

5 Beyond Service

The Development of Universities as Independent Agents

In addition to working directly with government as a partner, universities began to work as its agent, helping establish national standards and define policy in a variety of arenas. The position of universities as agents stemmed in many ways from the loosely coupled regulation of education; from local elementary schools to advanced graduate and professional programs, universities helped define and nationalize the American educational system. This influence had implications far beyond educational policy itself, touching on most every domain into which the formative state would venture.

Universities' service as independent agent of the national state evolved from a variety of interconnected forces. Supported by institutional coordination and entrepreneurship, America's schools worked closely with one another and developed an informal national system of standardization. Though such efforts were not often undertaken in direct concert with federal, state, or local governments, they were often undertaken with these governments' informal support and occasional input. University leaders would share their plans and expectations with government officials, who would reciprocate with advice and interest as well as their implicit sanction. The federal Bureau of Education did not develop or enforce standards for secondary schools. However, its representatives worked with universities as they developed and enforced such standards.

Establishing Agency: Universities and Standards for Secondary Education

With the rise of compulsory elementary and secondary education, the expansion of opportunities in higher education, and the growth of

graduate and professional education came a desire for uniform standards and expectations. The federal government's Bureau of Education was not equipped to or capable of pursuing such standardization. Similar to university presidents who shaped their institutions through lengthy tenures, William T. Harris shaped the bureau by serving as the commissioner of education in its formative years, from 1889 to 1906. Harris had achieved some renown as a public advocate of school reform during his tenure as superintendent of St. Louis public schools. Stressing the need for "directive intelligence" in an ever-specialized society, Harris championed the development of high schools as a means of ensuring that citizens had the basic skills and tools needed to nurture the expertise required to govern and lead.¹ Harris would continue to advocate reforms while commissioner, but he was limited by a federal agency that lacked resources and authority over local school districts. Harris's influence on national education policy was dependent on his personal connections and service in various national associations.² Instead of being driven by a federal agency, the development of a national system of public education relied on universities not only training teachers but also defining curriculum and establishing standards through accreditation and entrance requirements.

Like higher education, American secondary education could trace its origins to before the Revolutionary War. The Collegiate School of New York and the Roxbury Latin School of Massachusetts offered secondary education and preparatory assistance in the colonial era. During the nation's early years, college admissions were very particularized and localized. At those few schools where standards were firmly established and upheld, entrance exams were offered usually once a year. These exams were given on campus and administered by faculty. As a result, preparatory schools and private tutors were primarily located around collegiate campuses offering instruction and training for prospective students. Colleges would influence the nature of education and instruction through the detailed publication of exam topics and content and by the fact that many of the tutors were alumni. Overall, however, higher education institutions did little to directly shape the preparation of students for college work in the antebellum years. This began to change with the establishment of a system of admission by diploma at the University of Michigan in 1870.

*Developing Agency: Admission by Diploma
and the Roots of Regulation*

Begun by James Burrill Angell's predecessor, interim president Henry Simmons Frieze,³ admission by diploma was a system whereby gradu-

ates of accredited high schools who had completed the “college preparatory” course of study (high schools generally offered preparatory and nonpreparatory tracks) were admitted to the university without having to take entrance examinations. The university itself accredited high schools. Faculty from the university would spend two to three days visiting a particular school and assess the quality of its teachers, facilities, and curriculum. Initially, only high schools in the state of Michigan were allowed this privilege. Soon after taking the presidency in 1872, Angell expanded the program to include any and all high schools willing to participate, provided they paid for the faculty’s travel and visit.

The program was a great success, beginning with five high schools in Detroit, Ann Arbor, Flint, Jackson, and Kalamazoo. A year later, four more high schools, in Pontiac, Coldwater, Grand Rapids, and Ypsilanti, were accredited. Growing consistently over the years, the program would encompass forty-five schools in 1886–87, fifty-eight in 1887–88, and seventy-one in the program’s nineteenth year, 1888–89. Of these seventy-one, only forty-six were in Michigan itself, nineteen schools were in Illinois, three were in Minnesota, and there was one each in Ohio, Pennsylvania, and Indiana. By 1889–90, the program had developed to such an extent that a majority of students admitted to the university were accepted by diploma rather than by examination (164 to 131).⁴

While the university’s accreditation program was successful, its policy of having out-of-state schools pay for faculty members’ visits led to some complaints. In February 1891, the Chicago Board of Education responded to the university’s announcement regarding accreditation by noting that “the Board of Education has no appropriation of money applicable to such expense.” The board suggested that “in place of the proposed examination of our High Schools, the University of Michigan follow the custom of several of the Eastern universities and send a Committee to Chicago at a convenient time in the summer to examine applicants for admission to the same.”⁵

Michigan traditionally had offered examinations during the summer in Chicago and other cities, such as Dubuque, Iowa, and Milwaukee, Wisconsin. The exams were not given at any particular school but, rather, were advertised in the local newspapers and administered at a local hotel. As admission by diploma expanded, these off-site examinations were discontinued in all cities but Chicago by 1891. As Angell wrote to Shatock Hartwell, principal of Kalamazoo High School, the exams in Chicago were an exception prompted by the need to maintain a presence in the city similar to that of the university’s eastern peers:

“some years ago we did offer examinations at two or three cities remote from here, but we are holding such examination only at Chicago and would prefer to drop that if we could but as eastern colleges continue to hold examinations there we are compelled to do so at present.”⁶ Regardless of the existing examinations, Chicago’s school board pressed the issue of faculty visitations, as they offered an opportunity for assessment and, if successful, an increase in stature.

