members judged the success of proposed solutions to the labor problem--usually some variety of incentive wage system--in both economic and social terms. Justice, a word they used frequently, as well as increased productivity, was their explicit concern. They did this because line and staff functions had yet to be defined as distinct management activities; the complete engineer, like the entrepreneur, fulfilled both functions. The labor problem--which by the early twentieth century would fall under the purview of personnel managers or industrial psychologists--was still the engineer's problem since he dealt with workers on a daily basis.[9]

Taylor's own commentary on the labor problem did not

emerge until he left Midvale in 1889 for a position at the Manufacturing Investment Company. According to Daniel Nelson, MIC was "organized in the late 1880's by a group of prominent politicians and financiers to exploit lumber-mill by-products." The move to MIC exposed Taylor to a new type of businessman; he no longer worked for shop men, but for investors interested primarily in profits. The financiers' preoccupation with profits led Taylor to talk about the financial and production aspects of business as conflicting activities, a contrast drawn most starkly in a letter he wrote in 1911:

> Personally my experience has been so unsatisfactory with financiers that I never want to work for any of them. If there is a manufacturer at the head of any enterprise,...and he is a large-minded man, that is the man whom I want to be under. As a rule, financiers are looking merely for a turn over. They want to get in and out of their business quickly, and they have absolutely no pride of manufacture. It is all a question of making money quickly, and whether the company is built up so as to be the finest of its kind and permanently successful is a matter of complete indifference to almost all of them.[10]

Taylor resented being ordered about the factory by financiers who knew little about manufacturing and thus affronted his sense of authority and professional independence. The financier held the same position as the manufacturer, but only by virtue of his wealth. If men who had no experience on the shop floor were now in charge of the factory, a way had to be found to limit their control over the engineer's activities. In the mid-1890s Taylor started his search for a new form of authority, designed to replace the faltering system that developed during the days when the "great captains of industry" ruled the shop.[11]

The first articulation of this new form of authority came in 1895 in a paper entitled "A Piece-Rate System, Being a Step Toward a Partial Solution of the Labor Problem." Taylor began "A Piece-Rate System" with a familiar formulation of the labor problem, citing the antagonism between workers and employers. Under current wage systems efficient workmen were compelled to limit their output in order to maintain their level of pay: "The demoralizing effect of this system is most serious. Under it, even the best workmen are forced continually to act the part of hypocrites, to hold their own in the struggle against the encroachments of their employers." He offered a program that treated the men with "greater

uniformity and justice" while increasing their value to the employer.[12]

Under Taylor's system the rate-fixing department of a company would make a careful study of the components of each job to determine the quickest time for their completion; the sum of these times yielded the shortest possible time for a given job, and thus a maximum output for the worker assigned that job. This sort of information, when combined with certain "fundamental facts and principles," would lead to a harmonious relationship between labor and capital; "and most of these facts and principles," Taylor emphasized, "will be found to be not far removed from what the strictest moralists would call justice." While Taylor clearly intended scientific rate-fixing to increase management control over the individual worker, he also left no doubt that such control came at a price: "MEN WILL NOT DO AN EXTRAORDINARY DAY'S WORK FOR AN ORDINARY DAY'S PAY." By reducing output and wage decisions to scientific investigation, Taylor limited the influence of both labor and ownership over production. His means for exacting a measure of control over labor was simultaneously a mechanism for reasserting his professional independence: neither the union nor the board of directors could legitimately countermand a scientific fact.[13]

With this new vision of authority in hand, Taylor embarked on a career as a consulting engineer: that is, as an independent professional armed with a generalizable system of managerial authority grounded on scientific method.[14] Taylor developed the managerial structure that corresponded to this conception of authority while working as a consultant at Bethlehem Steel between 1898 and 1901. Shop Management, which appeared in the ASME Transactions in 1903, detailed that structure and provided Taylor with the managerial mechanisms to make liberalism "scientific".[15]

Taylor began Shop Management with the arresting observation that "there is no apparent relation in many, if not most cases, between good shop management and the success or failure of the company, many unsuccessful companies having good shop management while the reverse is true of many which pay large dividends.... It would appear, therefore, that as an index to the quality of shop management the earning of dividends is but a poor guide." The success of management, Taylor argued, should be judged by the quality of the relations it promoted between employers and employees. Taylor thus subordinated private gain to the larger issue of social justice; this moved the labor problem--really a technical issue of output and wages--to the fore, and hence vested the engineer with

authority over the factory.[16]

This conception of authority extended throughout the shop by means of functional foremanship. Under this system the myriad duties of the old-style foreman were divided and dispersed among various subforemen: instruction card clerks, speed bosses, inspectors, etc. At this juncture functional foremanship meshed with the simplification of work achieved through time study. These simplified positions could be filled by relatively less talented men who could be trained to perform more specific functions. When a man succeeded in mastering one position, he would receive a promotion to the next level of responsibility (in theory at least). This process provided a continuum by which the laborer could rise to the position of machinist; and "the machinist, with the aid of the new system, will rise to a higher class of work which he was unable to do in the past, and in addition, divided or functional foremanship will call for a larger number of men in this class, so that men, who must otherwise have remained machinists all their lives, will have the opportunity of rising to a foremanship." The authority of any given worker, foreman, manager, engineer, and, by implication, owner, would thus be based on demonstrated proficiency at their assigned task. Authority rested on the narrow ground of one's function

within the organization. Frank Copley captured the underlying purpose of the functional principle: "...as Taylor's functional principle stripped management positions of their plenitudinary authority, the general manager's along with the rest, and as it based all authority on knowledge and made the idea of authority entirely subordinate to the idea of responsibility, it menaced every tyrant, or every man who would govern according to his caprice, his arbitrary will."[17]

This reformulation of authority along functional/scientific lines brought stiff managerial resistance, a theme which Taylor sounded with increasing frequency in the latter part of his career. In Shop Management Taylor noted that "overcoming the opposition of the heads of departments and the foremen and gang boses, and training them to their new duties, still remains the greatest problem in organization." By 1912 he could tell a Special House Investigating Committee that "nine-tenths" of the resistance to his reforms came from management. Though Taylor no doubt colored his testimony to give the committee a favorable impression of his work, Daniel Nelson's examination of the firms in which Taylor or his disciples attempted a scientific restructuring of management reveals that the "crucial factor" for a successful implementation "was neither technology nor plant size

[nor labor resistance], but, as Taylor insisted, the managers' commitment to change."[18]

This intra-managerial conflict might be identified as the beginning of line/staff differentiation as regards engineering. According to Alfred Chandler:

> No factory owner, even those who consulted Taylor or his disciples adopted the Taylor system without modifying it. To provide the essential overall coordination and control of throughput and at the same time to benefit from the functional specialization proposed by Taylor, many installed an explicit line and staff structure. The operating departments or shops continued to be managed by foreman who were generalists and who were on a line of authority that came down from the president by way of the works manager or superintendent. The function of Taylor's planning department and functional foremen became those of a plant manager's staff. Overall coordination, control, and planning remained the responsibility of the works manager, who was now assisted by a staff of specialists.

Functional specialization of this sort meant that industries needed engineers with more specific--and per-

force limited--training, rather than the multifaceted shop-culture engineer suited to the simpler factory environment; as the market for engineering services changed, so too did the engineer and his professional culture. Monte Calvert has detailed the emerging conflict within the ASME between shop- and school-cultures. By 1900 a younger generation of engineers committed to the technical rather than executive or managerial aspects of engineering professionalism began to dominate (numerically at least) the ranks of the ASME; according to Calvert, "School culture believed in the high school, not in the shop, as the source of future engineers and discounted the value and importance of shop culture as an educating and socializing force." Engineering education focused on supplying the increasing demand by industry for engineers to fill advisory and research positions. As staff and line functions grew more distinct, their professional roles and cultures came into increasing conflict: with the staff engineer grounding his authority on his education and the power of science and the line manager demonstrating his authority through de facto control over production.[19]

This tendency toward specialization no doubt contributed to Taylor's impression that management consistently meddled in the implementation of his system; much of Taylor's criticism of business might then be

attributed to his unwillingness to have his own power as an engineer limited by the specific needs of an enterprise, just as he circumscribed the power of foremen.[20] The character of Taylor's lament against the manner in which businesses used his system reveals a more complex conclusion, however. In Principles he warned against confusing the "mechanisms" of scientific management with its "essence." Defining this essence, framing it in just the right language, was Taylor's principal preoccupation for the last ten years of his life.[21]

Although it appeared in various guises, the essence of Taylor's system lay in harmonizing the interests of employers and employees through the discovery of the scientific laws of work by the mechanical engineer. The scientific manager would use these impartial laws to settle all questions of production--whether wages, output, profit, or promotion.[22] Taylor's tenacious belief in the efficacy of such laws can be seen in this exchange between Taylor and W.O. Thompson, counsel for the Senate Committee on Industrial Relations. Thompson queried Taylor on the process of dealing with a worker's objection to one of the requirements of a scientific manager:

> Mr. THOMPSON. But you decide finally whether the workman's objection is well taken to

our ruling, do you not?

Mr. TAYLOR. I do not. This code of laws decides it--this code of laws that has been proved to be right decides it.

Mr. THOMPSON. A code of laws is an inanimate thing and can not decide anything.

Mr. TAYLOR. There is nothing in the world more powerful than a code of laws. The whole United States is run by a code of laws. This code of laws that has been developed determines, and we ask these men to go to these various shops and see whether it is right. That is our answer. The code of laws is above all people. That is what I want to impress.

Mr. THOMPSON. But the workman does not recognize that code of laws framed by Mr. Taylor and his associates in several shops as ruling human action.

Mr. TAYLOR. It is not framed by us.... These laws are gradually evolved through the cooperation of both sides [management and labor]--not of one side. They build themselves up through the fact that they are giving satisfaction to both sides, and have to repeat it and repeat it and repeat it....

