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ADDING THE PINNACLE AND KEEPING THE BASE

The Graduate School Crowns the System, 1880–1910

The situation of American higher education in 1880 brought great opportunity but also great risk. The system had an enormous amount of excess capacity: all of those buildings and professors and programs to maintain with a thin and uncertain stream of revenue. Lacking reliable funding from church and state, it was heavily dependent on students. Yet, although enrollments were growing, there were not nearly enough students available to support the nine hundred or so colleges and proto-colleges that were in existence at the time. In addition, whereas the higher education system had broad support as an institution that was both popular and practical, it was lacking in the one thing that would distinguish it from other popular and practical institutions such as museums and trade schools and apprenticeship programs—namely, academic credibility. There were too many colleges for more than a tiny number of them to be academically distinguished (Harvard, Yale, and a few others), they were too small to hold a credible concentration of academic talent, and they were too widely dispersed across the countryside to create viable cultural communities of high intellectual caliber.

The German model of the graduate-oriented research university offered help with a critical part of this problem. In short, it offered a way to put the “higher” into American higher education. It gave a parochial, benighted, and dispersed array of colleges and universities

a way to attain some degree of credibility as institutions of advanced academic learning. Its professors would come to have the new scientific degree, the PhD, which certified their position at the cutting edge of academic attainment, and they would be evaluated based on their own research productivity. Its graduate schools would draw the best-educated and most talented students in the country and induct them into the scientific methods of research and the habits of mind that would lead to authoritative scholarly publication. For the heterogeneous and barely academic structure of American higher education of 1880, the German model offered the chance to attain serious academic standing in the community and even the world.

The German research ideal gave hope for the American system, but it also posed a number of problems. The model envisioned a university that was extraordinarily elite academically and radically more expensive per student than anything that had existed before in the United States. To pursue this approach in the unalloyed fashion that German universities were doing was impossible in the American system. The German approach called for strong state support, since small and elite graduate programs would otherwise lack both the flow of funds and the political legitimacy needed to keep them going. This would not work in the American setting, where state investment in higher education still paid only a fraction of the total cost and where student tuition was essential for survival.

So instead of adopting the German model, the American system of higher education incorporated a version of it within the existing structure. The most ambitious, best financed, and oldest institutions—spurred by competitive pressure from research-oriented newcomers like Hopkins and Chicago—sought to establish major elements of the new model: organizing graduate schools, hiring professors with PhDs, developing advanced graduate programs, recruiting academically talented graduate students, and shifting faculty incentives toward the production of research. But they did this without abandoning the elements of the existing model that were critically important if they were going to be able to survive and thrive within the market-based political economy of American higher education. And they were aided in

this effort by a development that had little to do with the graduate university but a lot to do with the sudden surge in student interest in enrolling in an undergraduate program.

By the 1890s, going to college started to become *de rigueur* for upper-middle-class American families. One factor was the sharp decline of small business and the sudden rise of managerial work in the new corporate economy, which meant that families of a certain means were unable to pass on social advantage directly to their children by having them take over the family business; instead they increasingly had to provide their children with educational credentials that would give them priority access to the new white-collar workforce. Another factor was the rapid increase in high school enrollment in the 1880s, which meant that the middle-class families that had relied on a high school education as a form of distinction began to look to college as a way to mark themselves off from the incoming horde of high school students. And a third factor was the glut of institutions in the higher education system, which meant that colleges were desperately looking for ways to attract students. So in the 1880s American colleges and universities invented most of the familiar elements the twentieth-century American undergraduate college experience that made attending college attractive to so many students (or copied them from peers): fraternities and sororities, football, comfortable dormitories, and grassy campuses adorned with medieval quadrangles in a faux gothic style. It was a mix that said: this is a place where you can meet the right people, acquire the right knowledge and skills, walk away with a useful credential, enjoy social life in a comfortable middle-class style, and do all this in a setting adorned with newly created social traditions and imported adornments from the great universities of the old country.