In September of that year, Angell reported to the Board of Regents on the program’s success, noting that its benefits had led the university “to assume the expense of sending committees of the Faculty to visit the schools in Michigan.” For Angell, admission by diploma benefited the state as it attracted the highest caliber of students and reflected “the desire of the University to cultivate relations of the most cordial intimacy with [the high schools].”⁷ Reflecting back on his twenty years as president of Michigan, Angell would conclude his discussion of the program by noting that the number of schools from which students were received “on diploma” had grown from an initial five to a remarkable eighty-two. Commenting on this growth, Angell suggested:

If we consider either the effect on the schools or on the University it would probably be just to say that no act of the university has in the last twenty years been more serviceable than the careful development of the policy, by which it has brought itself into so close and fruitful relations with the preparatory schools in this State and some neighboring States.⁸

Michigan’s service extended beyond facilitating admission and expanding opportunities for higher learning, to include improving secondary education for the state as well as its neighbors.

In addition to the simple numbers of students admitted and schools accredited, the regulatory influence of universities reached to the everyday operations of secondary education. Most notably, university accreditation led to changes and improvements in the curriculum. Typical of such a process was an exchange between Michigan alumnus and school examiner Dalbert Haff, Angell, and Kansas City High School principal James Buchanan. After inspecting the high school, Haff was effusive in his praise but believed instruction in English and science might be brought into greater concert with Michigan’s requirements. He did not believe change would be difficult and wrote Angell, “I wish you would write a personal letter to Prof. Buchanan (Principal) making such suggestions as to the change of courses you would recommend.” Angell did, and Buchanan soon responded that a visit would be “most welcome.”⁹

The general sentiment of secondary school administrators was best synopsisized by superintendent of Chicago public schools A. F. Nightingale: "we are gratified to learn that our high schools have been placed upon your accredited list, and we shall be glad at any and all times to receive suggestions concerning the betterment of our course of instruction and of the quality of our teaching."¹⁰ The extent of Michigan's influence as accrediting agent is hard to overstate. Writing to Angell a few years later, Nightingale would highlight such influence when he wrote for the names of faculty the University of Michigan assessors had deemed inadequate.

I have heard that one or two teachers were quite condemned by your visitors, and as I am obliged to report by May 1 my recommendations concerning the re-election of our teachers, this report will help me very much in the matter.

I am sure that we do not wish to retain teachers that the U. of Michigan does not approve of, and, therefore would like to know the opinions of your experts.¹¹

The ability of the university to act as an agent of the state rested on its position at the head of the educational system and in secondary schools' acceptance of its authority and belief in its expertise regarding the educational process.

Michigan was the first, but not the only, institution to adopt such a system. The University of California soon followed suit, adopting a similar system in March 1884. Representing the unique coordination between these two western institutions, Berkeley essentially adopted Michigan's exact system. A committee of the university's faculty would visit public high schools at the request of the principal, and if their report was favorable, the school's students could be admitted without examination. Previously, examinations had been given to applicants at Berkeley, in San Francisco, and in the outlying areas of Los Angeles and Marysville.

In a section of his 1884 annual report to the governor, entitled "Want of Preparatory Schools," University of California president William T. Reid stressed the importance of good high schools and bemoaned the condition of such education in California.

The most serious drawback to the University is the want of suitable preparatory schools throughout the State, in fact, the entire absence of them in many portions of it, and to this cause may, doubtless, be attributed the slight representation of many counties in the University. The standard of admission to the University has, within a few years advanced; while, under the discouragements of the new Constitution, the establishment of high schools has been retarded.

It must always be difficult to bring a people to prize the higher education, if they are not accustomed to the encouragement and support of the intermediate.¹²

For Reid, the visitation and accreditation of high schools by the university's faculty was a great method for developing such support. Two schools, Berkeley and San Francisco, were initially accredited, and twenty-seven of their graduates were admitted in 1884, constituting 31 percent of all admitted.¹³ Four years later, in 1888, the program had grown to include four additional schools (Alameda, Oakland, Sacramento, and Stockton) and forty-three students, 33 percent of all those admitted. The program, mirroring the rapid explosion of the state itself, grew to such an extent that for the class entering in the fall of 1899, 434 students, 83 percent of all those admitted, were accepted "on diploma."

Michigan and California recognized the value of accreditation not only in developing their universities and raising their stature nationally but also for improving educational standards throughout the state and the West. While the two institutions did not jointly accredit high schools, Reid sought to emulate Michigan's program. Such imitation would evolve into a systematic and loosely coordinated effort to regulate secondary schools in the West.

For Reid, Berkeley's program of admission by diploma was "an important step toward establishing relations between our higher grade public schools and the University, and a heartier cooperation between them." He was confident this program would accomplish such a step in light of Michigan's success: "there can be no doubt, I presume, that the excellence of the public school system in Michigan has been greatly promoted, if indeed, it is not greatly due, to this cooperation between the University and the secondary schools."¹⁴ Explaining the program to the regents and the governor, Reid stressed that the university was closely intertwined with the quality of education.

The University must always react upon the secondary schools, to their great benefit. Parents can have no warrant that the public school of the community in which they live offers as good educational opportunities as are offered in other communities, unless the scholarship is measured by the same standard applied to other like schools throughout the commonwealth.¹⁵

Regulation of secondary schools was thus an explicit function of universities and the system of "admission by diploma." Reid granted that such regulation and assessment might not be popular with local school districts, but he believed that it was necessary not only for the benefit of

the university but also for the benefit of secondary schools throughout the state. In assessing high schools, the university sought to improve education not only for the best students in the state but for all students in the public schools.

During the assessment process, schools were judged on the preparedness of their students for admission to higher education, as well as on their overall curriculum, facilities, and faculty. Reid cited Michigan as an example of the advantages of such an approach: "the result of giving to the University of Michigan the power to set the standard of education in the secondary schools throughout the State is, perhaps, the most evenly balanced system of public schools in the United States." As well as simply improving the general quality of the system, university-based accreditation also directly influenced the faculty and administrators of secondary schools.