> I have tried to make myself clear, that gradually a code of laws is evolved which is satisfactory to both sides, and that both sides submit themselves to those laws; that the manufacturer, the owner of the business, no more dares violate those laws than the workman does to violate those laws.... [emphasis added]

Although Taylor tried to put the best face on the actual use of his laws--which in practice worked somewhat differently than implied here--his intention is clear: by raising scientific law to the level of universal adjudicator, Taylor endowed science with the same legitimating role--symbolic leveling--as the apprenticeship in shop culture. Since everyone submitted to the law, all were equal; but the law then shed light on the differences between men.[23] Those differences should be taken into account when people organized for cooperative production; as Taylor warned in Shop Management: "Men are not born equal, and any attempt to make them so is contrary to nature's laws and will fail." With a few of the laws of engineering in hand (and a plan for finding more), Taylor thought he had reformulated liberalism in scientific terms: that is, he used science to structure and thereby legitimate the inequalities experienced within the workplace.[24]

The articulation between this conception of justice--universal submission to the dictates of scientific laws--and Taylor's struggle to maintain his professional independence lies in his vision of the unique relationship between the efficiency expert and scientific authority. "Our commonsense and every day experience entitle us to an opinion on an immense variety of every day subjects," he wrote in 1914: "the proper speed of automobiles in our streets; police protection of our cities; laws affecting the ownership of property and inheritence; laws as to our domestic relations, marriage, divorce, etc." But the laws used by the engineer and the scientific manager bore little resemblance to those governing these "every day subjects." Like the laws of mathematics, physics, and astronomy, the laws of engineering "are based on physical facts and...are in no sense matters of opinion.... [A]nd the fact which I particularly wish to emphasize is that the development of all of these laws has been the work of experts and that the ordinary layman is not entitled to any opinion regarding these laws unless he, himself, becomes an expert...." Taylor failed to mention explicitly here that ordinary laymen included uncooperative foremen, recalcitrant factory superintendents, personnel managers, company directors, most financiers, and union representatives. At least at the

level of the shop floor, justice required that the scientific manager--armed with the laws of engineering--remain free from the meddlesome influence of both unions and management.[25]

II

Taylor fought to secure for the engineer a position of independence in an era of large-scale enterprise by linking the authority of science to his liberal conception of justice. Brandeis was involved in a similar project. Both attempted to preserve the entrepreneurial dimensions of their work through a commitment to public service, connecting their professional struggles with their conceptions of democracy. The articulation each achieved between professional outlook and commonweal differed considerably, however. In Brandeis's case, this articulation emerged from his attempt to adapt a nineteenth-century professional philosophy to the social conditions of turn-of-the-century Boston.

Although lawyers did not have a professional ethos as coherent as the engineers' shop culture, Alexis de Tocqueville's reflections on what James Willard Hurst has called "the profession's golden age of public leadership--the years from 1765 to 1830--" provided them with a powerful professional vision. "If I were asked where I place

the American Aristocracy," Tocqueville suggested provocatively, "I should reply without hesitation, that it is not composed of the rich, who are united by no common tie, but that it occupies the judicial and the bar." The lawyer held this exalted position in American democracy because of his unique intellectual training: "The special information which lawyers derive from their studies ensures them a separate station in society; and they constitute a sort of privileged body in the scale of intelligence....In America there are no nobles or literary men, and the people are apt to mistrust the wealthy; lawyers consequently form the highest political class and the most cultivated circle of society...." The prominent role of lawyers in American political history provided some basis for Tocqueville's characterization: between 1790 and 1930, an average of 65 percent of U.S. Senators were lawyers; and they represented nearly as many Representatives, Presidents, Vice-Presidents, and cabinet members.[1]

As "a professional group of exceptional public influence and power," the legal profession not only served as "the nursery of most American statesmen," according to Richard Hofstadter, but gave its practitioners other advantages: "a sense of public responsibility had been present in the moral and intellectual traditions of the

bar--a feeling embodied in the notion that the lawyer was not simply an agent of some litigant but also by nature an 'officer of the court,' a public servant. [And], law had been, preeminently in the United States, one of the smoothest avenues along which a man who started with only moderate social advantages might, without capital, rise upward through the ranks to a position of wealth or power." Thus a legal career endowed the fabled rise from small means to power and independence with a certain "transcendent" quality: the successful lawyer could serve his own ends and protect democracy simultaneously through the promotion of justice and social order.[2]

This professional mythic-history resonated with Brandeis's commitment to nineteenth-century liberalism. His parents provided the initial influence. Having fled Bohemia during the upheaval of 1848, they settled in Louisville, Kentucky, becoming part of that city's German-Jewish economic and social elite; they raised young Louis on a mixture of conservative German culture, liberal economic theory, and Mugwump politics. When Brandeis came to Harvard in 1875, many of his professors, mentors, and later on his clients reinforced this liberal predisposition. Like the small businessmen whose interests he often represented, Brandeis as a lawyer was committed to the preservation of competition, free trade,

and honest government.[3]

After compiling a spectacular record at Harvard Law School Brandeis worked briefly in a law firm in St. Louis. In 1879 he started a practice in Boston with a friend from Harvard, Samuel D. Warren. The partnership lasted ten years and helped Brandeis develop his fortune and his reputation as a business lawyer.[4] Though Boston presented many opportunities for a bright, aggressive attorney, Brandeis's background tended to limit his possibilities. He had few social ties in Boston at a time when, according to Allon Gal, "Family connections loomed large in the business practices of the Boston elite. Marriage alliances and business arrangements were closely related; kinship rather than merit emerged as the criterion for commercial success." Furthermore, when he set up shop with Warren the social ranks of Boston were beginning to close in response to the increasingly diverse ethnic composition of the city. In 1880 first- and second-generation immigrants comprised 64% of Boston's population; by 1910 they accounted for 74%. Furthermore, Jewish immigration increased dramatically. In 1880 there were a quarter of a million Jews in the United States, mostly of German descent; between 1882 and 1924 2.3 million Jews immigrated to America, principally from Eastern Europe. In 1924 the Jewish population was slighlty over 4

million.[5]

Because he was "an outsider and a Jew," Brandeis did not have access to the full range of clients Boston offered. Although he was not totally excluded from society, he did not work for the established families of Boston, any large financial interests, railroads, or transportation firms. Instead, most of his clients were small businessmen, manufacturers, and merchants. His first major client was Samuel D. Warren and Company, a paper manufacturer. Warren, Jr., left his law partnership with Brandeis in 1889 to take over the family firm upon his father's death; Brandeis did the legal work for the company, a position which carried considerable prestige. Brandeis also did legal work for other paper companies as well as shoe and boot manufacturers. Later in his career he did considerable business with Jewish retailers, the Hecht Brothers and the Filenes.[6]

These businesses, although not all small, were all "peripheral" or family-run firms. Their owners ascribed to the same liberal economic beliefs and Mugwump political attitudes professed by his family and his law school mentors. Though Brandeis came to Boston as a Mugwump, his experiences there transformed him into a Progressive. And the root cause of that transformation, according to Gal, "must be sought in his experiences as a Boston lawyer,

particularly the social isolation he was subjected to and the fact that his law firm had no stake in the transportation industries (the latter being an expression of the former). The combination made Brandeis only too happy to lead his troops against the particular vested interests and to conduct his campaign along democratic and militant--Progressive--lines, as only an outsider would have done." When Brandeis set out to expand his influence in the community, this interpretation suggests, he had no ties to the vested interests to keep him from moving toward a hard-lined Progressive stance.[7]

Neither McCraw nor Gal mention that Brandeis argued his first case before the Supreme Court on behalf of the Wisconsin Central Railroad. Although it happened "quite by accident," according to Alpheus Mason, Brandeis "successfully pleaded his case, which led promptly to a retainer as eastern counsel for the Wisconsin Central Railroad, a relationship which lasted until 1905." Melvin Urofsky and David Levy note that "In 1893 the Northern Pacific had leased the Wisconsin Central line, and then had gone bankrupt carrying the smaller road with it. LDB...drew up a plan for reorganization that, after extensive litigation, was finally adopted in 1899. The case proved useful to LDB as it brought him into contact with many of the country's leading lawyers, and also

taught him about railroad economics." His association with the Wisconsin Central meant that he was not completely alienated from the interests of the transportation industry.[8]

Consequently, Brandeis's move to Progressivism should not be interpreted merely as an expression of the outlook of his clientele, although he was always more sympathetic to smaller businesses. While ethnicity and its concomitant social isolation certainly influenced his outlook, it needs to be viewed in conjunction with his attempt to respond to the central problem encountered by the entire legal profession around the turn of the century: redefining their professional philosophy in light of the growth of big business. For a small segment of the legal profession, big business offered opportunities for advancement. As Jerold Auerbach has noted:

> The emergence and proliferation of corporation law firms at the turn of the century provided those lawyers who possessed appropriate social, religious, and ethnic credentials with an opportunity to secure personal power and to shape the future of their profession.... They capitalized upon historical circumstances to hitch professional values, which they were

> advantageously located to define, to the service of social stratification and corporate profit. The corporate law firm was their fortress. Its priorities--more precisely, the priorities of its clientele--shaped professional education, career patterns, ethics, mobility, and the availability and distribution of legal services--indeed, the very meaning of law and justice....

Auerbach has emphasized that corporate lawyers exercised influence over the profession through their control of the American Bar Association, which they effectively controlled by 1909. Founded in 1878 in Saratoga, New York, the ABA remained a small, primarily social organization under the control of a selective elite: in 1880 its membership included only 0.9 percent of the lawyers in the United States; and by 1910 that percentage rose only to 3.0. Brandeis's ethnic background precluded his close association with the ABA elite. The tensions between Brandeis and the Association came to a head during his 1916 Supreme Court nomination hearings, during which the ABA expressed vigorous opposition to his promotion to the Bench.[9]

The other force shaping the professional identity of the lawyer was the law school professoriate. Prior to 1870, notes Auerbach, teachers and practitioners were usually the same people. But the professionalization of

teaching and the nationalization of public reform issues generated tensions between the two: "To generalize, teachers tended to view law as an instrument of social change; practitioners saw it as a means for social control.... Inherent in the professionalization of law teachers...was the notion of a detached expert who scientifically weighed the utility of existing laws against social needs. Whenever the laws were found deficient it was the self-assumed responsibility of the expert to restore the sociolegal equilibrium." Brandeis sympathized with the professoriate's vision of the law and eventually came to see himself as an expert maintaining the socilegal equilibrium through the public service. But he wanted to fill this role as a practitioner, rather than a professor. When Samuel Warren alerted him to the possibility of an editorship of a law journal, Brandeis responded that "although I am very desirous of devoting some of my time to the literary part of the law, I wish to become known as a practicing lawyer. As a means of existing while working up a practice and as a means of becoming favorably known to the legal fraternity and also because it affords an opportunity for law-writing I regard the suggested editorship as highly desirable; but it must be in aid of and incidental to our law partnership, and not in substitution of it."[10]

Because he did not have the requisite social capital to become an elite corporate lawyer, and because he preferred an active rather than contemplative approach to the law, Brandeis developed his own professional philosophy centering on the problem of professional independence. While white, Anglo-Saxon, corporation lawyers accomodated their professional philosophy to the growth of large-scale enterprise, their success came at a price: "The top leaders of the law, in their strategic place as the source of indispensable policy advice to the captains of industry, probably enjoyed more wealth and as much power as lawyers had ever had," remarks Hofstadter. "But their influence was of course no longer independently exercised; it was exerted through the corporation, the bank, the business leader." Brandeis leveled harsh criticism against this deterioration of the bar's independence; and the close association between his complaints against big business and corporate lawyers argue against identifying his professional philosophy solely with the interests of his clients.[11]