The large infusion of tuition-paying undergraduates reinforced the populist role that the American college had long played. Now attending college was both attractive and useful for large numbers of young middle-class men and women. This sharp increase in student enrollments brought an equally sharp increase in tuition revenues, and the closer loyalty to alma mater engendered by the new all-inclusive college lifestyle made graduates into an increasingly reliable and wealthy

source of future donations for the institution. All this new money helped to subsidize the growing graduate programs and increasingly expensive research-oriented faculty. The undergraduates supported the elite academic enterprise that now allowed the college to call itself a research university. And the growth of research and graduate programs gave the institution the academic credibility it needed to offset what otherwise would have been little more than a party school for socially qualified but academically challenged undergraduates. And on top of these elements—the populist and the elite—was the continuation of the college's practical functions, serving business and society through applied research and the production of the higher end of the workforce.

But let's go back to 1880 when all of these changes began to take place and try to figure out why and how the system made its sudden transition into what by 1910 looked a lot like the modern structure of American higher education. We need to consider the situation facing the three major actors in the change: colleges, students, and employers. The revitalization of the system would not have happened unless colleges had made major changes in form and content, students had responded to these changes by pouring through the doors in large numbers, and employers had welcomed college graduates as prospective managers in burgeoning corporate bureaucracies.

First, what was the situation facing existing colleges and universities that spurred them to embrace change? And why did these changes incorporate two contradictory visions of the university—the academic ideal of graduate study and scientific research, combined with the social ideal of a vibrant undergraduate college life and an extensive extracurriculum? Second, why did middle-class families suddenly come to see college enrollment as an essential rather than frivolous pursuit? And why did middle-class youths embrace the role of college student with such enthusiasm after having found it so unattractive for most of the nineteenth century? More broadly, how did college emerge from its position of longtime marginality to become a central part of American popular culture? Third, why did corporations come to value and recruit college graduates for administrative

positions? For years business leaders had scorned college men as dilliantes and book learners, who were thereby disqualified for practical work, instead preferring to hire men with little formal education at low-level jobs so they could learn the business from the ground up, from factory floor to the manager's office. Why the sudden turnabout in the way business viewed college?

The System's Structure Evolves

As we saw in the last chapter, the American system of higher education in the middle of the nineteenth century was in bad shape—with too many colleges, not enough students, and no academic credibility. In 1850 Francis Wayland, the president of Brown, framed the problem succinctly: "We have produced an article for which the demand is diminishing. We sell it at less than cost, and the deficiency is made up by charity. We give it away, and still the demand diminishes. Is it not time to inquire whether we cannot furnish an article for which the demand will be, at least, somewhat more remunerative?"¹ He was talking about the classical studies that still dominated the college curriculum—with a focus on classical languages, the medieval trivium, and religion. The emphasis was on tradition and piety rather than learning things that would prove useful in the modern world. "The single academy at West Point," he argued, "has done more toward the construction of railroads than all of our . . . colleges united."²

A MODERN CURRICULUM

After the Civil War, however, the college curriculum did begin to modernize and turn more practical, led by the example of the land-grant colleges, with their focus on engineering and agriculture and other forms of learning related to the practical work that graduates might pursue. The proportion of students seeking to enter the clergy, which had been the largest group in the student body early in the century, was declining, the proportion aiming for law and medicine was growing, and increasing numbers were going into business.³ Student

enrollments, after falling in the 1840s, began to rise in the 1850s and accelerated in the 1860s and 1870s. By 1869 there were 63,000 students in college, a number that rose to 116,000 in 1879, 157,000 in 1889, 238,000 in 1899, and 355,000 in 1909—an average increase of about 50 percent per decade.⁴ With enrollments surging and the founding of colleges slowing, the average student body started to increase more rapidly: from only 47 in 1850, it rose to 131 in 1880, 157 in 1890, 243 in 1900, and 372 in 1910. This sharp growth in enrollments helped make marginal colleges more viable enterprises.

One reason for this change was the shift toward practical curriculum, which made college attendance seem more like a useful investment for a future career. Another reason was the rise of the elective system during the same period. Harvard kicked off the trend in 1869 by eliminating the old required curriculum and allowing students to choose from an array of courses in filling out their program of study. In the same year, Harvard also stopped combining conduct and scholarship in calculating student rank, choosing instead to grade students only by academic performance. The first of these changes made studies much more consumer friendly, which in turn made college attractive for a wider range of students. The second reinforced this consumer orientation by announcing that college was less about building character (how the college could shape you) than about acquiring useful cognitive skills (how the college could serve you). Both policies spread quickly throughout the system, initially to the larger public and private institutions that could afford to support the broader array of courses called for in the elective system and then, gradually, in attenuated form to the smaller schools.⁵

