

Getting Down to Business: The Development of the Commercial Curriculum at the Wharton School in 1910

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From the times of the medieval Italians through the middle of the 19th century, apprenticeship had been the classic form of business education. Among the last important businessmen trained in this way, Joseph Wharton had spent two valuable years at the Waln and Leaming counting house learning accounting and general business procedures. However, as American business developed into industry, its leaders found themselves without the time needed to take on apprentices; while a prominent merchant had completed his daily tasks in a few hours, Wharton's interests in nickel, steel, and sundry other ventures demanded more time than Wharton had. If the next generation of business leaders were to receive a preparatory education, it would have to be done outside the business firm, in a separate institution. Numerous schools of bookkeeping sprang up to teach the rudiments of commerce, but little more. In 1881, in the hope of finding a more powerful way "to fit a young man for the struggle of commercial life, for wise management of a private estate, or for efficient public service," Joseph Wharton gave the University of Pennsylvania \$100,000 for a School of Finance and Economy. This endowment of the Wharton School brought the nation's institutions of higher learning into the business of training businessmen.

Wharton thought a liberal education necessary for all gentlemen, including those in business, and therefore placed his educational venture in a college. Collegiate engineering schools and their scientifically trained graduates had hoped to organize business education on this model. Now that the nation's schools of higher learning had adopted the "elective system," students could depart from the classical college course during their last years and pursue more pragmatic programs. The new School of Finance and Economy would be such an elected course, to follow upon two years of traditional studies. Although no other collegiate business course existed in the world, Joseph Wharton spent two years developing his plans; and when he finally presented his program, he outlined a curriculum in great detail. First, he specified instruction in the business procedures handed down from

master to apprentice since the days of the Italians: accounting and commercial law. Students should learn "the simplest and most practical forms of bookkeeping for housekeepers, for private individuals, for commercial and banking firms, for manufacturing establishments, and for banks, trusts, and governments." Wharton specified a "Professor of Elementary and Mercantile Law" to instruct students on the constitutional, statutory, and common law governing business operations. In addition, Wharton specified instruction in the knowledge, or "science," of economic affairs. He wanted instruction on the "meaning, history, and functions of money," including "how an essential attribute of money is that it should be hard to get." Another professor would teach "how industries advance in excellence, or decline, and shift from place to place"; finally, Wharton's plans called for instruction on "the history and practice of modern taxation."

When Wharton endowed the school in 1881, the University of Pennsylvania already offered the social science part of his curriculum. An associate of Wharton's from his campaigns for the tariff, Robert Ellis Thompson, was Penn's professor of social science and took on these responsibilities in the newly formed Wharton School. The school, however, had a problem in the business subjects. These courses had not been taught at the collegiate level, and the trustees of the University had to go outside the academic world to find a suitable professor. In the middle of the school's second year of existence, they appointed the sedate and conservative Albert S. Bolles as the world's first true professor of business. They named him Professor of Mercantile Law and Practice, in charge of all work in the field, and gave him a salary even greater than Thompson's.

Before his appointment Bolles had never served on a college faculty; but he came to his new post as a mature and experienced man of affairs with an impressive set of credentials. He began his career as a lawyer in Connecticut and soon became judge of the Court of Probate for the District of Norwich. He sat on the bench for six years before resigning to edit the local daily newspaper, the *Norwich Bulletin*. Upon becoming a journalist, he specialized in economic issues, a subject that had interested him his entire life. In 1880, after five years at the paper, Bolles resigned and became editor of *Bankers Magazine*, a journal that had already published many of his articles.

In the context of the 1880s the editors of major trade magazines had emerged as the nation's major surveyors of business rationality and were the closest approximation to a modern professor of business. These men served as information brokers, statistics collectors, industry analysts, history writers, guardians of morality, reformers, and general spokesmen to the industry and to the outside public. They had a bird's eye view of the industry, saw its common problems and the various attempts at solving them, and informed businessmen of what should be done.

Henry Varnum Poor, editor of the *American Railroad Journal*, became perhaps the best known of these business journalists through his history of American railroads, his statistical and analytical *Manual*, and his campaigns to reform railroad management and information reporting. While he edited the *Bankers Magazine*, Bolles also wrote a three-volume *Financial History of the United States* -- and led a campaign advocating greater public disclosure of bank statistics. Men in the field wrote to him asking for information on a variety of matters, including training in banking practice. When Harvard chose its first professor of economics, it not surprisingly chose the well-known editor of the *Boston Advertiser*, Charles F. Dunbar. Wharton's selection of Bolles made equal sense.