A further result of this coordination in the school system is an active spirit of cooperation between the teachers in the secondary schools and those in the University. While the Faculty of the college, indicates what, in the temper of the community and in the quality and capabilities of the teachers is possible. The tendency of the University is constantly upward, and this upward tendency reacts powerfully upon the schools in the desire of the teachers to meet every new requirement made by the University; and this healthy stimulus is felt, not only by the teacher, but by the community. It becomes the ambition, not only of the teacher to see his school made a diploma school, but of the community as well.

This community ambition became so influential, according to Reid's sources, that "the principal of a high school in Michigan cannot feel at all secure in his position if he fails within a reasonable time to get his school on the list of diploma schools."¹⁶

Reid hoped such ambition would result from Berkeley's adoption of the system, and preliminary indications were that it might. Reid ended his report on the system by noting, "the effect of the regulation has thus far unquestionably been favorable to higher aims and higher scholarship in the preparatory schools, and it therefore promises to be highly beneficial to the University."¹⁷ Reid's words proved prescient: diploma admissions would quickly grow to be the standard means by which students entered the university not only at Berkeley but also at other institutions in the West, such as the universities of Indiana, Iowa, Minnesota, Missouri, Ohio, and Wisconsin.

At this time, there existed no formal coordination among the western universities in regard to accreditation. There was, however, a loose affiliation based in the university presidents' relationship with Angell

and in Angell's awareness of the unique position Michigan held as the model for other universities in the West. Discussing a related debate over whether improvement of secondary education and the growth of graduate and professional education might lead the university to shorten the course for a bachelor's degree, Angell stressed that Michigan could not undertake such a decision without appreciating the full influence of its decision.

We cannot neglect to consider what would be the effect of such action on education in the west. Without assuming too much for ourselves, we can hardly doubt that if we made the proposed change, our example would compel the smaller colleges in this region and probably tend to bring all the State universities in the west to make the change also.¹⁸

Angell and Michigan chose not to adopt the proposed "short course," so we are left unable to judge the exact extent of their influence on this matter. We can, however, see in Angell's comments a growing awareness of Michigan's role as a linchpin in an emerging system that was national in its orientation.

In terms of high school accreditation, it is clear that Michigan was the model. Writing to Angell about his school's efforts to undertake admission by diploma, S. S. Lows, president of the University of Missouri, wrote: "you are in advance of us in the arrangements for preparation work in cooperative schools, and for the curriculum prescribed and optional work. Our growth within the last 10 years has been such as to encourage us to feel our way to a more advanced stage of organization."¹⁹ Angell and Michigan did not simply develop a model program that others would imitate. Michigan's standards were often other western school's standards or, if not their immediate standards, their aspiration. Hence, a simple program for accepting students in Michigan evolved into a system of regulation for secondary schools throughout the West.

The informal coordination at the heart of this system extended to secondary school administrators, such as William Reid, who instituted the "diploma system" as president of the University of California and then left to become headmaster at Belmont Academy. Not having the resources to bring faculty out for a visit, Reid asked to have his school join Michigan's accreditation list on the basis of its accreditation by the University of California.²⁰ Reid's story reflects the depth of coordination but also alludes to the limits of entrepreneurship in creating a national (or at least western) system for secondary education. While Reid successfully brought admission by diploma to Berkeley and later

gained “diploma” status for his preparatory school, such efforts were driven primarily by an individual belief that they would improve the quality of education.

No incentives or sanctions existed to encourage or maintain membership in this system of admission by diploma. So some states and some schools lacking initiative or sufficient resources failed to participate. Owing to informal adoption, such standards were not implemented in the most uniform or methodical way. Nevertheless, the broader popularity of admission by diploma did further a move toward national standards. The quasi-government apparatuses of the new American state were like the federal government itself—developing, but not fully formed.

*The Limits of Agency: Admissions Standards
and the Committee of Ten*

Unlike schools in the West, eastern and southern universities still relied primarily on examinations to determine admission. Drawing primarily from private high schools, academies, and tutors, these schools did not directly regulate individual schools. Beginning in this era, however, they did seek to reasonably coordinate their admissions requirements so as to develop standards and expectations. The initial step in this process was the introduction, in the post-Civil War era, of admission by certificate, whereby universities and colleges would accept students on the basis of having passed another institution’s exam rather than requiring them to take their own. This process was still marked by vagueness, so various efforts at more formal coordination were attempted. The most ambitious of these undertakings was spearheaded by Harvard University president Charles Eliot in 1891. Under the organizational umbrella of the National Education Association, which at the time incorporated both secondary and higher education institutions, Eliot directed establishment of the Committee on Secondary School Studies, also known as the Committee of Ten because of the number of its members.

Among the ten that Eliot tapped, the first he asked was Michigan’s Angell. Angell had been highly involved in drafting a preliminary report to the National Council of Education, a branch of the National Education Association (NEA), “on the general subject of uniformity in school programmes and in requirements for admission to college.” The committee sought to develop detailed standards for admissions to colleges and universities and a general guideline for high school curricula. To accomplish this, the committee arranged conferences of the leading

instructors in the principal subjects tested for admission, including mathematics, history, classics, and the like. Writing to thank Angell for agreeing to continue on with his service, Eliot stressed: "the selection of these specialists will be the most difficult work of our committee. The members of the conferences ought to be not only good teachers, but also reasonable men who can enter into a wise and influential agreement." Eliot also expressed hope that the conferences might "represent fairly the different parts of the country."²¹ Despite his intentions, the initial Committee of Ten did not include any members representing states west of Colorado or south of Missouri.²²

The committee and its conferences were well supported by the NEA, who appropriated twenty-five hundred dollars and secured discount rail passage for its work. Eliot, as was his habit, ran over budget, but he managed to secure funds to offset the additional costs. Financial concerns were the least of Eliot's worries. Eliot initially encountered some delay obtaining component reports, but he wrote Angell to reiterate that he felt "sure our Committee will be able to contribute to the improvement of American Secondary schools."²³

Unfortunately for Eliot, a simmering conflict undermined the ability of the committee to present uniform standards to the association and its schools and universities. In addition to the usual petty squabbles that mark any committee process, a significant series of objections were raised by James Baker, president of the University of the Colorado. The rift was so significant that Baker shared his initial concerns with the whole of the sponsoring council rather than simply with the Committee of Ten itself. In his letter, Baker emphasized that he was in complete support of the committee's aims but that he wished to raise objections to aspects of the committee's work.