College leaders who made these changes did not necessarily do so for the explicit purpose of pleasing the educational consumer. People like Harvard's Charles W. Eliot framed the changes as a response to the growing specialization of knowledge in the emerging university and the need to abandon a narrow core of studies for all students. But intended or not, they did make college more attractive to a wider array of students, and other colleges felt compelled to adopt the changes in order to remain competitive in a tight educational market. These

curriculum reforms seemed to address Wayland's complaint about the midcentury college model, but by themselves they did not deal with the other major problem facing the system, its weak academic reputation. In fact, eliminating program requirements could easily have signaled a decline in academic standards by making it easier for students to take courses that were more enjoyable but less intellectually rigorous. Electives meant that students, rather than the college, were setting the standards, potentially making the college more like a department store than a cathedral of learning.

ADDING A GRADUATE SCHOOL BUT KEEPING THE UNDERGRADS

The system in this period, however, responded to the credibility problem by importing elements of the German-model research university. Germany remade its large but lagging university system in the nineteenth century around the ideals of scientific research and advanced graduate education. It pioneered the PhD as the credential certifying research-based learning at the highest level and made this the entry ticket for a professorial position. American educators were entranced by this vision of the university and made regular pilgrimages to Germany to learn about the system and increasingly, by the 1870s and 1880s, to earn doctorates there. Johns Hopkins University, established in 1876, was the first American institution founded in line with this model, and Clark University (1887) was the second. Both represented a nearly pure case of adopting the German approach—remaining small, with a heavy focus on graduate education and research. This, however, was not the American norm. Most institutions that became research universities did so by adding a graduate school on top of a large and growing undergraduate program. By 1904 there were fifteen leading research universities in the United States: California (Berkeley), Chicago, Columbia, Cornell, Harvard, Hopkins, Illinois, Michigan, Minnesota, Massachusetts Institute of Technology (MIT), Pennsylvania, Princeton, Stanford, Wisconsin, and Yale—five small private universities, five comprehensive private universities, and five large public universities. These elite schools were also were the larg-

est in the country, accounting in 1904 for 22 percent of all American college enrollments.⁶

Notice that Clark had already dropped off the list; therein lies a key part of our story. The problem was that the German model didn't translate very well to the U.S. context, and those who tried to copy it slavishly ran into trouble. Clark held the line on graduate education and had to struggle to survive on the modest enrollments and limited revenues that followed from this decision. Hopkins included undergraduate education only reluctantly, and several presidents tried to eliminate it, but competition eventually compelled them to preserve lower-level instruction. The American university, it turned out, couldn't flourish (or possibly even survive) without a strong array of undergraduate programs.

A large group of undergraduates served a variety of important functions for even the most research-oriented American universities. The research university was an enormously expensive proposition, which involved small class sizes and high faculty contact and which paid professors to carry out research. Major sources of federal research funding did not arise in American higher education until the Second World War (for now such funds came in modest amounts from private donations and foundations), so universities for the first half of the century had to generate internal sources to subsidize research.⁷ A large pool of undergraduates brought a large amount of tuition money to support the whole enterprise. Even in public universities, where tuition was lower (and in a few cases nonexistent), undergraduates helped because state appropriations were in part allocated based on the number of enrolled students. Enrolling more undergrads justified hiring more professors, especially in the new era of the expanded elective curriculum, and large undergraduate classes required the hiring of graduate students as teaching assistants. Thus was born a central principle of the American university that has continued to the present day: cross-subsidy. In the U.S. model, each individual program of teaching and research in the institution does not have to support itself with its own dedicated revenue stream; instead, the university moves resources around internally to keep the various components afloat. The parts depend on the whole.

But the undergraduates in the new American research university did not just provide tuition and appropriations; they also became the primary base of donors for the university. Then as now, undergraduates were heading into more lucrative careers than the academics produced by doctoral programs. They became managers and professionals, earning more income and accumulating more wealth than the researchers turned out by the graduate school. These were the alumni who were going to contribute to the university's endowment and buy naming rights for new buildings on campus. Over the course of the nineteenth century, the American liberal arts college had become adept at tapping its graduates for the funds needed to support the enterprise, and this became particularly important when, at the end of the century, the enterprise added the expensive upper tier of graduate education.