At Wharton Bolles taught business law and practice, but not accounting. As it was taught at the time, that subject did not demand Bolles's talents; and it was farmed out to one Chester N. Farr -- Wharton's first instructor of accounting -- in the 1883-84 academic year. Farr stood before Wharton's junior class, dictated at great length examples of normal accounting practice, and then drilled his students on this material. His instruction, however, was not a success. In 1885 Bolles even thought that the manner in which it was taught caused "grave injury to the school," and he recommended that "in view of the ill odor surrounding bookkeeping, at present in the University, to drop the study for a year until the students had somewhat forgotten how it had been mistaught." The board followed Bolles's recommendation, and in 1885-86, Wharton offered no course work in accounting.

As a former judge of probate, Bolles was admirably prepared to teach his students business law. Bolles went over with his students the legal aspects of contracts for sales, debt, partnership, insurance, shipping, and conveyancing real estate -- all matters familiar to medieval Italian merchants. In addition to law Bolles also taught an amorphous catchall subject, "mercantile practice." Bolles introduced his students to many of the various business "practices," including banking, merchandising, and transportation. But as the editor of *Bankers Magazine*, Bolles had particular knowledge and interest in finance and emphasized the field in his classes. In the 1883-84 academic year he offered special instruction in finance, using as textbooks elementary introductions to money and finance by two of the leading economists of the day, William Stanley Jevons and Henry Fawcett. Because no simple guide to the actual business of operating a bank remained in print, Bolles wrote *Practical Banking* for use in his courses after he arrived at Wharton. Under Bolles, Wharton students thus received instruction in the general tools of business not very different from those that the Italians had known.

Bolles had hardly set up shop when the school hired a dynamic young instructor in political finance and administration -- Edmund James -- who soon redesigned the Wharton program. James

had won a Ph.D. at the University of Halle and had returned to America inspired by the German organization of higher education. He introduced the German traditions of research, the seminar, the graduate school, and the commitment to in-depth, specialized study. While most of his attention was devoted to social science and public affairs, in 1885 he also presented a program to reform the business curriculum along specialized, German lines. In addition to the general training that every businessman required -- the accounting, law, and general business practice that Wharton then offered -- James also wanted to open programs to provide training in specialized business areas. He specifically mentioned "the great departments of business, such as banking, railroading, merchandising, manufacturing and other similar branches."

James's proposal pushed the newly established elective principle further than anyone at Penn had ever intended. The academy had just given up the grand unity of its curriculum to provide a place for schools such as Wharton. Now James advocated literally an infinite number of collegiate courses of study. He credited the recent diversification of education as the major cause of modern economic progress and claimed that greater specialization would further invigorate American society. The management of the nation's affairs would be taken out of the dull hands of uneducated "routinists" and placed into those of alert "professional students" who constantly searched for new opportunities and recognized them when they appeared. He expected that his School of Political and Social Science would soon achieve a status akin to schools of medicine and law, "except that it should insist on a higher grade of acquirement for admission."

At first Joseph Wharton looked with cold jealousy on James's effort to redesign his newborn school. He thought the proposed School of Political and Social Science "unlikely to be established, and if established, liable to disappoint its founders." The project, he sneered, simply required too much money and too much management. Joseph Wharton also saw in James's proposal a purpose for the school different from his own. "My object," he pointed out, was simply "to provide if possible a way for young men to fit themselves for the management of affairs -- to acquire sound knowledge of the principles of what is called 'business.'" But in five years, by 1890, James had won the founder over. Wharton even rhapsodized over the notion that to be "a doctor, a *doctus*, or learned man, is thus no longer to be a recluse separated from his fellow-men;" and that soon there could be such a "doctus" of "some service in trade, or finance or legislation, some organization of industry, some problem in social life."

In 1892 James again petitioned the provost to proceed with his design. But now James embellished his original proposal with a call to spread the Wharton program over all four college years. He thought that the school needed access to all four years to give adequate coverage to the "core" social science disciplines,

to the general business courses, and to final training in the proposed areas of practical specialization. To teach these new specialized courses, James also asked permission to hire associate professors in banking, transportation, insurance, merchandising, business law, business practice, commerce, accounting, and journalism. Through discussions with local high school principals, James came to believe that if the new program were enacted, many of the high school graduates who then went straight into business would enter the Wharton School instead. The lure of practical education in the freshmen year, he reasoned, would induce a whole new group of students to come to the university. Many would stay, he thought, through the completion of their professional training. He assured the provost that tuitions from this new clientele alone would pay the cost of the new program.