His initial approach to the issue of professional independence grew out of a simple desire to earn a living in a competitive market. Writing to one of the young attorneys in his office he claimed that "The duty of a lawyer today is not that of a solver of legal conundrums;

he is indeed a counsellor at law." As a counsellor the lawyer had to impress his clients with his knowledge of their businesses. "Your law may be perfect," he admonished, "your ability to apply it great and yet you cannot be a successful advisor unless your advice is followed; it will not be followed unless you can satisfy your clients, unless you impress them with your superior knowledge and that you cannot do unless you know their affairs better than they because you see them from a fullness of knowledge." The good attorney would feel the "dependence" of his clients; he would be indispensible to the men he advised. Eventually, the lawyer would develop public recognition for the invaluable assistance he rendered to his clients; "the duration of time required for this public recognition and its extent depend on personal qualities--largely independent of intellectual ability and attainments--namely the ability to impress one's personality upon others--and of creating followers." By turning clients into followers, Brandeis could exert considerable influence over economic and political resources while retaining his independence. Following his own advice made Brandeis a business lawyer with two distinct differences. As his biographer, Alpheus Mason, notes:

> First, he dealt only with heads of corporations as his personal clients and never acted as a

> mere legal employee of the corporation itself. 'I would rather have clients,' he said, 'than be somebody's lawyer.' ...In the second place, he treated corporate practice in its broader business context, not merely as involving legal issues. Approaching each case in this way, he found that it called for quite as much business judgment as for legal advice for counsel on matters both of business and law.[12]

Brandeis articulated his concern for the independent influence of the lawyer most clearly in an address given to the Harvard Ethical Society in 1905. Echoing Tocqueville, Brandeis reflected that "the paramount reason why the lawyer has played so large a part in our political life is that his training fits him especially to grapple with the questions which are presented in a democracy." Drawing a close association between political and economic life, he suggested that the lawyer's role was really that of a policy-maker, or arbiter of social problems:

> In guiding these affairs industrial and financial, lawyers are needed, not only because of the legal questions involved, but because the particular mental attributes and attainments which the legal profession develops are demanded in the proper handling of these large financial

> or industrial affairs.... The questions which arise are more nearly questions of statesmanship. The relations created call in many instances for the exercise of the highest diplomacy.... The relations between rival railroad systems are like the relations between neighboring kingdoms. The relations of the great trusts to the consumers or to their employees is like that of feudal lords to commoners or dependents. The relations of public-service corporations to the people raise questions not unlike those presented by the monopolies of old.

Brandeis criticized his fellow members of the bar for failing to retain this "position of independence, between the wealthy and the people"; instead, lawyers had attached themselves to corporations and thus neglected their social function: "We hear much of the 'corporation lawyer,' and far too little of the 'people's lawyer.'" By focusing on the role of the lawyer as a statesman, not merely as a hired advisor, Brandeis extended his clientele from merchants and manufacturers to the public, and thereby broadened his influence beyond the narrow limits imposed by the social restrictions of Boston.[13]

The lawyer as statesman could act as an independent

judge of the public good. Brandeis viewed the public good as separable from the interests of any particular group, including his own clients. By rendering service to "the community" or "the people," the public-spirited lawyer could in effect represent the general welfare as embodied in his reputation for public service. The community, then, represented a ladder by which the extraordinary individual rose to a level of power and independence by indentifying his interests with that of the commonweal. Preserving this route to public influence required that the interests of the community remain separate from the interests of any particular group of citizens, including railroads, bankers, and industrialists. By emphasizing public service, Brandeis attempted to free himself from the narrow interests of his clients and promote his own judgment as a guide to the general welfare.[14]

An example of Brandeis's tendency to view himself as a largely independent defender of the public welfare was the Boston Elevated fight. Between 1897 and 1902 Brandeis fought against the Boston Elevated Railway Company when that company tried to secure permanent franchises for the use of public streets in order to build a subway system. The Boston Elevated was controlled by a group of New York bankers led by J. Pierpont Morgan, represented in Boston by Kidder, Peabody, and Company. Their cross-town rivals,

Lee, Higginson, and Company, opposed the granting of the franchises because they had no interest in the deal. Since Brandeis had been associated with Henry Lee Higginson and Lawrence Minot, who both opposed the rechartering for their own financial reasons, rumors surfaced that Brandeis had been retained by Lee, Higginson. Brandeis, who viewed the rechartering as a "sacrifice of the interests of the public to that of a single corporation," wrote letters to the chairman of the board of the Elevated and to one of the Elevated counsellors emphasizing that he was acting entirely independently: "I am not retained by Mr. Higginson or any other person or corporation or association, and have opposed this measure merely as a matter of duty, believing it to be absolutely prejudicial to the interests of the people of the Commonwealth." Although Brandeis was later called upon to represent the Boston Associated Board of Trade in this affair, his entry into the fight came as a private citizen defending his conception of the public good.[15]

That Brandeis preferred to act according to his own standards of the commonweal was also illustrated by his involvement in the battle against the New Haven-Boston & Maine merger. Originally Brandeis had been alerted to the merger by Samuel Lawrence, a major stockholder in the Boston and Maine, who did not want the New Haven "to gob-

ble up" his railroad. Brandeis agreed with Lawrence's position, but declined to represent him because the fight against the merger involved defending the public interest. Brandeis joined the fight not as counsel to Lawrence, but as cousel for the public interest. According to Edward McClennen, Brandeis "had expressed...himself as averse to the idea of a lawyer, who had acquired a position in the community, using that community position to influence legislation in a private interest against what might be thought to be the public interest." But because he had been called to the case by Lawrence, Brandeis paid his firm $25,000 out of his own pocket for the time he spent on the matter.[16]

In both the Boston Elevated affair and the New Haven fight Brandeis opposed many of the same citizens with whom he had allied on other public issues. In the New Haven case, as Richard Abrams has made clear, the community was in desparate need of a consolidated railroad system: a fact recognized by many of Massachusetts's Progressive leaders. Brandeis found himself on the opposite side of the issue from many of his erstwhile allies, including Edward Albert Filene. Though his small business clientele shaped and reinforced his antipathy for big business, Brandeis wanted to avoid being primarily a spokesman for a particular set of interests; such a position limited his

public influence and conflicted with his professional ideals. When the small businessmen he supposedly represented wanted something--like a consolidated railroad system--with which he disagreed, he felt no compunction about acting alone according to his conception of what was really good for the community. His clients certainly influenced his outlook on business; but his professional aspirations propelled him beyond their particular interests. Over time he increasingly emphasized his role as statesman, gravitating toward the "transcendent" issues he associated with his professional mythology.[17]

Brandeis exhibited great creativity in his role as statesman. In 1891 he took up the cause of the distillers in the Massachusetts Legislature. The State was taking action in response to the corruption resulting from the liquor interests attempt to circumnavigate legal restrictions on alcohol sales. Liquor dealers had entered the political arena and bribed state officials in order to prevent the enforcement of liquor laws. Brandeis suggested that his client and others in the industry take the initiative in proposing better legislation on liquor sales. The liquor dealers would not be in politics, he told the Joint Committee on Liquor Law, if the Legislature would "let business be stable, instead of precarious." He suggested new laws that would allow the liquor dealers to

earn their living while protecting the community against the evils of excessive drink. "Remove from the Statute Book obnoxious and degrading laws," he exhorted the Committee, and the liquor dealers would become law abiding citizens.[18]

He used the same tactic in the protest against the Boston Consolidated Gas Company in 1903 over the valuation of stock and the price of gas to consumers. Acting as unpaid counsel for the Board of Trade, Brandeis proposed to bring the Boston Consolidated under public control through the use of a "sliding-scale" for utility rates: as the price of gas fell, the dividend to stockholders could increase. Brandeis told the Legislative Committee on Public Lighting that "those who engage in a business which involves the use of public property, like the streets, undertake as trustees to perform a public service, and that they must be held accountable for their actions as trustees." In the absence of market competition, the public had a right to inspect the finances of the company--even though it was privately owned--and supervise its management in order to insure satisfactory service and proper returns to capital. He affirmed that this approach allowed the public service corporation to be "sure of its rights as long as it deals justly with the community; and the knowledge that this continued existence

is dependent upon the good will of the people protects the companies from committing arbitrary or unjust acts which would incite public indignation and lead to a curtailment or destruction of their rights." When the officers and investors in a public service corporation recognized their duty to the public--their professional duty--they would then invite the representatives of the community--lawyers and concerned citizens--to review the company's practices. Community supervision, guided by the informed legal mind, would serve as the impetus for efficiency in the absence of competition.[19]

When Brandeis undertook the Advance Rate Case of 1910, he approached it as another public service corporation fight. The legal environment of the hearings shaped his strategy. Under the terms of the Mann-Elkins Act of 1910 by which the Commission proceeded, "the burden of proof to show that the...proposed increased rate is just and reasonable shall be upon the common carrier...." In other words, the railroads not only had to ask the ICC for a rate increase; the Mann-Elkins Act required them to prove that the increases were necessary. The railroad executives who attended the hearings were being asked to debate in a public forum decisions which they had previously made privately: a process for which they were neither thoroughly prepared nor particularly

enthusiastic.[20]

Brandeis seized the opportunity presented by the hearings to attack the railroads on several grounds. Apparently he had not originally intended to use scientific management as one of his arguments: "when I entered upon the Advance Rate Case, I had no thought of introducing the question of scientific management, and I supposed the leading railroads were efficient.... My intention then was to contest the advance on the grounds later stated by the Commission in its opinion. But when I began to cross-examine the railroad witnesses on questions of cost and rate-making, I found apparent ignorance of the costs of specific operations and a disregard of cost in rate-making." Brandeis introduced scientific management for two reasons. First, he wanted to subject the railroads to the scrutiny he felt commensurate with their role as public service corporations. Second, he was deeply convinced that scientific management would yield the savings he claimed, and thereby satisfy all parties involved, railroads, unions, and shippers.[21]

He made essentially the same argument before the ICC as he had before the Massachusetts Legislative Committee on Public Lighting.

> I believe it is absolutely essential, in case railroads are to be operated by private

> individuals, that the returns to those interested in the operating companies should be dependent upon the efficiency of management; that the returns to the stockholder, not because he is a stockholder, but because he is represented by men who manage efficiently; not because of the capital invested so much as because of the management. The incentive to good management is to get a return in dollars for the service that is rendered.... What is the public getting as the result of having intrusted [sic] to certain persons certain public or quasi-public property?

Having set forth the framework of his argument, Brandeis then stated that he would introduce a new efficiency system for the benefit of the railroads. That system would allow them to maintain dividend payments, wage increases, and low freight rates. Brandeis suggested scientific management to the railroads in the same way that he suggested new legislation for the liquor retailer, the sliding scale for the gas company, and business advice to his smaller clients; he was exercising his special abilities as a lawyer to arbitrate between competing but legitimate social ends. Brandeis argued that the special circumstances under which the railroads operated--their

great size, the absence of competition--might prevent them from adopting the latest efficiency methods pursued by the most innovative manufacturing companies. Finally, he reminded the Commission that a reasonable doubt was sufficient to deny the railroads their rate increase:

> I say that if this commission finds, as we believe it will find after it has heard these witnesses [on the value of scientific management], that the reasonable maximum efficiency has not been attained...we shall ask the commission to say...'We can not permit a heavier burden upon the community on the theory of greater need, because there remains a margain for profit attainable through the introduction of new methods which will give you not only as much, but infinitely more than anything you are now asking.'