Undergraduates also contributed one more crucial element to the American model of the research university: a broad base of political support. The German university could focus on abstruse research and advanced graduate study because of secure funding from the state. But a comparable aura of elitism was dangerous for American universities. In order to scrape off the old reputation for mediocrity they had accumulated earlier in the century, they needed to cloak themselves in the intellectual cachet of research and advanced learning. But they could not afford to be seen as remote from the public or disconnected from the practical life of the community. They needed to add the elite element to the higher ed package without abandoning either the populist or the practical. Heavily weighted toward undergraduates, the American research university that emerged at the start of the twentieth century assumed a lofty academic role while still retaining the feel and appeal of a people's college.

THE NEW SHAPE OF THE SYSTEM

By 1910, all of the core elements of the new research university were firmly in place. At the top was still a strong, entrepreneurial president appointed by a board of laymen, but now the makeup of the board of trustees had shifted away from clergymen to businessmen and profes-

sionals. At private institutions between 1860 and 1910, the proportion of clergy on the board fell from 39 to 17 percent while board members from business, law, and banking rose to 68 percent; only 9 percent were educators. At public institutions, the proportion of clergy on the board had never been high, and by 1910 businessmen had displaced lawyers as the largest occupational group; business, law, and banking accounted for 81 percent of the members; and only 7 percent were educators.⁸

New faculty hired at these institutions needed to have a PhD, and the recommendation for hiring them came from the faculty members of a new organizational unit within the university, the disciplinary department. The rise of the department was a sign of both the growing size of the institution and the growing emphasis on intellectual specialization. Only the experts in the field could judge the quality of faculty candidates and instructional programs, so the department took the lead in hiring and curriculum matters, which in turn decentralized power. These faculty were expected to engage in research, so a whole array of laboratories, specialized research journals, and professional organizations arose to support this effort. Pedagogy consisted of lectures for undergraduates and seminars for graduate students.

Another characteristic of the new university was the hegemonic position it assumed in American intellectual and professional life. It was not just an institution for acquiring certification in higher learning; it became the only credible place to get such certification. A major indicator of this was the role it suddenly assumed in the education of future professionals. Until the turn of the twentieth century, the primary route for entering the professions was apprenticeship. A student would work as an assistant to a doctor or lawyer for a while until deemed ready to enter practice. Prospective doctors and lawyers often attended college and some attended *de facto* medical or law schools, but most of the latter were freestanding enterprises independent of universities and had little pretension of academic rigor. But by 1910, the pressure was rising for professional education to join itself to the university. Only the latter had the scientific authority and educational standing to provide a strong launching pad for a profes-

sional career. Even less prestigious professions such as teaching felt the draw, as high-school-level normal schools began changing into teachers colleges, which later in the century evolved into regional state universities.

One last new element that the research university model contributed to the American system of higher education was hierarchy. The new structure introduced hierarchy in two related ways, both across the whole educational system and also within the domain of higher education. First, it created a clear ladder of educational attainment, each rung with its own institutional form. High schools fed into undergraduate colleges, and these in turn fed into graduate and professional schools. As a result of this change, high schools lost the ability to compete with colleges, but in return they won a position as the sole feeder institutions for colleges. Likewise, undergraduate programs fell below graduate schools in the newly stratified structure, but at the same time they gained a monopoly on providing access to graduate and professional study. Paralleling this structure was a hierarchy of academic credentials, from high school diploma to bachelor's degree to master's or professional degree to PhD.

A second emerging hierarchy ranked the various institutions of higher education in relation to each other. Previously, colleges had operated under conditions of formal equality. They were physically isolated and played to local markets, so there was little reason for them to interact with each other and little basis for establishing relative rank. But now a clear structure of stratification was becoming visible. At the top were research universities, with a monopoly on graduate education and preeminence in academic prestige and research production. Next were undergraduate colleges or universities, which offered bachelor's degrees; these included most public and private colleges and universities, including the land-grant schools. At the third tier came the teachers colleges, recently rising to college status. And the fourth tier consisted of a new entry into the game, the junior college, which offered the first two years of a four-year college experience, with the possibility of transfer to a four-year school or entry into a semiprofessional role.

So this was the structure of the system that emerged with the creation of the American research university at the start of the twentieth century. It built on the old nineteenth-century structure, but in the process it created a rationalized and stratified system that has persisted to the present day. It drew on the strengths of the old structure—adaptability, broad political and financial sources of support, and consumer orientation—while adding academic credibility and the promise of social and individual utility. This is the system that established the promise for what turned out to be a spectacular century of growth and rising accomplishment for American higher education.