The report of the committee had stressed flexibility in the application of its recommendations. Baker took issue with such an approach, arguing that the committee's recommendations were "based upon the theory that, for the purposes of general education, one study is as good as another,—a theory which appears to me to ignore Philosophy, Psychology, and Science of Education."²⁴ For Baker, breadth of study was admirable, but prescription was necessary. Baker felt that a broad but detailed and prescribed curriculum could be developed from the various subject committee reports.²⁵ Baker's dissent underscored the difficulty of informal coordination. Ironically, by attempting to offer flexibility and achieve the greatest consensus possible among the general membership, the Committee of Ten had undermined its own consensus.

Angell and Eliot wrote to Baker asking him to withdraw his statements offering only qualified support, but to no avail. Eliot and Angell agreed that the committee's recommendations were "but tentative" and would "doubtless be modified by different schools to meet their various circumstances." Unfortunately, Baker was not of the same mind. His objection exasperated Eliot, who wrote to his friend Angell:

I saw in my first interaction with him, nearly two years ago, he believed it possible to invent a uniform high school program for the entire country. The idea that he still clings to—indeed, he thinks he can write that programme himself, and that it would closely resemble his programme in the Denver High School. That is the real reason why he advocates a continuation of the work of our Committee, or of some committee. I need not say that I agree with you in thinking that the National Council had better not continue our Committee. Public discussion of our work is the next thing in order, and I should think two or three years a short time to allow for that discussion.²⁶

Eliot did convince the NEA's executive board to approve the committee's report and forward it to the full membership. Additionally, the report received the sanction of the national state, thanks to the support of committee member and commissioner of education William T. Harris. The federal government subsidized and distributed thirty thousand copies of the committee's report throughout the country, under the auspices of its Bureau of Education.

While the Committee of Ten's broad and flexible recommendations were generally well received, specific pockets of acrimony would continue to obstruct effective coordination between academic leaders and, correspondingly, nationwide implementation of the report's recommendations. Following the Committee of Ten report, the first major meeting of secondary school leaders and other academics was the annual conference of the association's department of superintendence. Returning from this meeting of leading academics, Columbia's president Nicholas Murray Butler wrote to Eliot that the committee's report had generated enthusiasm. Describing its work as "a prominent feature in the intellectual landscape," he added, "I am sure you will be glad to hear that it was received with almost unqualified admiration and with substantial approval by the large body of serious minded public school men."²⁷

Significantly, however, support for the committee's work was not universal. Butler continued:

one or two others, notably Supt. Greenwood of Kansas City, showed a disposition to find fault with matters of minute detail; and one or two others, notably Mr. Nightingale of Chicago, apparently unacquainted with the

courtesies of life, endeavored to substitute a malicious attack of the committee for the criticism of their report.

Though annoyed by Nightingale's manner, Butler was generally unconcerned about Greenwood and his objections. Saying their complaints were "strongly reprehended by the leading men present," Butler believed that "on the whole you would have been very well satisfied at seeing and hearing the impression that the report has made."²⁸ Eliot said that he had never had any dealings with Nightingale and thus assumed that his issues with the committee were "impersonal." Overall, Eliot was "content" with the reception the report had received, believed it was "having a very thorough and useful discussion in this part of the country."²⁹

Effective coordination in the "loosely coupled" era was contingent on close working and personal relationships between leading academics. When tensions arose, it often undermined not just short-term efforts at coordination but the long-term attempts to develop and implement policy as an independent agent. As with admission by diploma, though reputational concerns and peer influence could encourage systemization, no formal organization or agency of consequence yet existed to maintain uniformity and stability when the relations between institutions became strained.

*Toward a National System of Regulation:
Coordinating Diplomas and Certificates*

Though not immediately succeeding in their efforts to establish general standards for high school curriculum, the Committee of Ten did succeed in laying the groundwork for the development for minimum standards for college admission at the nation's elite universities. These curricular standards would be in many aspects formalized by the related College Entrance Examination Board and the Association of American Universities a little over ten years later. The report was widely distributed and widely read. It was not necessarily widely implemented. Limited by faculty and curricular resources, some schools could not meet all the standards. Systematic distinctions still existed. Western schools generally admitted students "on diploma," while schools of the South and Northeast continued to require examinations. In developing shared expectations for accreditation, the western schools coordinated with one another through correspondence and through James Burrill Angell's informal oversight as the dean of western university presidents. Eastern and southern schools began to develop informal coordi-

nation through an emerging system of admission by certificate and gradually undertook efforts to move toward more formal relations between schools.³⁰

The certificate and diploma systems shared similarities. Some schools, most notably the University of Michigan, functioned in both. As Michigan's president, Angell would help draft the Committee of Ten report that was criticized by western school principals, such as Greenwood and Nightingale, as elitist and unreasonable in its expectations. Nonetheless, he would also be praised by Nightingale, who wrote:

Your influence in advancing the cause of higher education—East as well as West—will never be fully weighed. Your advocacy of a broader spirit in courses of study, of individual rather than class development, and of placing greater confidence in the honest work of secondary schools, has been of untold benefit to all of the country.³¹

Angell's relationship with Nightingale underscores both the limits and the successes of efforts to establish standardized admissions requirements. On the one hand, many school principals sought freedom to develop particularized programs of instruction and recognized that not all of their students would necessarily be attending college. On the other hand, such principals were interested in furthering the cause of education and saw the emerging universities as a natural and forceful ally.