As an indication of his support for James, Wharton gave the school an additional endowment of \$75,000 in November 1893. The money and the sanction of the founder induced the trustees to approve James's four-year curriculum four months later, 6 March 1894. Courses in accounting, society, geography, history, and current issues in economics, society, and politics were now scheduled in Wharton's new freshmen and sophomore years. To teach business, Wharton had on its staff Roland Post Faulkner, Joseph French Johnson, and Emory R. Johnson (no relation). All had studied economics in Germany and had spent some time at Halle before joining the Wharton staff. Before James had time enough to work out the implications of the four-year course, however, a new provost with a strong distaste for James had come into office and forced James to resign.

The faculty, however, went ahead with James's plans for specialized study and designed three "parallel courses" in business. Students electing these practical programs took an additional year of accounting and business law in their sophomore year and then four or five special classes under the direction of one professor. The plan assigned J. F. Johnson the banking course; E. R. Johnson, commerce and transportation; and Faulkner, insurance. Various factors, however, slowed the development of these parallel courses. Enrollments at the School between 1894 and 1899 failed to rise and fill classes in the projected programs; and two of the three mentors, Faulkner and J. F. Johnson, were primarily interested in other subjects and never got their courses up and running. Faulkner was then spending most of his time on statistics, probably resisted conscription as guru of insurance, and never taught the subject at Wharton. J. F. Johnson seemed more interested in finance and did offer classes in banking, but he was chiefly occupied with the school's journalism and writing programs as well. In any case, both men left the school at the turn of the century.

Only Emory Johnson truly relished the opportunity offered by his "parallel course" and had ambitions to develop commerce and

transportation as areas of study distinct from the more general field of geography. Johnson's courses in commerce and transportation were the first of their kind at the university level, and he took great pride in that fact. Like Faulkner and J. F. Johnson, however, Emory Johnson left Wharton before his parallel course had much of a chance to develop. In 1899, before the commerce and transportation curriculum had been sanctioned by the proper university authorities, Johnson took a two-year leave to join the US Isthmian Canal Commission.

The steady expansion of business studies at Wharton came with the new century, with the acceleration of student enrollments and the establishment of a strong Ph.D. program at the school. At the turn of the century Wharton began turning out a steady stream of Ph.D.s including several ambitious young men who wrapped their passions and professional identities around business studies. As Wharton's student population began to grow, the school supported more such graduate students as quizmasters and brought greater numbers of its own Ph.D.s onto the faculty. In this manner Wharton produced its own business professoriate. These new doctors of practical affairs quickly developed each of the three "parallel courses" outlined in 1896 as well as several others devised in the new century. By 1910 Wharton had full-time faculty offering courses of study in finance, transportation, geography, insurance, factory management, marketing, business law, and accounting.

This explosive growth of the business subjects resembled the "speciation" process found in biological evolution. Rather than the simple expansion of the older forms, the sudden opening-up of a new mode of survival spawned a broad array of new species of study. Indeed Wharton's original business subjects -- law, accounting, and business practice -- saw other fields outstrip their formerly unchallenged positions in the curriculum. Rather than continue to divide the business program into these general skills needed by all businessmen, the school adopted a new principle of organization to control the structure of the professional curriculum. Increasingly, Wharton's disciplinary array mirrored the emerging divisions of entrepreneurial labor in the outside business world as both students and faculty sought niches in the larger economy. Studies such as commerce, insurance, finance, marketing, and manufacturing became the basic units of instruction. These new specialized business courses, moreover, often included work in law and accounting, and practice specific to their particular areas of concern.

The size of each of Wharton's new disciplines depended primarily on the ability of one man to control its material. The school had the habit of placing one man "in charge" of a group of subjects, and in the early days of the school one instructor taught several different fields. But as enrollments mushroomed after 1900 and as the amount of material offered at Wharton

expanded apace, these professors found themselves with too much work on their hands. They then turned whole fields in their responsibility over to ambitious and able young men coming out of the Ph.D. program. The first decade of the new century thus offered entrepreneurial business scholars the unique opportunity to take over a new academic specialty at its beginnings.

The men who seized a new field of study had to organize a curriculum from scratch. For lecture materials they had to go out and collect testimony from men of affairs and reports from the business press. Since no textbooks then existed, they had to write the pioneering surveys in their fields. As they proceeded in this activity, they took over from 19th century business journalists much of the responsibility for handling the ideas in their respective business areas; but the move into academe enhanced the execution of traditional journalistic tasks. Business professors explained the "best practice," but in textbooks rather than magazine articles; they served as experts in public discussions, but with long leaves of absence and time off from their other chores. By the coming of World War I, Wharton's business professors had worked and written in their fields for over a decade. Although still young men in their twenties and thirties, they challenged, and in some cases actually replaced, traditional business journalists as the leading voices in their fields.