But at this stage, in 1910, the system was more about promise than product. The elements were all there, the structure was in place, but the potential was far from being realized. This was particularly true at the research university. There were only fifteen or so out of 951 institutions of higher education that could claim to be taking on this role, and even for them, the research component was still quite marginal. There were only 9,000 graduate students in the United States, which amounted to a little more than 2 percent of the total number of college enrollments, and most of these were in science.⁹ Undergraduates were hugely dominant within the system, even in the research universities. The scholarly productivity of faculty at the latter was modest, since research funds were short and research expertise still thin (most faculty still did not have the PhD). At other institutions of higher education, research was nonexistent. In many ways, it wasn't until the Second World War that university research really became a major-league enterprise. And that lag reinforces a central theme of this book—that the American system of higher education was good at building a structure and a capacity for accomplishment long before it was needed and there were means to capitalize on it.

In light of the limited extent of the system's actual commitment to graduate education and research, it is not surprising that some commentators found the new research university—and the system that it crowned—underwhelming in light of the German model. From the latter perspective, the Americans did everything wrong. They let

undergraduates crowd out and undermine graduate education; they forced professors to teach too much, especially to undergrads; and what research they did was too focused on practical problems rather than research for its own sake as in the German vision. The most slashing critique came from Abraham Flexner, who had played an important role in helping to shape the new research university. In 1910 he wrote an extraordinarily influential study for the Carnegie Foundation for the Advancement of Teaching, which attacked the old model of the free-standing medical school and strongly endorsed incorporating medical education into the research university in order to give the profession a research base and university prestige. But in 1930, he wrote another book, which attacked the American university for having failed in its mission. His ideal was the German university and his American model was the old original Johns Hopkins, where he received his own PhD in 1884. Early on in the book, he outlines his case: "The great American universities which I shall discuss are composed of three parts: they are secondary schools and colleges for boys and girls; graduate and professional schools for advanced students; 'service' stations for the general public. The three parts are not distinct: the college is confused with the 'service' station and overlaps the graduate school; the graduate school is partly a college, partly a vocational school, and partly an institution of university grade."¹⁰

In his view, the only thing that made an institution "university grade" was the graduate school in pure form—where professors performed research and where they educated advanced graduate students who planned to become researchers themselves or members of the high professions. For him the undergraduate program that consumed so much of the faculty's effort was little more than a high school, which should be carried out elsewhere in order to avoid polluting the graduate enterprise. Among the professional schools, only medicine and law were deemed worthy of inclusion; schools of education and the like were nothing but vocational schools, which should be lodged elsewhere. In short, he mourned the distinctive path taken by the American system of higher education at the start of the century, which is the path that led the situation in the 1960s when the system

started to look like a model for the world. Clark Kerr, who presided over the University of California during this heady decade, provides a pithy critique of Flexner's view: "The universities did all the wrong things—undergraduate instruction, professional schools (other than law and medicine), service activities, vocational courses, extension work. They did all the wrong things—and they entered their most Golden Age."¹¹

Students Come to Embrace the College Experience

We have seen that the American system of higher education went through an evolution at the end of the nineteenth century. An academically undistinguished and radically overbuilt system needed credibility and needed students; by 1910 it had both. In the previous section, we saw how the research university brought academic recognition to a system that had long been a standing joke for European visitors, but it is less clear how adding a top layer to the system made college so much more attractive to students. One factor we saw that helped in the latter quest was that the colleges sought to make the curriculum more consumer friendly. By shifting from the traditional classical curriculum, with its strong emphasis on dead languages and religious piety, to a living-language curriculum that was more focused on skills useful in modern life, the system for the first time was able to make a case for the utility of attending college. High schools and land-grant colleges had both paved the way for these changes, and competition compelled the other parts of the system to follow suit. This was a start, but it still doesn't explain how middle-class families by the end of the century had so quickly come to see college attendance as an essential pursuit for their children.

The answer is that at this time a series of factors converged to turn college into the primary means by which middle-class families could pass on social position to the next generation. College had suddenly become the pipeline to a middle-class job. Below I explore how that happened, by examining the occupational and educational situation facing the middle class in this period. In the next section after the one

following, I explore the other part of the equation: how employers came to prefer hiring college graduates.