Universities did not necessarily wish to prescribe a curriculum for all levels of education but did feel a responsibility to increase the number of students interested in higher education as well as to improve the quality of students it did admit. To do this, universities developed both admission by diploma and admission by examination. While individual universities would develop their own standards through informal communications and more formal committees and organizations, these informal standards would develop into standardized quasi-regulatory systems. As Angell noted in writing his son, James Rowland Angell, upon the former's return from presiding at a session of college and secondary school leaders at the University of Chicago, "there is a laudable effort all over the country for the colleges and school men to work on educational problems."³²

These systems developed to the point where universities would oversee many high schools' curricula. Yet there were limits to its reach. First, high school participation was essentially voluntary. High schools were not required—by anything other than public sentiment or the demands

of benefactors and prospective students—to meet university requirements. Even the state of Michigan, whose university was at the forefront of the accreditation movement, did not require high schools to have accreditation visits or to offer curriculum in keeping with the university's entrance requirements. Second, before the turn of the century, no truly national system of regulating high schools arose. Instead, two distinct but occasionally overlapping methods of oversight drove American education, admission by diploma and admission by examination.

Nonetheless, it would be fair to say that a loosely coupled national system regulating secondary schools began to develop in this era. Not every high school participated, and those that did were not all judged on the same criteria. However, from the beginning of the system of admission by diploma in 1870 to the end of the century, a dramatic shift had taken place. The institution of the American high school had gone from being solely local to being influenced by national standards—standards developed not by the federal government but by universities acting as independent agents on behalf of the national state. Such initiatives were often local or, at most, regional in their origin; yet they were greatly influenced by national forces. Coordination among the heads of leading universities and their shared “nationalist” agenda devoted to the pursuit and application of expertise, as well as the fluid interaction between these academics and representatives of the federal government, underwrote agency. Though not enforced by the federal government, national standards for secondary schools supported the development of a national state.

Taken on its own, universities' regulation of schools might seem detached from their efforts to build a new American state. However, when we consider universities' active partnership with the federal government and their overall efforts to develop and enforce standards across a variety of domains, we find that in regulating secondary schools, universities worked on behalf of the emerging national state. The limited reach of the Bureau of Education and the local nature of school governance meant that America did not have a government-run system of education, but thanks to the work of the nation's leading universities, it was developing a national system based on shared standards and expectations.

Extending Agency: Defining Higher Education

In attempting to define and standardize admissions standards, the nation's elite universities not only influenced the development of sec-

ondary education but also shaped the evolution of their peers. The formal organizational umbrella of the AAU would not be established until the first years of the twentieth century. Nonetheless, loosely coupled coordination between institutions had enabled colleges and universities to outline national standards for higher education and to define expectations of agency and service to the developing national state.

Unlike today, no formal accrediting body with governmental sanction held sway over the nation's early institutions of higher learning. In the late nineteenth and early twentieth centuries, almost any institution could call itself a college or university, and many did. However, closely linked leadership and competitive pressures did enable the leading universities to regulate one another, laying the groundwork for later formal standardization through the development of the AAU. Coordination would lead to an eventual standardization of credentials and degrees, especially in the professions. For the story of American political development, it is essential to appreciate that the movement to ensure certain competencies, skills, and expertise among teachers, lawyers, doctors, and others was not initiated and institutionalized by the state; rather, it was initiated and institutionalized by this emerging system of national universities.

Defining Expansion: From College to University

The decades following the end of the Civil War witnessed exceptional expansion and advancement in the fields of knowledge and courses of study housed in America's leading universities. Attempting to give shape to their new functions and missions, established eastern colleges—such as Columbia (1883), Yale (1887), Harvard (1890), and Princeton (1896)—retitled themselves as universities.³³ These actions represented more than simply the renaming of an institution. They symbolized the desire of schools to move beyond their traditional role with a commitment to pursue research, extend knowledge, and define expertise. They also reflected a collective effort to give general definition to such a desire. In simplest terms, by taking the title *university*, the more established institutions of higher learning (e.g., Columbia, Yale, Harvard, and Princeton) could help legitimately direct the course of the emerging higher education institutions that took the title *university* from their founding (e.g., Michigan, California, Virginia, Cornell, and Johns Hopkins).

By taking the name *university*, these schools pronounced their belief in the promise of expertise and the potential that it held for the American state. Justifying Yale's name change, which had faced some oppo-

sition from the more conservative elements of its faculty and governing corporation, Timothy Dwight stressed the need for Yale to include the graduate and professional schools and their pursuit of expert knowledge as “essential parts of the university, without which its life cannot, by any means, be complete.”³⁴ The development of Yale University, he argued in his inaugural address, “bears in it the promise of the coming era.”³⁵

Yale was not alone in changing its name to incorporate and reflect a belief in the “promise of the coming era.” This promise meant both new curricular initiatives and new notions of service—and, to some extent, new identities. Publicizing the changing of Columbia’s name and pronouncing the potential of expertise that accompanied it, the *New York Times* editorialized:

The President and Trustees of Columbia College have announced their purpose to build up in this City “a university of the highest order. . . . They have set forth the country’s and the city’s need of such a university and . . . hope it shall draw students from every part of this country, and from other countries, and shall furnish here upon our own soil that post-collegiate education which American students must now seek abroad. This latter fact is reason enough for establishing such a university.

The *Times* not only saw potential in the institution’s ability to keep students from having to go abroad for advanced study; it saw promise in the defined expertise an advanced university would pursue.

But to the city and the Nation a well-endowed university would also supply a new and more fully equipped class of workers in the sciences and mechanic arts. Aside from the honor which men of creative minds and great attainments conferred upon the countries of their birth and training there are considerations of the highest practical utility connected with opening up of a university for professional and scientific training.