If the Commission found his witnesses convincing, Brandeis hoped that it would use its power to conduct an investigation into the applicability of scientific management to railroad cost reduction. The data collected in such an investigation could be used to assess the performance of each railroad and provide the Commission with a tool for assisting the railroads to attain the highest level of efficiency.[22]

The Commission held "That there is no evidence...which establishes the necessity for higher rates. The probability is that increased rates will not be necessary in the future. In view of the liberal returns received by these carriers in the past 10 years, they should be required to show, with reasonable certainty, the necessity before the increase is allowed. If actual results should demonstrate that the commission's forecast of the future is wrong, there might be grounds for asking a further consideration of this subject." They later noted that scientific management "is everywhere in an experimental stage" and was therefore not applicable to the question at issue. But they added, "We can not escape the impression that railroad operators have not given to this important subject the attention which it deserves." Brandeis, however, believed that the commissioners had been "very considerably impressed by his line of argument."[23]

After the Commission returned its decision Brandeis appeared before the Hadley Railroad Securities Commission. He repeated his contention that the railroads were private enterprises in a quasi-public business; in order to resolve the difficulties of deciding a just return to stockholders Brandeis suggested a sliding scale by which dividends would increase every time rates were lowered--

just as in the Boston Gas fight. He also recommended the establishment of an Expert Station in Railroad Efficiency to assist companies in adopting the best methods of management. Thus, while he continued to believe that the railroads were probably too large to be efficient, he used his knowledge of industrial management (however sparse or innaccurate it may have been) to suggest an innovative program to bring big business under public scrutiny.[24]

So successful was Brandeis's strategy that the ICC called upon him to assist in their consideration of the railroads' next request for rate increases. Brandeis played the role of "special counsel" to the ICC in the Five Percent Rate Case of 1913-1914, a fact which disturbed many railroad executives who interpeted Brandeis's appointment as ICC bias against their concerns. Although the Commission prevented him from using scientific management again--the Commission wanted to investigate the issue "without advocating any particular theory for its dispostion"--he appears to have sought out Taylor's advise. Brandeis again opposed an across-the-board increase in rates, but recommended that freight rates be raised for the railroads in the Central Freight Association territory; this precipitated a feud with Clifford Thorne, his co-counsel in the Eastern Rate Case, who was representing the shippers in the Five Percent Case.

Thorne had originally expressed great confidence that Brandeis would support the shipping interests in his role as special counsel; Brandeis's apparent apostasy galled Thorne enough that he became the first witness to testify against Brandeis's appointment to the Supreme Court. What Thorne failed to see in Brandeis's actions was his attempt to delineate himself as an independent judge of the commonweal--as a private statesman--working directly "in the public interest." As such, he attempted to render an impartial opinion on rate increases, which in this case meant siding against the shippers in one region in spite of his former association with their cause.[25]

By appointing himself as judge and guardian of the public good, Brandeis transformed the Tocquevillian ideal of the lawyer into professional power and independence. The distinction between this professional philosophy and the working ideals of the bar emerged during Brandeis's Surpeme Court nomination hearings. Willard Hurst observed:

> A banker, testifying before the investigating Senators, told of the answer which Brandeis gave to the request that he represent the interests of a great investment banking group in a proxy fight involving the Illinois Central. Brandeis not only had to be convinced that the proffered

> retainer was not conceivably inconsistent with his then current public activities devoted to exposing the financial mismanagement of the New Haven. He also required 'to be satisfied of the justness of our position.' 'It was an unusual experience,' the witness observed. 'I had occasion to retain other lawyers, and no one ever raised that question.' Austen Fox, a leader among lawyers who campaigned against the confirmation, explained his position to Amos Pinchot: 'It is true that nothing unethical has been proved against Mr. Brandeis. What has been proved against him is that he does not act according to the canons of the Bar. The trouble with Mr. Brandeis is that he never loses his judicial attitude toward his clients. He always acts the part of a judge toward his clients instead of being his client's lawyer, which is against the practices of the Bar.'

Brandeis's "judicial attitude"--his vision of the lawyer as statesman and as independent judge of the public good--rather than the interests of his petite bourgeois clients, provided the continuity between the struggling Boston lawyer, the concerned citizen, the political advisor, and the Supreme Court Justice.[26]

III

The search for professional independence lay at the heart of the agreement between Taylor and Brandeis. They were both deeply emersed in professional cultures that predated the rise of big business. Those cultures emphasized the entrepreneurial aspects of engineering and law: both the shop-culture engineer and the Tocquevillian lawyer acted as advisors--guided by ideals entirely separable from the interests of their clients--rather than as mere employees. The increased size of businesses changed the relationship between employer and professional advisor. Technically-based enterprises incorporated engineers into more elaborate managerial structures, calling forth a more limited notion of the role of the engineer. Though law remained largely an activity of partnerships and individuals, the relative significance of the individual attorney decreased with respect to the corporate lawyer in the service of a bank or railroad.

Taylor and Brandeis tried to resist this subordination of their professions by developing professional philosophies that emphasized independence. When Taylor insisted that management become scientific, he called for a restructuring of the internal organization of the factory that placed the engineer in a position of power. His conception of good shop management would replace the drive

for profits as the guide for corporate organization. In a similar vein, Brandeis eagerly suggested that business become a profession. As a profession, business would be conducted "largely for others and not merely for one's self." "Real success in business," he insisted, "is to be found in achievements comparable rather with those of the artist or the scientist, of the inventor or the statesman." The lawyer, because his training suited him especially to wrestle with the questions faced by the businessman, would play the role of advisor in the interest of the public. In both cases, the professional established himself as an independent judge of the public good. By linking their independence with public service, and hence democracy, Brandeis and Taylor transformed their inherited professional ideologies into strategies for coping with the changing market structures for their services. Those strategies had in common an attempt to maintain the entrepreneurial dimension of their work.[1]

Though these strategies allowed a certain amount of agreement between Taylor and Brandeis, the distinct markets for engineering and legal services dictated incompatible approaches to the problem of professional independence. The overriding characteristic of the market for engineering services, as Margali Larson has observed, "is the inherent subordination of the engineers' market....

No matter how vigorously or successfully the engineering profession might have organized to secure its market and face its employers, it could not have controlled its professional market because that market was inherently subordinate. Though strategic for industrial growth, the services of the engineer were subordinate to general considerations of accounting and business profit." Because Taylor worked in a dependent market, his strategy for retaining his independence involved establishing himself as a law-giver, or to use Daniel Bell's apt characterization, as a philosopher-king. Taylor had to guard his position as an unquestionable authority. He ascribed, consequently, to a formalistic conception of law. And he based his idea of democracy on the notion that as long as the law applied to everyone, equality reigned.[2]

The growth of the corporate law firm surely created similar conditions of dependence for lawyers who chose that career path. But Brandeis fought against this subordination, not from the inside of the organization, as did Taylor, but from the outside. Since a formalistic conception of the law was used to fortify the position of big business, Brandeis took an anti-formalistic approach. Law became a tool in the pursuit of the public interest, rather than a means of establishing authority. In this approach, democracy meant collective decision-making,

rather than the equality of non-decision-makers.

While Brandeis and Taylor used the language of efficiency to attack the environment created by big business, their understandings of that language were, at base, incommmensurable. Taylor cast the issue of industrial unrest as a question of authority: if a source of impartial (and perforce just) authority could be found to arbitrate between the interests of the workers and the employers, the labor problem would disappear. For Brandeis the real conflict lay in "the contrast between our political liberty and our industrial absolutism." He proposed placing severe limitations on the authority of those in industry, rather than making their authority inviolable; in effect, Brandeis wanted to create "practically an industrial government--a relation between employer and employee where the problems as they arise from day to day, or from month to month, or from year to year, may come up for consideration and solution as they come up in our political government."[3]

Brandeis promoted this vision of industrial democracy as a means for combating big business. By transforming the work place into a parliamentary arena, he demoted the businessman and carved out a place for the lawyer as industrial statesman--an arbiter of economic disputes. Scientific managment played a distinctly subordinate role

in this scenario. Brandeis revealed his attitude toward Taylor's system in his comments before the same Senate Committee on Industrial Relations for which Taylor had elaborated his conception of the laws of engineering.

> Commissioner WEINSTOCK: The question, Mr. Brandeis, has been put to various witnesses that have come before us, as to what, in their opinion, was the prime remedy for industrial unrest, and different witnesses have offered different remedies. One has suggested that the prime remedy in modern industry is scientific management with a bonus system; another has suggested arbitration; still another, mediation and conciliation; yet another, profit sharing; another has expressed the opinion that the remedy lies along the line of legal minimum wage. I take it your prime remedy for industrial unrest...is a condition of industrial democracy?
>
> Mr. BRANDEIS: That is fundamental, and I should adopt each one of these five remedies that you have named also as in incident, as an aid.
>
> Commissioner WEINSTOCK: As subsidiary?
>
> Mr. BRANDEIS: Yes; as subsidiary.

. . . .

> Commissioner WEINSTOCK: ...I understand by industrial democracy a condition whereby the worker has a voice in the management of the industry--a voice in its affairs. Do we agree on that?
>
> Mr. BRANDEIS: Yes, sir; and not only a voice but a vote; not merely a right to be heard, but a position through which labor may participate in management.

For Taylor, the five remedies Brandeis suggested using in concert could not be reconciled; they rested on incompatible principles of authority. Although Taylor saw some place for the unions and for collective bargaining, the objective of his system was to keep even managers--those not committed to his philosophy--out of management. The idea that workers would actually vote on wages, output, or procedures ran against the very foundations of his professional project.[4]

This incompatibility provides insight into what Daniel Rodgers has identified as the multiple languages of Progressivism. Rodgers suggests that Progressivism lacked a single ideology, and was instead engergized by the simultaneous use of three separate rhetorical strands: the language of antimonopolism, the language of social

bonds, and the language of efficiency and rationalization. Taylor and Brandeis employed the language of efficiency, but understood it to mean very different things. Although both attempted to preserve an older, entrepreneurial ideal, the markets to which they adapted their professional philosophies generated essentially incompatible strategies. The Taylor/Brandeis alliance suggests that the source of Progressivism's intellectual dynamism and its lack of coherence may lie in the fact that, as a largely middle-class and professional movement, the circumstances that shaped the meaning of its various languages produced irreconcilable ideological hybrids.[5]

Although this paper has focused on professionalization as the link between Taylor and Brandeis, other themes implicit in the analysis may provide promising avenues for future investigation. For instance, both Taylor and Brandeis came to see finance and production as competing aspects of business. Some Taylor followers--especially Henry Gantt and Morris Cooke--picked up this theme, and there developed an association between the Taylorites and Thorstein Veblen. It appears as though Taylor's heirs inspired Veblen's Revolt of the Engineers. Taylor may provide, then, a link between Brandeis and Veblen. Brandeis might also connect Taylor and the conservation

movement. Just before the Rate Case Brandeis was deeply involved in the Pinchot-Ballinger Affair. The idea of efficiency, which Brandeis used in both cases, may link Taylor and Gifford Pinchot, among others. The distinction between politics and administration emerges in the work of both men. The response these figures had to the changes in American society at the turn of the century made provide a bridge across their disparate fields and their distinct historical legacies. Although they appear to be strange bedfellows, further research may reveal a closer association than heretofore realized.[6]

ENDNOTES

INTRODUCTION

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Letters of Louis D. Brandeis. Volume 3 (1913-1915): Progressive and Zionist, ed. Melvin I. Urofsky and David W. Levy (Albany: State University of New York Press, 1973) [hereinafter BL], 240-241; and Copley, Taylor, 2: 372; see also Drury, Scientific Management, 38.