MAKING A NEW MIDDLE CLASS

The rise of the university model in the 1880s and the growing popularity of attending college coincided with a sharp increase in social pressure on the life chances of the college's traditional middle-class constituency. In the eighteenth and most of the nineteenth century in America, to be middle class was to be the owner of a small business. Wealthy people owned large businesses like a bank, trading firm, or plantation. The middling sort owned a farm or shop where they employed their family and a few workers. In town, this usually meant owning a small retail establishment or an artisanal production operation with its own attached store. It was a middle class of proprietors, and the entry point to this status was apprenticeship. A family would apprentice its son to a printer or shoemaker or shopkeeper, where he would live with the owner and learn the trade, move up to journeyman status while living and working in the shop, and with luck and some backing set up his own small business, eventually hiring his own apprentices and journeymen. In this situation, your social position was grounded in the business, and you passed on this position to your sons by having them take over this business.

The market revolution in the 1820s and 1830s in the United States began to disrupt this system. The rise of cheap transportation (canals and turnpikes) meant that the shops in town were no longer protected from competition from retailers and producers in other towns, even those in more distant cities. This competition forced producers to reduce costs and increase productive efficiency, and the result was a steady decline in both wages and prices across the whole nineteenth century. Under these circumstances, owners could no longer support a stable in-house workforce but needed to hire by the hour at the lowest rate and let people go when business was slack. Efficiencies of scale paid off, so enterprises grew larger. Increasingly, apprentices were just cheap, unskilled labor with no avenue for advancement, and propri-

etors were becoming large-scale businessmen. In short, the middle was disappearing.¹²

By the 1880s, the process had accelerated. The consolidation of businesses, combined with the emergence of steam power, increasingly transferred production to large-scale factories, and small retail shops were being squeezed out by the new large-scale department stores. The middle classes—if they hadn't already been pushed down into the working class or won a rare position as a large business owner—were finding themselves without a viable business to pass on to their children. The most promising possibilities for a middle-class life for the next generation were now in new forms of white-collar employment—in the corporations that were taking charge of a large manufacturing operations and in the emerging government bureaucracies.

THE CULTURE OF PROFESSIONALISM

The problem for these families was how to ensure that the white-collar workforce didn't just turn into a proletariat with a cleaner workplace. Here, college dropped to the stage as *deus ex machina*. The college degree became an insurance policy against proletarianization. Burton Bledstein explains the process at end of century in his compelling book, *The Culture of Professionalism: The Middle Class and the Development of Higher Education in America*. The idea is this: You don't want a job; you want a profession. Being a professional protects you from downward mobility and grants you autonomy and authority—an elevated status in a democratic society, made legitimate because it is grounded in specialized knowledge acquired through individual merit. And the institution that provides this knowledge and certifies this merit is the university. Bledstein puts it this way: "By and large the American university came into existence to serve and promote professional authority in society. More than in any other Western country in the last [nineteenth] century, the development of higher education in America made possible a social faith in merit, competence, discipline, and control that were basic to accepted conceptions of achievement and success."¹³

Professionalism burst on the American scene in 1880s. That decade alone saw the formation of no fewer than sixteen professional associations, ranging from chemists to political scientists, and saw massive increases in the number of professional students in universities (988 percent in dentistry, 142 percent in medicine, and 249 percent in law).¹⁴ It turns out that in a market economy everyone praises competition but no one wants to experience it personally. Thus businesses construct corporations as a conspiracy against the market (to contain and control competition from other businesses as much as possible), and employees construct professions to accomplish the same goal in the workforce. But in a democracy, privileged exemption from the travails of the ordinary worker requires a strong justification. "Far more than other types of societies, democratic ones required persuasive symbols of the credibility of authority, symbols the majority of people could reliably believe just and warranted. It became the function of the schools in America to legitimize the authority of the middle class by appealing to the universality and objectivity of 'science.'"¹⁵ With the emergence of the research university, science was now firmly located in higher education.

The culture of professionalism extended well beyond the bounds of the traditional high professions (law, medicine, clergy) to the new world of white-collar employment—to roles as managers in corporations, stores, and government bureaucracies. The ideal was to endow these positions with some of the same characteristics as the professions, such as autonomy, certified expertise, and meritocratic appointment. And having a degree from a college or university was the main element that linked these positions with the full-fledged professions and gave them credibility.