After listing a variety of potential areas for the university’s attention (e.g., engineering, electricity, botany, geology, geography, biology, physiology, astronomy, archaeology, and disease, pollution, and sewage), the *Times* stressed the universality of subjects that these newly titled institutions could pursue: “there are ample fields which American scholars are more and more eager to cultivate. They should be fitted for work here.”³⁶

Obviously, name changes and pursuit of an increasing variety of subjects were not the only criteria by which universities came to define themselves. In this period, universities began to more actively pursue collective definition as well. At the core of these efforts for collective definition were attempts by universities to pursue similar policies,

structures, and courses of study for bachelor's, graduate, and professional degrees. No government agency or outside accrediting body drove such collectivity, nor was it undertaken by the associations of universities that were being developed prior to the AAU. Among the first of these, the Association of American Agricultural Colleges and Experiment Stations (AAACES) was founded in 1887, and the National Association of State Universities (NASU) was founded in 1890; neither counted among its members the leading public universities—California, Michigan, and Wisconsin. Rather, the close working relationships between academic leaders and the uncertainty their new institutions faced led universities to turn to one another for direction and guidance. Such institutional isomorphism meant not only the creation of similar policies, structures, and courses but also the development of a loosely coordinated and increasingly prominent national system of higher education.

The nation's elite universities were self-defined institutions, regulating themselves. In this "loosely coupled" era, no formal organization existed to define their ranks; but the leading universities shared a collective search for definition. This search for definition impacted higher education itself and would also come to define and regulate such professions as education, medicine, and law. Universities, serving as agents of the national state, proscribed the skills and knowledge that would be seen as necessary for members of these professions and institutionalized formal programs of study and credentials that would encapsulate such expertise. By sharing their best and most useful approaches with one another, the institutional entrepreneurs who ran universities began to develop standards and establish expectations.

The development of state administrative capacities relied heavily on an intellectual cadre, developing professions, and standards of expertise. However, unlike in nations with strong ministries of education or strong national universities, the development of such capacities in the American state relied on the support of a self-regulating group of universities. In defining themselves, leading universities were also defining the nature and reach of the expertise that supplemented bureaucratic development. University leaders were not in conflict with federal officials; they were simply better positioned. By taking responsibility for the development of advanced knowledge (a task that could have fallen to the national state itself), universities acted as independent agents of the national state—serving and defining its goals, but essentially free from its authority.

Before the Civil War, colleges were largely autonomous, taking little counsel from one another. After the war, when faced with challenges presented by increasing societal complexity and popular demands, developing universities looked to one another, with select institutions leading the way. Not every university was newly founded, but every university was an institution in search of a new definition. Gradually, mutual oversight and regulation would lead to standard expectations for and approaches to higher learning. The leading universities looked to one another—and were also looked to by their less-established peers—for insight into their administration, internal affairs, external relations, and credentials.

Loosely coupled through personal and professional relationships, the elite universities essentially functioned as a national regulatory agency, not only broadly shaping the lower tiers and their relationship with institutions of higher learning, but shaping their peers in higher education as well. Such regulatory activity had a dual effect on the university's role as independent agent. First, it meant universities would be self-regulating. Through loosely coupled coordination, universities themselves, not the federal Bureau of Education, would begin to define standard shape and structure for the new institutions emerging from federal, state, and private support. Second, by regulating themselves, universities sought to standardize not only their internal operations but their role as agents of the state, through oversight of degrees and credentials. This reliance between peers evolved into a system whereby more established universities and more senior presidents took the lead in guiding new institutions and newer leaders.

Throughout the later years of the nineteenth century, the meaning of the title *university* continued to be of interest to educators. Appealing to the Maryland state legislature for funds in 1898, John Hopkins University president Daniel Coit Gilman echoed his sentiments from California many years earlier.

The question is often asked in these days, when so many institutions great and small, good and bad claim the title of a University—what is a real true University? One of the best answers is this, that it is an assembly of superior teachers and advanced scholars who are engaged in the acquisition and advancement of knowledge. It is a place where the best agencies that the world has are employed in the instruction of youth, and where the lamp of science is carried onwards into regions hitherto obscure. The training of youth and the promotion of knowledge are its essential functions.³⁷

The institutional entrepreneurs who guided leading institutions were very concerned with protecting and defining their good name.

Defining Peers: Administration, Staffing, and Competition

For university-based expertise to possess political authority and societal value, universities needed to ensure that institutions bearing the name *university* shared similar definition. Therefore, the leading universities looked to and guided one another in regard to a multitude of issues. The institutional entrepreneurs who shaped the modern university tapped the shared wisdom of their peers, frequently addressing concerns that included but were not limited to the overall administrative and academic structure of the university, relations with faculty, sources of funding, and the discipline of students.

To the older, established institutions of the East, competitive pressures would lead to institutional similarities. Such institutions as Yale and Harvard would occasionally survey one another as to how best to approach curricular and structural initiatives, but they also looked at one another with occasional jealousy. The nature of such competition was clearly evident to many, as is attested by a later anonymous gift of ten thousand dollars from a Harvard alumnus to Yale to “promote good relations between the universities.”³⁸

Despite their competitive nature, eastern universities still communicated regularly and took interest in their peers’ success. Writing to Gilman in 1890, Charles Eliot remarked about his peers Cornell and Columbia: “President Adams of Cornell is having a horrid time, and it looks as if he won’t stay long.³⁹ Low begins extremely well at Columbia, and it is a thoroughly cheerful subject to contemplate.”⁴⁰ Such interinstitutional concern would become formalized with the establishment of the AAU, but its roots lie in the developing awareness of peer institutions.