4. Copley, Taylor, 2: 372.

5. Some controversy exists concerning the authorship of Principles. Charles D. Wrege and Anne Marie Stotka have concluded that Taylor used the second chapter of Morris Llewellyn Cooke's "Industrial Management" manuscript (1907-1910) as the basis for Principles and that Cooke did extensive editing work for which Taylor never gave him credit. Wrege and Stotka further suggest that Taylor regularly attached his name to other people's work, including the famous "Schmidt" pig-iron handling experiments. See Charles D. Wrege and Anne Marie Stotka, "Cooke Creates a Classic: The Story Behind F. W. Taylor's Principles of Scientific Management," Academy of Management Review 3 (October 1978): 736-749. Edwin A. Locke counters this argument by noting that the Cooke based his work on ideas borrowed from Taylor; Cooke also knew about the publication of Principles and did not protest it; and Taylor offered Cooke all the royalties from the sale of Principles in case his book reduced sales

of Cooke's "Industrial Management," had it ever appeared. See Edwin A. Locke, "The Ideas of Frederick W. Taylor: An Evaluation," Academy of Management Review 7 (January 1982): 21-22. This is a noteworthy article, in addition to its comments on the Wrege-Stotka contentions, for its re-evaluation of Taylor's belief in the primacy of money in motivating workers; see ibid., 16-19.

6. Copley, Taylor, 2: 373. Nelson, Taylor, 181-182. Bruce Sinclair, A Centennial History of The American Society of Mechanical Engineers, 1880-1980 (Toronto: University of Toronto Press, 1980), 84, 93, 100.

7. Copley, Taylor, 2: 378-381.

8. LDB to Ray Stannard Baker, December 3, 1910, Letters of Louis D. Brandeis. Volume 2 (1907-1912): People's Attorney, ed. Melvin I. Urofsky and David W. Levy (Albany: State University of New York Press, 1972), 390-391. Copley, Taylor, 2: 381-382. Nelson, Taylor, has suggested that the publication of The Principles of Scientific Management "marked [Taylor's] emergence as a 'progressive'"(111); see also 169 and chapter 8, esp. 198.

9. Albro Martin, Enterprise Denied: Origins of the Decline of American Railroads, 1897-1917 (New York:

Columbia University Press, 1971), 221-222; Martin does not cast Brandeis in a very favorable light. See also Thomas K. McCraw, "Rethinking the Trust Question," in Regulation in Perspective: Historical Essays, ed. Thomas K. McCraw (Boston: Harvard University Press, 1981), 25-55. Haber, Efficiency, chapter 1, attributes considerable influence to Taylor's compulsive personality; Martin, Enterprise, 212, refers to the "Darwinian aspects" of Taylor's thought.

10. Explanations for this alliance fall principally into two catagories. The first builds upon Richard Hofstadter's interpretation of Progressive reformers as members of an old elite attempting to salvage their deteriorating social position. By-passed by industrialization, challenged by powerful unions and wealthy corporate businessmen, Progressives like Brandeis searched for ways to preserve their social status: whether by advocating the rule of experts or demanding the dissolution of large aggregations of capital. See Richard Hofstadter, The Age of Reform: From Bryan to FDR (New York: Vintage Books, 1955), chapter 4. Following this model of status decline, Samuel Haber has suggested that the synthesis of scientific management and Progressivism "provided a standpoint from which those who had a declared allegiance to democracy could resist the leveling tendencies of the

principle of equality," and thus constituted "a social outlook for the accomodation of business, in which ultimate authority lies on top, to the environment of political democracy, in which ultimate authority lies below" (Haber, Efficiency, xii, xi).

Monte Calvert, building on Haber, characterizes Taylor as a shop-culture engineer, versed in the ways of small, entrepreneurial shop practice, attempting to bridge the gap between old and new forms of industrial organization: "scientific management...was a way for the engineer as engineer to retain decision-making powers and to cope with the largeness, impersonality, and corporateness which was coming to characterize the old shop world they knew." See his The Mechanical Engineer in America, 1830-1910: Professional Cultures in Conflict (Baltimore: Johns Hopkins Press, 1967), 242, 243, 279, and passim.

In a similar interprestation Edwin Layton emphazises the development of an ideology of engineering; this ideology, grounded on the idea of professionalism, stressed the autonomy of engineers, colleagual control of their professional work, and social responsibility. Engineers used professionalism as a means of maintaining their status as corporate bureaucracies absorbed them. "The engineer's problem has centered on a conflict between

professional independence and bureaucratic loyalty," Layton reveals. Taylor, in this scenario, "showed in a concrete manner how engineers might resolve their status dilemmas" by developing scientific laws of management which endowed engineers with the ability to solve crucial social problems. See his The Revolt of the Engineers: Social Responsibility and the American Engineering Profession (Cleveland: Case Western Reserve University Press, 1971), 1, 4, 134, and chapter 6.

The second type of explanation locates the reform impulse in more specifically biographical circumstances--concentrating on issues of reputation or clientele--rather than broad structural transformations. Daniel Nelson has looked closely at the actual implementation of scientific management. He concludes that Taylor had little actual interest in the "labor problem"; instead, he used the wide-spread concern over worker unrest to further his career as a consulting engineer. Taylor allied with Brandeis, Nelson infers, because the publicity generated by the Rate Case bolstered his faltering position within the ASME. See Daniel Nelson, Managers and Workers: Origins of the New Factory System in the United States, 1880-1920 (Madison: University of Wisconsin Press, 1975), 55 and chapter 4, esp. 60; Nelson, Taylor, ix, 174-176; see also Daniel Nelson, "Scientific Management, Systematic

Management, and Labor, 1880-1915," Business History Review 48 (Winter 1974): 479-500.

In a similar vein, Allon Gal has argued that Brandeis's position as a social outsider in Boston facilitated his transformation from Mugwump to Progressive. The city's social elite owned and operated most large businesses, including transportation and banking concerns. Brandeis did not have social access to the people who controlled these enterprises. Instead, the owners of small businesses formed the bulk of his clientele; their interests were often opposed to those of Boston's business elite. Brandeis's antipathy toward the railroads and investment bankers flowed naturally from those of his clients. Building on Gal's analysis Thomas McCraw contends that Brandeis's use of scientific management was simply part of his "talent for finding the winning ground" in an effort to further his reputation. See Allon Gal, Brandeis of Boston (Cambridge: Harvard University Press, 1980), chapters 1, 2, and 4; and Thomas K. McCraw, Prophets of Regulation: Charles Francis Adams, Louis D. Brandeis, James M. Landis, Alfred E. Kahn (Cambridge: Belknap Press of Harvard University Press, 1984), 87.

1. Philip Scranton, and Walter Licht, Work Sights: Industrial Philadelphia, 1890-1950 (Philadelphia: Temple University Press, 1986), 199; Nelson, Managers, 7. Layton, Engineers, 3, 29, 33, 35. Sinclair, Centennial, 77.

2. "Frederick Winslow Taylor," Trans.ASME 28 (December 1906): 27. My information on the entrepreneurial firm is found in Richard Edwards, Contested Terrain: The Transformation of the Workplace in the Twentieth Century (New York: Basic Books, 1979), 26-32 and Nelson, Managers, chapter 3. The quotation is from ibid., 40. Frederick W. Taylor, "Testimony before the Special House Committee," in Scientific Management: Shop Management, The Principles of Scientific Management, and Testimony before the Special House Committee (New York: Harper and Row, 1947), 113.

3. Nelson, Taylor, 33-35, and "Taylor," Trans.ASME 28 (December 1906): 27-28. For a discussion of the distinction between line and staff functions, see Melville Dalton, "Conflicts Between Staff and Line Managerial Officers," American Sociological Review 15 (June 1950): 342-343.

4. Men like Sellers transmitted to Taylor the ideals of the philosopher mechanic, to borrow Bruce Sinclair's

phrase. Tracing its roots back to the founding of the Franklin Institute in Philadelphia in 1824, the philosopher mechanic was the embodiment of the union of technology and republicanism. During the 1820s Jefferson's yeoman made an important transition from the farm to the workshop, achieving a tenuous synthesis of democratic ideals with applied scientific knowledge. Bruce Sinclair has suggested that Americans "saw in this combination the potential for political freedom, the end of class privilege, and a basis for equal economic opportunity.... The increasing use of machinery in manufacturing processes only heightened ambitions for the future. Inventiveness lightened the burden of labor, increased productivity, and made goods cheaper. It also elevated the condition of the laborer and raised his standard of living." Science for the philosopher mechanics of Philadelphia lit the path of progress. The esoteric knowledge of the European aristocracy would be replaced in America with useful knowledge, available to anyone who would apply it. Science meant "systematic learning about nature, pursued in a rational manner and transmitted openly." The mechanic possessing scientific knowledge could recognize more readily innovations that would result in real gains in efficiency and progress: "He would, in fact, be able to escape that cycle which had limited

craftsmen for centuries, that need to rediscover the same truths every generation. Technical knowledge would become cumulative, and that meant progress" (Bruce Sinclair, Philadelphia's Philosopher Mechanics: A History of the Franklin Institute, 1824-1865 (Baltimore: Johns Hopkins University Press, 1974), 1-3, 14-15).

Although this philosophy had changed somewhat between the age of Jackson and Taylor's entry into industry, the same spirit of community pervaded the shop culture of the 1880s. "One function of the shop culture was the sharing of information," observes Calvert. "Machine shops exchanged information (particularly in such machine-tool centers as Philadelphia) to an extent unthinkable in competitive industries which sold to the general consumer on the open market." When a new generation of mechanics--including William Sellers--took over the Franklin Institute in the 1860s they achieved an even closer association between scientific knowledge and industry. They created an industrial environment that gave the mechanical engineer room to grow and expand his expertise while maintaining profitable enterprises and a sense of collective advancement. "These men gave new meaning to the old idea that technical progress would flow from a union of theory and practice," Sinclair avers. "Industrialists like...Sellers had a firm faith in the

practical understanding which on-the-job training provided but an equally deep distrust in rule of thumb methods." They developed a new synthesis of theory and practice in which "'theory' defined a body of engineering knowledge and the ability to use it; ...'practice' meant the rational manipulation of power and materials in an industrial context." By this synthesis they transformed science into the tool of a technical community serving the needs of industry and, consequently, the whole community (Calvert, Engineer, 7; Sinclair, Mechanics, 309, 318, 322, 324, 325).