Emory Johnson, responsible for instruction in geography, commerce, and transportation, had never been especially interested in geography nor fond of commerce. He taught these subjects because he had to, and he used them as springboards for discussing his true passion: the patterns and techniques of the transportation business. As the school expanded, Johnson's Ph.D. students took over geography and much of commerce, and he seized the opportunity to specialize. He began teaching a course on railroads and another on waterways. He then added advanced, graduate-level classes on the same topics. Beginning with the publication of his *American Railway Transportation* in 1903, Johnson issued a steady stream of texts on transportation. These books, published in the Appleton Company's pioneering series of business texts, were the first such volumes in the field and offered general descriptions of transportation systems and organizations and their regulation by government. Books such as *Railroad Traffic and Rates*, an outgrowth of his advanced course, were addressed to both college students and railroad men.

While Johnson became prominent as a specialist in transportation, his students took over the other parts of his original set of responsibilities. The more academically ambitious among them imitated Johnson and his management of his career. They likewise specialized as much as possible, mastered their subject areas in great detail, became prolific writers of college texts, and established themselves as well-known experts at the head of their chosen fields. Geography was the first nontransportation area

that Johnson was able to shed. In 1901 J. Paul Goode, a Johnson Ph.D. who specialized in geography, took over the chores of teaching the subject. Goode left in 1903 but was immediately replaced by another of Johnson's Ph.D.s, J. Russell Smith. The two Huebner brothers, Solomon and Grover, came soon after and got their Ph.D.s under Johnson. Solomon became Wharton's pioneer professor of insurance, and his younger brother Grover became Johnson's right-hand man in commerce and transportation.

While Johnson and his students developed geography, insurance, transportation, and commerce, Edward Mead served as the fountainhead for instruction in finance, accounting, and industrial management. Mead had gone through the Wharton Ph.D. program at the turn of century, getting his degree in 1899. His primary area of interest, corporate finance, was essentially a 19th century addition to the business world. Only since the 1850s had specialized American "investment" bankers dealt in private stock and bond financing, primarily for railroad companies. This business differed significantly from traditional commercial banking, the funding business that had been a central part of the capitalist system since the middle ages, and had not been taught in the early years of the Wharton School. The term "finance" then referred exclusively to government operations -- taxes, tariffs, expenditures, and the like -- and courses in private funding only covered commercial banking. Only with the development of the parallel course in banking, and the more extended treatment of finance that it allowed, did the Wharton curriculum call for work in corporation finance. Between 1896 and the turn of the century, however, the subject took on an entirely new importance as the great wave of industrial mergers in that period rendered "banking" a totally anachronistic title for any parallel course in the private funding business. Wharton students demanded more instruction in corporation finance, and Mead and his fellow graduate student, Frederick A. Cleveland, prepared themselves to teach the new field.

Together Cleveland and Mead collected materials from cooperative investment bankers and from the *Commercial and Financial Chronicle* to illustrate the subject for their students. They then compiled this material and their class notes into pioneering textbooks published in the Appleton series, *Trust Finance* and *Funds and Their Uses*. Cleveland taught all the early courses in the subject. He was a much older and more experienced man than Mead, having graduated college in 1890 and having worked as a lawyer before coming to Wharton for his Ph.D. But in 1903 Cleveland left Penn to become professor of finance at New York University's new School of Commerce, Accounts and Finance, and Mead took on his responsibilities. While Cleveland taught corporation finance, Mead gave instruction in accounting and industrial management. Although he was teaching accounting because Faulkner and J. F. Johnson had left the university, he had also been drawn

to these subjects as a result of his primary interest in corporation finance. Financial accounts reported essential information about a corporate enterprise, and any student of the subject had to be able to interpret these statements; success, for which investors searched through financial statements, depended critically on managerial efficiency. At the time, when much of America's manufacturing capacity was being merged into huge combinations, the question of whether these industrial behemoths enhanced or diminished productive efficiency bothered all observers of the business scene.