As the leading public institutions in their region, Virginia and Michigan served as model institutions for other developing schools of higher learning. Since its founding by Jefferson in 1819, the University of Virginia had been a benchmark institution for schools of the South. In writing “The Influence of the University of Virginia upon Southern Life and Thought” in 1888, William Trent would note (in apologizing for his own usage), “the University of Virginia is known throughout the South as ‘the University’ and this is my excuse for using an expression otherwise indefensible.”⁴¹ Defensible or not, Virginia’s influence grew as southern institutions of higher learning pursued courses of study more in keeping with the title *university*. Virginia brought many aspects of the university system to the South—most notably, the elective system. As Charles Smith noted in the October 1884 edition of the *Atlantic*

Monthly, "at least thirty-five southern colleges and universities have adopted this system, following the example of the University of Virginia."⁴² For a number of southern schools, however, limited resources and facilities meant that other aspects of the university, such as graduate education and research, were not necessarily prominent. Virginia had granted the region's first PhD, in 1885, but still lacked a system of fellowships and a culture of original research. Even though it was somewhat behind its northern and western peers in pursuing a graduate curriculum and adopting a research model, Virginia's role as the leading institution in the South was secure and would continue into the twentieth century. The school was the first southern institution to join the Association of American Universities, in 1904.

Another prominent public university, the University of Michigan, found its influence covering a great expanse, primarily rooted in its relations with the state universities of the West. Reflecting Michigan's role as a model, James Bryce, upon receiving an honorary degree, noted that he took special pride in such an honor: "knowing what an eminent place the University of Michigan holds and how much it has done and continues to do for education and culture in the great Northwest, I feel special pleasure in being thus connected with it."⁴³ Michigan's influence was best seen in its extremely close ties with its sister institution, the University of California, but it would also influence schools across the West.

During the eight years between 1887 and 1895, for example, the newly founded or newly defined state universities of Washington, South Dakota, Illinois, Indiana, Missouri, Idaho, and Utah all requested curricular and administrative guidance, referring to Michigan as their aspiration. In part because of James Burrill Angell's lengthy tenure and in part because of its own location at a geographic "crossroads," Michigan would in many ways serve as a model for institutions across the country. Upon taking office as president of Rutgers, the state university of New Jersey, Martin Scott wrote (to Angell) that among his "first duties will be to aid in the development of the relations of our college to the state" and that Michigan would be an "exemplar" in this effort.⁴⁴

Michigan and Angell's standard did not only influence public institutions, however. Writing to Angell, Charles Kendall Adams's successor as Cornell president, James Schurman, predicted a large move toward public support for universities in the eastern states.

In my opinion the support of higher education by the State is likely to become universal with the future progress of our democratic civilisation. But the people of the older states, especially in New England, have not yet

overcome that suspicion of government which they inherited from their struggle with the British despots over a hundred years ago.

Praising Michigan and Angell's contribution to the development of public higher education, Schurman continued:

It is a blessed circumstance that in the West men have been forced to trust themselves. Of course, they have had many wise leaders, and I may here say that it was the example of what you had done in Michigan, and what other States had followed Michigan in doing, that first convinced me, not indeed of the wisdom, but of the feasibility of the public support of higher education.⁴⁵

Schurman was in some ways mistaken, as new sources of capital and the pressures of expansion meant that even public institutions soon pursued private support. However, while incorrect in the particulars—state support for public universities of the East would remain behind western counterparts—he was correct in recognizing that while being public concerns, universities were increasingly becoming governmental ones as well.

In keeping with Schurman's sentiments, newer private institutions often looked to more established institutions, be it Michigan or the private schools of the East, when developing academic and administrative structures. However, such interaction was not unidirectional. Increasingly, more established institutions examined and at times considered themselves threatened by newer institutions and their exceptional resources—most notably, Leland Stanford's university in Palo Alto (founded in 1885 and opened in 1891) and John Rockefeller's university in Chicago (established in 1891).

Soon after announcing the founding of a new university as a memorial to his late son, Stanford wrote President Edward Holden of Berkeley, seeking to assure him that Stanford University was not a threat. Stanford stressed that his university's goal was to "do all the good which is possible" and that "to attain this it will have to work in unison with other like institutions." Stanford concluded, "I trust therefore that the State University and the Leland Stanford Jr., University will not only be able to work in harmony but will prove a mutual support."⁴⁶ Holden replied that Stanford's desire for coordination was a welcome and important one, not only for the individual institutions, but for the "the whole pacific coast."⁴⁷ This initial spirit of cooperation did not lead to meaningful coordination. Soon, Holden and his colleagues would bemoan the challenge presented by the riches of Stanford on the Pacific Coast and Rockefeller in the Midwest.

Bluntly summarizing some of the anxiety and anger these institutions initially caused other institutional entrepreneurs, Cornell's Charles Kendall Adams wrote Angell regarding a mutual fear of "faculty raids."

At present it is still uncertain as to what depredations Chicago and Palo Alto will make upon our forces. Wheeler, Hull, and White⁴⁸ have all been taken up to the summit of the mountain and shown all the kingdoms of the west; but as yet no one of them has either succumbed or spoken the decisive word, "get thee behind me." My chief reliance in hoping to keep them here is the uncertain financial condition of the Chicago enterprise.⁴⁹

While Chicago and Stanford did succeed in luring some faculty away, Adams's fear of wholesale defections proved unfounded. Rather than a threat, these newest of institutions soon became part of the loosely coupled system. Stanford hired David Starr Jordan as its first president on Andrew Dickson White's recommendation. Chicago's first president, William Rainey Harper, quickly developed close ties with his colleagues at Michigan, Wisconsin, and California.

More than simply encouraging institutional similarities, relations among elite universities fostered a coordination that was fundamental for universities' development as agents of the state. In a fashion not unlike the regulation of secondary education, universities guided one another. For example, when Angell considered raising faculty salaries at Michigan in 1892, he polled his peers at such places as Wisconsin, Harvard, Yale, California, Columbia, Johns Hopkins, and Cornell. When Martin Kellogg wished to construct new dormitories at Berkeley in 1897, he polled a similar group of schools as to the ideal structure for students' residential life. Through such internal definition, universities developed a collective identity and an external role in relation to the state and society. In other words, universities acted as a regulating agent for the national state by supervising themselves.