5. For a discussion of shop culture, see Calvert, Engineer, passim. Copley, Taylor, 1: 221, 151, 152. Taylor's sympathies with shop-culture ideology can be seen in the following examples. Coleman Sellers, William Sellers's cousin and another shop-culture elitist, in his presidential address to the ASME in 1887 extolled the benefits of cutting one's teeth in the shop along side the workmen. "Must a mechanical engineer of necessity be a master workmen?" he asked.

> I know of some very worthy engineers who are making their mark in the world, who are themselves very clumsy in the use of their hands, and I doubt if they have ever worked at the bench. I know they would have been better for

> more hand training. Personally, I do not know how to separate the engineer from the skillful workman.... The man who is ready in the use of tools, can not only direct workmen more intelligently and systematically, he can also appreciate the value of the work done for him and be nearer to the workmen and better fitted to deal justly with them.

Taylor demonstrated his affinity with these sentiments in comments he made during an ASME discussion in 1886. When the author of an article on engineering education suggested that a year of training in a school shop would equal seven years in factory shop, Taylor protested vigorously:

> I think one year of actual service in the machine shop would in certain respects supplant twenty years of practice in a school shop. Probably the majority of those who go through a practical course of that sort intend to become masters; that is, they would not intend to remain workmen, and it would seem to me that in the course in the school shop the boy misses, perhaps, the one thing which will afterward be of the greatest use to him in his experience with men; that is the knowledge of the character

> of the men with whom he is dealing. He learns thoroughly the feeling of one student toward another and of a student toward a professor, but he fails to appreciate properly the feeling of apprentices toward their teachers, of workmen toward their foremen, and of foremen to their employees, which will enable him afterwards to manage men successfully. I think that no training whatever in a manual school can give a man this experience, which is more valuable than any manual dexterity which he can attain, and which he never can get if he starts at the other end as foreman and attempts to work down. He can only have it by passing through the mill himself; getting there at seven in the morning and leaving at six, and being knocked about to a certain extent as an apprentice in the shops.

Nineteen years later Taylor made a similar criticism of an apprentice system for college-trained engineers. During their college years young men concentrated on absorbing information; but in the factory, production, not the collection of more knowledge, would constitute the principal activity of the engineer. "Next in importance to learning how to work," Taylor added

> ...comes the necessity for the young graduate to

> become intimately acquainted with the view point and methods of thought of the great mass of mechanics who are working for their living. The college man should expect some day to be a leader, and to direct the work of other men, and unless he learns how to talk with workmen on their own level; how to successfully compete with them in doing every-day, monotonous work; and unless he acquires a certain respect and kindly regard for these men, his chances of ever becoming a successful leader are comparatively small.

The above quotations are drawn from Coleman Sellers, "President's Address, 1886," Trans.ASME 8 (June 1887): 681, and the "Discussion" sections of Calvin M. Woodward, "The Training of a Dynamic Engineer in Washington University, St. Louis," Trans.ASME 7 (May 1886): 771, and John Price Jackson, "College and Apprentice Training: The Relation of the Student Engineering Courses in the Industries to the College Technical Courses," Trans.ASME 29 (1907): 498, 499.

6. Calvert, Engineer, 8.

7. Haber, Efficiency, 9. Copley, Taylor, 1: 117, and Nelson, Taylor, 33. Taylor came from a prominent

Philadelphia family. His father had a successful career as a lawyer and had hoped Taylor would follow in his foot steps. His mother, who apparently exerted a powerful influence on him, was "among the earliest of the suffragists, and in 1842, when only twenty, she accompanied Lucretia Mott to London as a delegate to the International Anti-Slavery Convention. She also associated with such prominent abolitionists as William Lloyd Garrison and Charles Sumner." His father, a sixth generation American, came from solidly Protestant stock. His mother was a seventh generation American of Quaker descent; she could claim that one of her relatives landed at Plymouth Rock in 1620. They educated Taylor in private schools; from Exeter he would go on to Harvard, they hoped. He passed the entrance examinations with flying colors, only to develop severe eye troubles that forestalled his matriculation (Copley, Taylor, 1: 41, 27).

8. Dorothy Ross, "Liberalism," in Encyclopedia of American Political History: Studies of the Principal Movements and Ideas, ed. Jack P. Greene (New York: Charles Scribners' Sons, 1984), 2: 754.

9. Copley, Taylor, 1: 191. The attitudes of the engineers toward the labor problem can be found in W.E. Partridge, "Capital's Need for High-Priced Labor,"

Trans.ASME 8 (November 1886): 269-275, "Discussion": 275-294, and "Topical Discussions and Interchange of Data, No. 259-49: The Labor Problem," Trans.ASME 8 (June 1887): 723, 649-662. The seminal work on the role of the engineer in addressing the labor problem was Henry R. Towne, "The Engineer as an Economist," Trans.ASME 7 (May 1886): 428-432; "Discussion": 469-488. Towne's call to engineers to put their minds to the labor problem reveals that line and staff distinctions had yet to be applied to the engineer's various roles: "...[the engineer's] functions...include the executive duties of organizing and superintending the operations of industrial establishments, and of directing the labor of the artisans whose organized efforts yield the fruition of his work" (428). Papers presenting incentive-wage systems included William Kent's "A Problem of Profit Sharing" in 1887 and Frederick A. Halsey's "The Premium Plan of Paying Labor" in 1891. Taylor addressed these other wage programs directly in papers he gave in 1895, 1903, and in The Principles of Scientific Management, published in 1911. On this see Copley, Taylor, 1: 400-406.

10. Nelson, Taylor, 48, 53-54. Copley, Taylor, 1: 388, 387.

11. Nelson, Taylor, 53.

12. Frederick W. Taylor, "A Piece-Rate System, Being a Step Toward a Partial Solution of the Labor Problem," Trans.ASME 16 (June 1895): 856, 858, 861, 862.

13. Ibid., 864, 872-873.

14. This statement requires a clarification of the chronology of Taylor's career. After leaving MIC in 1893 he embarked on his consulting career; see "Taylor," Trans.ASME 28 (December 1906): 28, and Copley, Taylor, 1: 386-396. I see this move as an expression of his desire for independence after feeling a lack of professional regard at MIC. Nelson, Taylor, 58-59, suggests that "A Piece Rate" was an advertising mechanism for Taylor, intended to generate interest in his abilities and eventually to win him consulting jobs--a strategy which worked: "'A Piece Rate System' was Taylor's first public relations coup, a stimulus to his consulting career, and a model for his later writings. He soon obtained new clients and recouped much of his personal wealth. By mid-1896 he could write that he had made more money in the previous twelve months than in any other year" (59).

15. "Taylor," Trans.ASME 28 (December 1906): 28; Nelson, Taylor, 54-55; Copley, Taylor, 1: 390-391. I offer the term "scientific liberalism" as a means to understanding the rarified passages Taylor occasionally dropped into the

middle of what were otherwise technical papers. Without considering this specifically philosophical project simultaneously with Taylor's technical and managerial objectives, the view Taylor expressed in this pithy paragraph makes little sense:

> In concluding let me say that we are now but on the threshold of the coming era of true cooperation. The time is fast going by for the great personal or individual achievement of any one man standing alone and without the help of those around him. And the time is coming when all great things will be done by the cooperation of many men in which each man perfoms that function for which he is best suited, each man preserves his own individuality and is supreme in his particular function, and each man at the same time loses none of his originality and proper initiative, and yet is controlled by and must work harmoniously with many other men.

In this statement Taylor incorporated important elements of his past with his system for the future. The underlying motivation for his reform measures, I believe, was the incorporation of the key elements of shop culture--and, ipso facto, the class relations of the days of the entrepreneurial firm in Philadelphia--to the large scale

industrial world that grew up in the late nineteenth and early twentieth centuries. The quotation is from Frederick W. Taylor, On the Art of Cutting Metals (New York: American Society of Mechanical Engineers, 1907), 29. Taylor quoted this passage in an apocalyptic fashion toward the end of The Principles of Scientific Management; see Taylor, "Principles," in Scientific Management, 140-141.

16. Taylor, "Shop Management," in Scientific Management, 19, 20, 21.

17. Taylor, "Principles," in Scientific Management, 123; Drury, Scientific Management, 109; and Taylor, "Shop Management," in Scientific Management, 104-105 and passim, 143, 146. Frederick W. Taylor, "The Principles of Scientific Management," Dartmouth College Conferences, First Tuck School Conference, Addresses and Discussions at the Conference on Scientific Management Held October 12, 13, 14, 1911 (Easton: Hive Publishing, 1972), 52-53. Cf. James M. Dodge, "A History of the Introduction of a System of Shop Management," Trans.ASME 27 (May 1906): 723. Copley, Taylor, 1: 303.

18. See Taylor, "Principles," in Scientific Management, 135; Nelson, "Scientific Management," 496-497; Taylor, "Shop Management," in Scientific Management, 94; Taylor,

"Testimony," in Scientific Management, 43. Nelson, Taylor, 149.

19. Alfred D. Chandler, Jr., The Visible Hand: The Managerial Revolution in American Business (Cambridge: Harvard University Press, 1977), 277. Calvert, Engineer, 278. Joseph A. Litterer, "Systematic Management: Design for Organizational Recoupling in American Manufacturing Firms," Business History Review 37 (Winter 1963): 387. Dalton, "Staff and Line," 342-343.

20. Although the following quotation applies to the factory environment of the late 1940s, it captures the tension between Taylor and the line managers against whom he struggled at Bethlehem and elsewhere:

> Since the line officer regards his authority over production as something sacred, and resents the implication that after many years in the line he needs the guidance of a newcomer who lacks such experience, an obstacle to staff-line cooperation develops the moment this sore spot is touched. On the other hand, the staff officer's ideology of his function leads him to precipitate a power struggle with the line organization. By and large he considers himself as an agent of top management.

> He feels bound to contribute something significant in the form of research or ideas helpful to management. By virtue of his greater education and intimacy with the latest theories of production, he regards himself as a managerial consultant and an expert, and feels that he must be, or appear to be, almost infallible once he has committed himself to top management on some point. With this orientation, he is usually disposed to approach middle and lower line with an attitude of condescension that often reveals itself in the heat of discussion. Consequently, many staff officers involve themselves in trouble and report their failures as due to 'ignorance' and 'bull-headedness' among these line officers. [From Dalton, "Staff and Line," 348.]

Taylor began his managerial career before line and staff were clearly differentiated functions. Not only did he have authority over the shop--as a line officer--but needed and acquired technical training in order to advance to positions of greater responsibility--technical training that by 1910 was rapidly becoming associated with engineers who fulfilled staff functions while having little contact with workers on the shop floor. Taylor tried

to resist this dissolution of functions and to endow the scientific manager with the control over production associated with line officers and the technical expertise associated with staff engineers. On this point, see also Calvert, Engineer, 278-279.