Another factor reinforced the central position played by higher education in this process of conferring middle-class standing. Elementary enrollments had been growing steadily in the United States since the first common schools appeared in the 1820s while high school enrollments remained quite low. Census data show that, by 1910, the average twenty-five-year-old American had eight years of schooling, which means that toward the end of the nineteenth-century elemen-

tary schools were filling up.¹⁶ High school had been the protected domain of middle-class families during most of the century, but in its last several decades, high school enrollments were beginning to expand to include a large number of working-class students. Under pressure from voters to increase access to educational opportunity, school districts began to build new high schools; as a result, high school enrollments increased sharply, doubling every decade from 1890 to the Second World War. For the high school's traditional middle-class constituency, this flood of newcomers threatened to dilute the former exclusivity provided by high school credentials. Under these circumstances, attending college looked increasingly attractive, since it had become the new zone of educational advantage, a way to mark yourself off from the common herd by assuming the mantle of the professional.¹⁷

THE GROWING LURE OF COLLEGE LIFE

So, with the upgraded status of the higher education system at the end of the century and with consumers' growing need for a college degree in order to get a good middle-class job, attending college became a useful pursuit for middle-class youth. At the same time, it also became a pleasurable pursuit. Recall the desperate straits facing the American college in 1880, when the ratio of colleges to population was at its historic peak. The number of institutions per million population rose from 5.2 in 1850 to 16.1 in 1880 and then declined to 9.8 in 1920.¹⁸ So many sellers, so few buyers. Under these circumstances, a college's survival depended on its ability to draw more students in an extraordinarily competitive market. As we have seen, they helped make their product more consumer friendly by abandoning course requirements and shifting the curriculum toward more practical skills and knowledge. At the same time, they also sought to make college life more attractive—or, it is probably more accurate to say, they responded to student demands for these perks. The idea was that attending college would not only be a way to get a good job, but it would also be an enjoyable social experience—one that prospective students would ea-

gerly anticipate, enrolled students would revel in, and alumni would remember fondly for years afterward. By the end of the century, this dream was realized; college had become a destination.

What came together suddenly on American college campuses in the last two decades of the nineteenth century was the full array of undergraduate extracurricular activities that characterize campus life today. Most centrally these included fraternities and sororities, which took charge of student social life; a wide variety of clubs and other campus organizations to engage students outside of classwork; and, of course, intercollegiate athletics. When students arrived on campus they found a large and complex array of student-run activities that operated independently of and often in conflict with the official academic regime of college studies. Entering this life was a process of immersion, which for most students became the defining experience of attending college.

At the heart of college life was football. The first intercollegiate football game was played between Princeton and Rutgers in 1869, but the sport didn't take off on campus until Walter Camp, a former player at Yale who became the sport's greatest promoter, revised the rules in the early 1880s to give it the familiar form it has today. From that point on, it spread with remarkable rapidity across college campuses, and the effort to organize intercollegiate play forced the isolated array of institutions to organize themselves into leagues. By 1915, 263 colleges were playing football against each other.¹⁹ The game became a center of student social life. Sports had existed on a small scale on college campuses in the mid-nineteenth century, but the focus then was on competition between classes within the college, such as juniors against seniors. But now the focus was on the effort to defeat rival colleges on the football field, which led students and alumni to develop a close identification with their home institution by rallying behind the home team. With football came such now familiar collegiate elements as letter sweaters, fight songs, cheerleaders, alma maters, homecoming, and the tradition of wearing your school colors with pride and defiance.

Another consequence of the rise of football was that the college—after years of obscurity—became part of the larger popular culture.

Athletic contests became major news on sports pages and they helped burnish the populist image of an institution that could otherwise have easily been seen as archly elitist. Partly because of this newly accessible component of college life and partly because college was now becoming a central part of the middle-class American experience, college life started to become the subject of magazine articles and the setting for popular novels. For college administrators, this change was a bonanza of positive public relations. They now found themselves running an institution that had both academic credibility and popular appeal, that was able to offer students a way both to get a good job and have a good time. The scrappy but disreputable higher education system of the nineteenth century had now emerged as a popular and prestigious institution deeply integrated into middle-class American life.