Mead's instruction in accounting emphasized the preparation and interpretation of corporate statements and was the most specialized training in the subject that Wharton had ever offered. He concentrated all other material, work on simple mercantile, banking, and manufacturing accounting in the first-year course that he renamed "Bookkeeping and Office Methods." With this out of the way, he devoted the entire second year to a course on "Corporation Accounting." Even more important to the development of accounting education at Wharton was Mead's work as founder and director of the Evening School of Accounts and Finance. Mead's new evening school offered a far more advanced course in accounting than the regular Wharton day program ever did. Even Mead's two-year course in the subject had never attempted to educate professional accountants, but only to provide the basic skills needed by any businessman; but Mead brought into the night school a course, established a few years earlier by Philadelphia's leading accounting firms, to train young men to become "certified public accountants."

Mead's instruction in industrial management marked the beginning of such courses at the School. In 1901-1902 he offered his first class in "Industrial Management," and in the next academic year Mead added courses on "American Industries" and "Field Work in Industry." In Mead's program, students discussed the findings of the US Industrial Commission, a very important investigation of the formation and operation of large-scale manufacturing enterprises; labor-management relations from the management point of view; the work of trade associations; and how internal accounting systems facilitate control and communication in organizations. They surveyed the important technologies and power sources used in American manufacturing operations and took inspection trips through industrial plants in the city.

Mead stopped teaching accounting and management when he took up Cleveland's duties in 1903, and his courses were assigned to graduate students. In 1903 Thomas Warner Mitchell taught accounting, and the next year he was joined by Edward P. Moxey, Jr. While Wharton's program in corporate accounting survived and blossomed, Mead's curriculum in industrial management fell into stagnation. The young graduate student who took over Mead's courses in 1903, Walter Edison Kreusi, did not qualify. He left

the School in 1905 without his degree, and J. Russell Smith took over as a last-minute replacement. Smith, of course, was not trained in industrial management, nor was he especially interested in the subject. Smith's chance assignment, however, hardened into institutional fact, and he became head of work in both "geography and industry." Under Smith, courses took on a decidedly "geographic" flavor, emphasizing problems such as locating industrial plants. Smith also saw fit to drop "Field Work in Industry," the culminating course in Mead's old design. That class made its way back into the curriculum in 1907, only after Mead recommended its revival. Although Wharton offered nine geography classes as early as 1909-10, the curriculum then included only the same three courses that Mead had introduced by 1902. This situation continued up to the beginning of World War I.

That management education should receive such neglect cries out for explanation. Training for industrial leadership was one of Joseph Wharton's primary purposes for founding the school, and he himself had employed the father of the scientific management movement, Frederick Taylor, only a few years earlier. Taylor and several of his followers resided in Philadelphia and could have been employed as lecturers at Wharton. Light can be shed on this anomaly by contrasting the striking success of the accounting program with the dismal performance of management. More than any other curriculum at Wharton, accounting led to a well-defined professional career, and Wharton students took these courses because of their clear value in providing a livelihood. To a lesser extent, an education in finance, insurance, or transportation likewise led to "job" opportunities. Had law not been taught in separate schools at the time, it too would have been a logical candidate for rapid development at Wharton. Most practicing American managers owed their positions to family control of the enterprise or long service with the company, and few saw any value in the academic training or mastery of general managerial principles.

Management, moreover, was only beginning to be seen as a distinct professional category. Most contemporaries viewed management as essentially tied to a specific industry or function; they saw railroad or bank management, sales or production management, but not management as an independent activity by itself. Frederick Taylor's great manifesto, announcing his claims of discovering the *Principles of Scientific Management*, only appeared in 1911, and even then restricted its focus to the factory floor. Taylor, moreover, considered his professional enterprise as a part of engineering, not business. He and his colleagues published most of their articles in the *Transactions of the American Society of Mechanical Engineers*, and Taylor's most prominent appearance at Penn was a speech that he made at the dedication of the new engineering building in 1906.

Rather than cultivate overall executive ability, Wharton offered training in the various divisions of entrepreneurial responsibility. Specialization was its response to the fact that the sum of business knowledge and skill had far outgrown individual capacity. Wharton's professors pushed aside the problems of ultimate economic coordination and busily organized books and courses on the law, accounts, and practices of the various divisions of business. By the beginning of World War I, the nation's first business school was offering the most diverse array of business courses and professional training programs anywhere. With this great assembly of expertise, Wharton emerged as the best place in the nation to explore the practical intricacies of business activity; and with the type of education that it offered, thousands of young men joined the business world as professionals, relying on ideas and expertise rather than company experience or control over property as a basis of income and economic authority.

NOTE

*For a complete list of sources for this paper, contact Professor Sass, Dean's Office, Wharton School, University of Pennsylvania, Philadelphia, PA 19104.