21. Taylor, "Principles," 28; Copley, Taylor, 1: 10-11. See also Calvert, Engineer, 242.

22. So, for instance, when Taylor talked about scientifically-fixed piece rates, he tended to obscure--only, I believe, because he thought it was self-evident--two different phases of rate setting. First, the rate department determined the maximum possible output for a given type of work. Second, a series of experiments was conducted to determine how much a man would have to be paid in order to maintain that level of production on a daily basis. He explained this procedure to the Senate Committee on Industrial Relations in this manner:

> I went to a group of five or six of those [workmen] and said, 'I would like you to go on such and such a kind of work and work for a premium of, we will say, 15 per cent added to your wages.' I went to other groups at other kinds of work and offered 20 and 25 and 30 and 35 per cent. I said to these men, 'Just work

> ahead at this and see whether you like it better than you did [under the previous method of work and pay].... See whether this suits you....'
>
> I should say one-third of the 15 per cent men stuck to it and the others wanted to go back. When it came to the 20 per cent men a larger number of them stuck and the others went back....
>
> When we got to the 30 per cent men all but one stuck, and at 35 per cent every man stuck and was satisfied with the new thing. There is an indication of a law, and you want to do justice.... The fact that when we got up as high as the 30 and 35 per cent men all of them stuck, was an indication that at least we were doing justice to those men; showing we satisfied some of them.... When it comes to a certain kind of work, you have to pay 100 per cent in order to be just and fair. That is not a question of collective bargaining. It is a scientific investigation.

The increase in wages under the piece-rate system would therefore be subject to local wage conditions and the attitude of the workers (U.S. Congress, Senate Committee on Industrial Relations, "Testimony of Mr. Frederick W.

Taylor, April 13, 1914," Final Report and Testimony Submitted to Congress, 64th Cong., 1st sess., S.Doc. 415 (Serial 6929), 788-789; Taylor, "Piece-Rate," 873).

23. Senate Committee on Industrial Relations (Serial 6929), 804, 805, 806. This emphasis on equality before the law might help explain the contention by Ray Stannard Baker (and Frank Copley and Louis Brandeis) that Taylor was a man of democratic sentiments; it would be more accurate, however, to refer to his proclivities as meritocratic. See Ray Stannard Baker, "Frederick W. Taylor--Scientist in Business Management," American Magazine 71 (March 1911): 566.

24. Taylor, "Shop Management," in Scientific Management, 190. Taylor generally kept his references to the laws of engineering to a favorite few; these included pig-iron handling (derived from the famous "Schmidt" experiments), shovelling, bricklaying, inspecting ball-bearings, and cutting metals. A discussion of these can be found in "Principles," 40-120.

That these laws, and hence Taylor's project, were not value-free is implicit in the preceeding analysis: Taylor abstracted from his experiences with William Sellers and other shop-culture elitists a vision of legitimated inequality that he then tried to translate into scientific

terms, with various modifications. The rise from apprenticeship in the shop-culture environment was not based solely on natural ability or character; this was especially true in Taylor's case, since his social connections with the owners assured his rapid ascension beyond the position of day laborer. The function of that ritualized process was symbolic: lending the appearance of legitimacy to the consequent subordination of the worker to the manager. At least one of the objectives of making management scientific was to replace the ritual of apprenticeship with the "impartiality" of science in order to justify the subordination of workers to managers. As Jurgen Habermas has suggested, "...the 'rationalization' of the conditions of life is synonymous with the institutionalization of a form of domination whose political character becomes unrecognizable: the technical reason of a social system of purposive-rational action does not lose it political content." This quotation is from Jurgen Habermas, "Technology and Science as 'Ideology,'" in Toward a Rational Society: Student Protest, Science, and Politics, trans. Jeremy J. Shapiro (Boston: Beacon Press, 1970), 82. Although Habermas is not refering specifically to Taylor in this article, the process he describes certainly applies to Taylor's attempt to develop the laws of engineering.

25. Frederick W. Taylor, "Laws versus Public Opinion as a Basis for Management," Lecture delivered before Y.M.C.A. of Philadelphia, October 12, 1914 (Samuel C. Williams Library, Stevens Institute of Technology, Hoboken, New Jersey, Photocopy), 1, 4, 7-8.

SECTION II

1. James Willard Hurst, The Growth of American Law: The Law Makers (Boston: Little, Brown, 1950), 366; Tocqueville quoted in ibid., 251, 250-251. Margali Sarfatti Larson, The Rise of Professionalism: A Sociological Analysis (Berkeley: University of California Press, 1977), 283.

2. Hofstadter, Reform, 156-157. Larson, Professionalism, 167, 169; I borrow the term "transcendent" from Larson.

3. Edward F. McClennen, "Louis D. Brandeis as a Lawyer," Massachusetts Law Quarterly 33 (September 1948): 6. Gal, Brandeis, chapter 1, vii-viii.

4. Ibid., 11. McClennen, "Brandeis," 10.

5. Gal, Brandeis, 30, 29-31. Stephan Thernstrom, The Other Bostonians: Poverty and Progress in the American Metropolis, 1880-1970 (Cambridge: Harvard University

Press, 1973), 113. Thernstrom presents a somewhat more sanguine analysis of the career prospects of Jews in Boston than does Gal (see Thernstrom, Bostonians, chapter 7); but Gal's point is still well-taken: though Jews might be relatively successful, their access to certain types of clientele was nevertheless limited. Arthur A. Goren, "Jews," in Stephen Thernstrom, ed., Harvard Encyclopedia of American Ethnic Groups (Cambridge: Harvard University Press, 1980), 571-572.

6. McCraw, "Rethinking," 25. Gal, Brandeis, 40, 47-48, 11. McClennen, "Brandeis," 10.

7. McCraw, Prophets, 87; Gal, Brandeis, 15-16, 18-22, 7, 51. McCraw, "Rethinking," 25-26; McCraw suggests that Brandeis's connections with these small and peripheral businessmen made him a "petite bourgeoisie" lawyer, rather than the people's lawyer (55).

8. Alpheus Thomas Mason, Brandeis: A Free Man's Life (New York: Viking Press, 1946), 70, 71. Letters of Louis D. Brandeis. Volume 4 (1916-1921): Mr. Justice Brandeis, ed. Melvin I. Urofsky and David W. Levy (Albany: State University of New York Press, 1975), 33-34, ed. note 2. See also "Brandeis's first brief argued before the Supreme Court of the United States when he appeared on behalf of the Wisconsin Central Railroad

against Price Country et. al. (October term, 1889)," Document 6, Public Papers of Louis Dembitz Brandeis in the Jacob and Bertha Goldfarb Library of Brandeis University, compiled and subjects identified by Abram L. Sachar and William M. Goldsmith (Cambridge, Mass.: General Microfilm, 1978).

9. Jerold S. Auerbach, Unequal Justice: Lawyers and Social Change in Modern America (New York: Oxford University Press, 1976), 18-21, 21-22, 62-65. Hurst, American Law, 287, 289. For a description of the Nomination Hearings see Auerbach, Unequal, 65ff.

10. Jerold S. Auerbach, "Enmity and Amity: Law Teachers and Practitioners, 1900-1922," in Law and American History, ed. Donald Fleming and Bernard Bailyn (Boston: Little, Brown, 1971), 551, 556, 570, 571. LDB to Samuel Dennis Warren, May 30, 1879, Letters of Louis D. Brandeis, Volume 1 (1870-1907): Urban Reformer, ed. Melvin I. Urofsky and David W. Levy (Albany: State University of New York Press, 1971), 35.

11. Auerbach, Unequal, 62. Hofstadter, Reform, 161-162, emphasis in original. The Bar's apparent loss of independence was lamented by a wide variety of commentators at the turn of the century: from Theodore Roosevelt to John Dos Passos to Woodrow Wilson to A.A. Berle; see Auerbach,

Unequal, 31-35, Hofstadter, Reform, 158-164, and Hurst, American Law, 354-356.

12. Brandeis's future law partner, Edward McClennen, noted that "Brandeis entered on the practice of law doubtless with the predominant objective necessarily to earn his own living in a respectable way, and so to pull his own weight in the boat. The interest in public affairs and in the general betterment of the community about him, which became so intense in later years, had nothing in it abnormal in the [eighteen] eighties. He was in the common sense of it just a practising [sic] lawyer of the first water and an unusually attractive and cultured gentleman" (McClennen, "Brandeis," 10). LDB to William Harrison Dunbar, February 2, 1893, BL 1: 107, 108, 109. LDB to William Harrison Dunbar, August 19, 1896, BL 1: 124-125. Mason, Brandeis, 86-87. Hurst emphasizes that after 1870 the growing complexity of the demands business made upon law fomented a change in the role of the lawyer from advocate to counselor. Thus Brandeis's concern with this function was not solely his own, and was rather part of a larger trend; see Hurst, American Law, 302-303. Brandeis, however, used his role as advisor as a platform from which to criticize what he saw as the subordination of the lawyer to the demands of the corporation--the instrumentalization of the profession. He viewed the

large corporation as antithetical to the entrepreneurial dimensions of the law. The idea that the lawyer would exercise influence within big business only meant that he had reduced himself to the level of a powerful employee.

13. Louis D. Brandeis, Business--A Profession (Boston: Small, Maynard, 1914), 331, 333-334 (Brandeis remarked here on James Bryce's 1885 reflections on Tocqueville's assessment of the American bar: "Taking a general survey of the facts of to-day, as compared with the facts of sixty years ago," Bryce wrote, "it is clear that the Bar counts for less as a guiding and restraining power, tempering the crudity or haste of democracy by its attachment to rule and precedent, than it did."), 338-339, 335-336, 337. Review of BL by Edward A. Purcell, Reviews in American History 1 (June 1978): 256.

14. In the event that the interests of the community became identified with the success of a specific business, a particular railroad for instance, the public good could only be served if one worked for that business; in that case, the public would need to secure some formal means of control over the business in order to insure control over its own welfare, as in the examples below.

Richard Hofstadter suggested a dynamic similar to the one I see at work here. "The newly rich, the grandiously

or corruptly rich, the master of great corporations, were bypassing the men of the Mugwump type--the old gentry, the merchants of long standing, the small manufacturers, the civic leaders of an earlier era.... In a strictly economic sense these men were not growing poorer as a class, but their wealth and power were being dwarfed by comparison with the new eminences of wealth and power. They were less important, and they knew it" (Reform, 137). Quoting Alfred Chandler Hofstadter added that "With very rare exceptions, all these men had been and continued to be their own bosses. As lawyers, businessmen, and professional men, they worked for themselves and had done so for most of their lives" (ibid., 144). What Hofstadter called the "status revolution" brought on by the rise of big business I view as a restructuring of the relationship between independence and power. At stake in this restructuring was not so much status, as the continuity of the entrepreneurial dimensions of the legal profession. Corporate lawyers had considerable power, but little apparent independence; professors were independent enough to view the threat to society caused by big business, but they were not practicing lawyers. And because Brandeis inherited a professional philosophy that connected the independence of the lawyer with the preservation of democracy, he gradually began to conceive of his profes-

sional independence as a measure of democracy.