Employers Come to Value the College Graduate

We can understand why middle-class students were now choosing to attend college in large numbers, since doing so was both economically useful and socially enjoyable. But that doesn't explain why employers were now willing to hire them. For most of the nineteenth century, employers had in fact disdained college men, arguing that the college experience disqualified them for hard work. Andrew Carnegie was one of the leading critics: "In my own experience I can say that I have known few young men intended for business who were not injured by a collegiate education. Had they gone into active work during the years spent at college they would have been better educated men in every true sense of that term. The fire and energy have been stamped out of them, and how to so manage as to live a life of idleness and not a life of usefulness, has become the chief question with them."²⁰ However, by the early twentieth century, Carnegie and other corporate leaders had become major supporters of colleges and came to prefer hiring college graduates in management positions. What happened?

As David Brown has explained, toward the end of the century these leaders came to realize that the college man could be the answer to a major organizational problem that they had to confront.²¹ This was

the period when the corporation arose as the organizational form for controlling major business enterprises. What happens in a corporation is that the personal control of the owner becomes diffused and rationalized into a bureaucratic structure of administration. People like Carnegie now had to rely on a large number of managerial employees to take care of the wide range of activities of the corporation in a manner that was both competent and in line with corporate priorities. It was not easy to figure out which potential hires would be able to meet both criteria. In a small firm, the newcomer could start on the factory floor and work his way up the ladder, demonstrating his skill and loyalty along the way. But this was not a practical model for a giant corporation that needs to hire hundreds of managers to fill its administrative needs.

Brown argues that the college experience provided both elements required of the good manager. The skills required for bureaucratic work were not narrowly technical, in the sense of requiring specific knowledge about how to forge steel. These employees were not going to be metallurgists or engineers but managers. They needed to have a general ability to deploy the verbal and cognitive skills required to function within the setting of a complex organization. The new college environment at the end of the century was just such a social setting. They also needed to be comfortable assuming positions of authority. Again, being a college man meant that you were being socialized in a group of middle-class peers who saw management and professional life as their natural destiny. And your experience in college life helped prepare you in the interpersonal skills and leadership roles you will assume later on the job. In addition, corporations also needed to hire managers who were trustworthy and were aligned with the norms of the larger organization. So why not hire college men, who have been socialized in the norms of college life and pledged their loyalty to the college community?

As Brown notes, these are qualities that arise from the college experience but not necessarily from the formal academic curriculum. Ethan Ris develops this point further, arguing that it was explicitly the new extracurriculum at the end-of-century American college that

provided future managers with the skills and loyalty they would need on the job.²² He sees three skills in particular that students acquired at college and that were and are salient to management work. One is autonomous productivity. Students were given broad assignments to complete and then allowed a lot of space and time to work things out on their own, seeking help as needed but not receiving close supervision. Just like bureaucratic work. Another is hierarchical proficiency. Students needed to learn how to function in the complex and often opaque structure of the university. This was and is a system with multiple hierarchies—freshman to senior; assistant to full professor; faculty, chair, dean, provost, president—where the organizational chart is not much help in figuring out how to get things done and where you need to learn how to read the structure correctly and approach the right person. It's also a place where students develop their own roles, moving through a student hierarchy to positions like team captain, head cheer leader, fraternity president, and club organizer. A bureaucracy has many of the same elements, which employees need to negotiate effectively. A third skill is institutional loyalty. One of the things that the new university was good at was socializing students to identify with the institution and the team and the fraternity. These graduates have worn the colors, supported the team, and donated to the endowment—exactly the kind of team players needed on the job.

John Thelin notes that "a popular banner found in student dormitory rooms in the 1890s proclaimed, 'Don't Let Your Studies Interfere with Your Education!'"²³ The point, of course, is that the student culture in the period was in opposition to academic learning, which it certainly was. A mound of evidence attests to the student desire to do the minimum required to pass classes without unduly intruding on the quality of social life. But it may be that we should take the banner's admonition seriously. Maybe it was indeed the student-run extracurriculum at the early twentieth-century university that provided the core knowledge and skill that students would need in their future roles as corporate employees.

The larger story is that the American system of higher education

maintained its consumer orientation even as it was enjoying the benefits that came from its new association with scientific research and advanced learning. Adding a graduate school to the university didn't do anything to diminish the hold that undergraduate programs had on the institution. If anything, the move toward high-level research made the institution even more dependent on the financial support, political legitimacy, and practical impact that came from the undergraduates, whose desire for a good job and a good time had to be honored. In order to become an academic powerhouse, the university also had to become a party school.