15. Gal, Brandeis, 23, 49, 52-54. LDB to the Editor of the Boston Evening Transcript, April 30, 1897, BL 1, 128; LDB to Albert Enoch Pillsbury, May 20, 1897, BL 1, 131; see also LDB to William Ames Bancroft, May 20, BL 1, 130-131; ed. note 2, BL 1, 138-139.

16. Ed. intro. to Section 5, "Brandeis and the Railroads," Papers, 3. U.S. Congress, Senate Subcommittee of the Committee on the Judiciary, "Testimony of Edward F. McClennen, Resumed, March 4, 1916," The Nomination of Louis D. Brandeis to be an Associate Justice of the Supreme Court of the United States, 64th Cong., 1st sess., 1916, 994, 995.

During the hearings concerning the merger held by the Massachusetts Committee on Railroads Brandeis was asked whether he objected to the New Haven-Boston & Maine merger as a matter of principal; he replied:

> I believe within limits in consolidation. If I might state the general principle which I may go on, it would be this: There is for the community a certain limit of greatest efficiency, commercial efficiency, and if there are no other considerations that general limit of commercial, industrial efficiency is the limit which one may

> go to. But I believe, on the other hand, that it is extremely important that the community should not be subject to a complete monopoly in any branch of business and that, applying it to this particular case, we have here a proposed combination which does not mean merely a combination of railroads, but which through its scope practically covers all transportation, or is in danger of doing so ("Testimony before the Committee on Railroads of the Massachusetts General Court, Hearing on Purchase of Stock in the Boston and Maine Railroad, June 1907," Document 100, Papers, 18).

As to the Governor's suggestion that a supervisory board be established to monitor the consolidated railroad, Brandeis doubted whether "you can create a board of control which would be great enough to safeguard" the community's interests. "It seems to me that the only way to safeguard them is to create the possibilities of some free action on the part of some other corporation." In other words, the government of Massachusetts was simply too small to regulate a giant like the New Haven-Boston and Maine; only market competition would keep it under control while providing the community with a quality transportation system (ibid., 19-20, and "'Louis D. Brandeis Accepts

Mellen's Challenge And He Describes the Trouble with the New Haven System,' Boston Sunday Post (December 1, 1912)," Document 112, Papers).

17. See ed. note 2, BL 1, 139-140, and Richard Abrams, "Brandeis and the New Haven-Boston & Maine Merger Battle Revisited," Business History Review 36 (Winter 1962): 429, 426, and passim.

18. "The Anti-Bar Law--The Twenty-five Feet Law, Argument of Louis D. Brandeis, Esq,. before the Joint Committee on Liquor Law of the Massachusetts Legislature, Boston (February 27, 1891)," Document 11, Papers, 26, 19, 20-21.

Brandeis's willingness to regulate business should not be interpreted as antipathy toward business, big or small. He valued the corporate combination, viewing it as an integral part of America's economic development. In his notes for his 1895-1896 Business Law lectures at MIT he gave the following appraisal of the corporate enterprise:

> Without this instrument of business, it is difficult to conceive how the great industrial development of the present century would have been possible. The wealth, or at least the courage, of single individuals would not have been equal to the task of constructing our rail-

> roads, of extending the system of telegraphs over the continent, of erecting the gas and water works, of establishing banks and insurance companies and the huge factories. In many of these enterprises great aggregations of capital were indispensible; in many they were desirable as a means of lessening the cost of services rendered. Perhaps in a more marked degree the value of aggregations of capital became apparent in the manufacturing industries, where the cost of production was seen to diminish greatly with the increase in production.

He noted that while the corporation had existed for some years, recently it had been used as a means of limiting competition ("Lecture Notes for a course on Business Law...at Massachusetts Institute of Technology in 1893 [1895-1896]...," Document 9, Papers, 15-16). The most significant threat of size lay not in its potential inefficiency, but in its growing beyond the salutary constraints of the market and the collective influence of its employees.

> Every business requires for its business health the memento mori of competition from without. It requires likewise a certain competition from within, which can exist only where

> the ownership and management, on the one hand, and the employees, on the other, shall each be alert, hopeful, self-respecting, and free to work out for themselves the best conceivable conditions.
>
> The successful, the powerful trusts, have created conditions absolutely inconsistent with these--America's--industrial and social needs. It may be true that as a legal proposition mere size is not a crime, but mere size may become an industrial and social menace, because it frequently creates as against possible competitors and as against the employees conditions of such gross inequality, as to imperil the welfare of the employees and of the industry.

When a business became so large that its owners could not be held accountable for its activity, there developed a situation particularly dangerous in a democracy. Control over vast resources should involve a measure of social responsibility. When ownership became separated from control, however, the burden of that responsibility became diffused; such was the danger of the trust:

> The trust is not merely a capitalistic control of men. It is the worst form of capitalistic control. One hundred and fifty thousand persons

> are said to be interested as stockholders in the Steel Trust. The Steel Trust is a conspicuous instance of ownership separated from responsibility. The Steel Trust presents a condition similar to that which led to the demoralization of Ireland--the condition of absentee landlordism. The managers may be good men and true, but the permanent separation of ownership from control must prove fatal to the public interest. The responsibility of ownership is lacking. If there had been responsibility of ownership in the Steel Trust it would have been impossible that with the huge profits of the corporation...men would have been compelled to work twelve hours a day, seven days in a week, and at such low wages that even if they had worked 365 days in a year, seven days a week, the year's earnings would have been less than was necessary...for the support of a man, his wife, and three children with a minimum of decency, alas!

Trusts posed special problems to a democracy because they represented uncontrolled economic power. The "excesses of capital" so apparent in the activity of the trusts required that the lawyer apply his special skills to

balancing the interests of worker, stockholders, and the public (Louis D. Brandeis, The Curse of Bigness: Miscellaneous Papers of Louis D. Brandeis, ed. Osmond K. Fraenkel (New York: Viking Press, 1934), 106-107, 110-111; Brandeis, Profession, 338-339). This meant a creative approach to the law and to business; and while freedom of contract and consumer welfare were important elements of Brandeis's broad equation of social efficiency, he cautioned that "We must also remember that we are working here in America upon the problem of democracy, and we cannot successfully grapple with the problem of democracy if we are to confine our efforts to political democracy. American development can come on the lines on which we seek it, and the ideals which we have can be attained, only if side by side with political democracy comes industrial democracy" (Brandeis, Curse, 105, 140-141).

19. Gal, Brandeis, 51-52. Louis D. Brandeis, "Consolidation of Gas Companies and of Electric Light Companies, Argument on behalf of the Massachusetts Board of Trade before the Legislative Committee on Public Lighting...(March 9, 1905)," Document 30, Papers, 2, 11. On the sliding scale see LDB to Edwin Ross Warren, March 13, 1905, BL 1, 292-293, and Brandeis, Profession, 99-114.

20. Mason, Brandeis, 318. Martin, Enterprise, 195.

21. Drury, Scientific Management, 37-38; Evidence (Serial 5908), 2510. McClennen, "Brandeis," 20.

22. Ibid., 2510, 2624, 2511, 2622, 2623, and (Serial 5911), 5259. For Brandeis's comparison of the use of scientific management with the Boston Gas sliding scale see "'The Best Solution Is A Government Bureau,' The Engineering Magazine 42 (October 1911)," Document 111, Papers, 17.

23. Ibid. (Serial 5912), 5439, 5468, 5469; Drury, Scientific Management, 43. Gal, Brandeis, 143.

24. Brandeis, Profession, 313-14, 315, 318. Evidence (Serial 5908), 2302, 2624, and (Serial 5911), 5255. The Eastern Rate Case and the New Haven affair both involved government regulation of railroads; but Brandeis's strategy was very different in the two cases. The crucial difference between them was the size of government. Brandeis thought that the government of Massachusetts was too small to monitor the New Haven consolidation effectively. But the Rate Case decision demonstrated that the ICC had enough power to watch over corporate giants:

> The decision of the Interstate Commerce Commission denying the proposed advance in

> freight rate must be regarded as an event making strongly for conservatism. It has thoroughly justified the creation of the Commission and the endowing of it with great power. The fact that the case was decided in favor of the great mass of people as against the aggregation of capital must tend to relieve popular antagonism against the existing order of things. It will tend to convince the people that there is power in our Government to create a body which can successfully resist the demands of the great corporations, and it must therefore tend to allay not only hostility and suspicion, but the demand for the Government ownership of national monopolies (Louis D. Brandeis, "'A Victory for Conservatism,' Moody's Magazine 11 (March 1911)," Document 110, Papers, 164-165).

So pleased was Brandeis with the legal structure of the hearings, which placed the burden of proof of reasonability upon the railroad, that he suggested it as an amendment to the anti-trust laws; see "'La Follette, A Constructor,' Boston Common, (September 23, 1911)," Document 130, Papers, 2.

25. See Mason, Brandeis, chapter 21. "Arguments before the Interstate Commerce Commission, Hearings on 5% Rate

Case, Senate Document 466, 63rd Congress, 2nd Session, Vol. 14...," Document 114, Papers, 1, note 1. Copley, Taylor, 2: 375. I draw the conclusion that Brandeis consulted Taylor from the following: the Commission's letter to Brandeis requesting his assistance was dated August 15, 1913; Taylor wrote to Brandeis in November of that same year regarding a study he had made into freight handling costs. It seems plausible that he undertook those studies to assist Brandeis in the Five Percent Case. Brandeis did not undertake this as a pro bono case; Mason, Brandeis, 337, notes that he received over $12,500 for his services: a handsome sum for work on behalf of the public good.

26. Hurst, American Law, 371.

SECTION III

1. Brandeis, Profession, 2, 5. "Scientific management ideologies attempted to bestow upon the engineer...the crown of the entrepreneur" just as lawyers tried to preserve "the flickering flame of the entrepreneurial dream" (Larson, Professionalism, 143, 177).

2. Ibid., 28, 29. Daniel Bell, Introduction to The Engineers and the Price System, by Thorstein Veblen (New

York: Harcourt, Brace and World, 1963), 17.

3. "Testimony of Mr. Louis D. Brandeis, January 23, 1915," Senate Committee on Industrial Relations (Serial 6936), 7659, 7662.

4. Ibid., 7664. For Brandeis, there was "no such thing as a scientific distribution" of profits; neither did he think that "scientific management...is going to solve the human problems": two of the principal issues which Taylor intended his system to allay (ibid., 7675, and "Testimony of Mr. Louis D. Brandeis, April 13, 1914," Senate Committee on Industrial Relations (Serial 6929), 1002).

5. Daniel T. Rodgers, "In Search of Progressivism," in The Promise of American History: Progress and Prospects, ed. Stanley I. Kutler and Stanley N. Katz (Baltimore: Johns Hopkins University Press, 1982), 113-132.

6. See Bell, Introduction.

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