Defining Standards: Organizing Basic Knowledge

Credentials were essential to universities' collectivity and external influence. Universities needed to do more than simply produce degrees. They also needed to standardize and codify the knowledge such degrees represented, to give them value and authority. Harvard president Charles Eliot's campaign to shorten the time for a bachelor's degree from four to three years underscored the collective nature of this process and highlighted the fact that even the most prestigious and established of institutions would not radically alter the nature of its cre-

dentials without peer support. In keeping with his efforts at preparatory reform, Eliot sought to alter the bachelor's degree. Seeking Angell's support, Eliot bemoaned the inefficiencies of the current system.

Our Freshmen now average nineteen at entrance, and as we have increased the term of professional education, the age at which a young graduate is first able to earn his living has become absurd. It seems to me that two remedies should be applied; one the saving of time in schools, and the other the reduction of the course for the AB.⁵⁰

Angell wrote back that he understood Eliot's frustration but believed that students lacked maturity as it was and that shortening the time of preparatory and collegiate work would only heighten such difficulties.⁵¹

Writing to Adams, Angell alluded to "rumors that the Harvard men are thinking of trying a 3 yr. scheme for Bachelor's or something similar," and he questioned the wisdom of such a plan.⁵¹ Discouraged by such colleagues as Angell and Daniel Coit Gilman and daunted by the inflexibility of his own faculty, Eliot abandoned his plan. However, Eliot's failed efforts say more about the growing dependency between elite institutions than about his own ineffectualness. As elite universities began to see themselves as a collective body, academic reforms, especially in regard to degrees and credentials, were no longer undertaken individually; they were done with the advice and consent of peers.

It would be almost fifteen years until a committee of the AAU would formally define uniform standards for degrees. Nonetheless, universities were already working informally to systematize the production of such credentials. This coordination and regulation would have a dual purpose, highlighted not only by universities development of academic standards in collegiate and graduate education but also by the development of professional standards in such fields as education and law. These efforts enhanced universities' societal usefulness as well as their effectiveness as agents of the national state itself.

The contribution of universities also built on their evolution as national institutions. In this era, the leading universities increasingly began to draw in students from across the country and to send graduates out far and wide. By the 1895–96 academic year, Yale could boast of having students from each of the forty-five states. The West's model university, Michigan, had students from forty-one different states. Even the fledgling University of California had students from twenty-

six states. Perhaps reflecting unhealed wounds of the Civil War, the University of Virginia only counted students from seventeen states.

Nationwide recruitment of students and disbursement of graduates helped foster the national influence of institutions, especially in regard to the professions. In 1893, for example, the large number of Michigan graduates residing in the state of California prompted the state legislature to include Michigan, along with Berkeley and Stanford, among schools whose graduates were entitled to certificates allowing them to teach high school. Interestingly, Michigan first learned of the legislature's action from an educational journalist who praised the move. May Cheney wrote Angell with word of the plan and May's own approval: "as some of our best material comes from Mich., this is a step which all friends of education on the coast heartily approve. We have some excellent workers already in the field and we hope to introduce many more."⁵³ The news was confirmed by J. W. Anderson, the state's superintendent of public instruction, who laid out the details of the plan. Michigan soon joined California's major universities as the only institutions whose graduates could be recommended to teach high school. This placed Michigan in unique company, for as Anderson noted, "no Board shall consider the application of any party who is not a graduate of the pedagogical department of an institution that has been recommended by the State Board of Education in this state."⁵⁴ In other words, the University of Michigan would be one of only three institutions defining the skills, knowledge, and expertise deemed necessary for California's teachers.

Michigan did place a number of teachers in California schools. However, geographic distance and statutory vagueness meant that the university's work as a regulatory agent was occasionally muddled. Elmer Brown, the University of California's professor of pedagogy, wrote Angell to inform him of difficulties with the statute. As it was written, to be eligible for certification, a prospective teacher needed to have graduated from a pedagogical program. However, Michigan would not dedicate instruction to the "science and art of teaching" until 1889.⁵⁵ At Berkeley, Brown taught a number of Michigan alumni who either graduated before the pedagogy program started or had failed to take the proper series of courses while in Ann Arbor. Brown noted that under the wording of the statute, Michigan was required to certify both types of students. He acknowledged that there should eventually be "some settled policy in the matter" and expressed hope that Angell would pass along the records of such students in the meantime. Brown stressed that he did not mean for Michigan to grant official state certifi-

cation to such students; rather, he simply asked Michigan to inform the state of California that particular pedagogical requirements had been met.⁵⁶

Angell replied that he feared Brown's suggestion might appear to "disguise" the facts in particular cases. Brown worried that he had not made himself understood, and he continued to stress the difficulties presented by the current law. In one of the American state's first instances of bureaucratic red tape associated with credentialing, the law did not provide for cases in which the academic work had been taken at one institution and the pedagogical work had been done at another. Brown argued that the solution he offered would meet the spirit of law and not violate its letter. He maintained that training done at California obviously met "the requirement that professional pedagogical training be equivalent of the University of California." He again apologized for the "awkwardness" of the law and expressed hope that it would be amended soon.⁵⁷

Angell soon heard from a student in the predicament Brown described. Louis Webb of Los Angeles, who had graduated from Ann Arbor in 1878, wrote directly to Angell to ask for the University of Michigan's assistance. Webb explained that he had been a teacher in Michigan immediately after graduation, eventually becoming principal of Flint High School, but that he had later moved to California and gone into the insurance business. He now wished to return to teaching, and the Los Angeles County Board of Education had suggested that he write to the University of Michigan requesting that the school certify him based on his previous experience.⁵⁸ Realizing the slightly unique nature of his request, Webb soon wrote Angell again. Apologizing for again writing Angell before the university president could reply to his first letter, he said he felt that he needed to clarify his request and to underscore Michigan's ability to grant a certificate. In order to do so, he attached a letter from Brown, who, by virtue of his position as head of Berkeley's pedagogy program, was a member of the state's Board of Education. Webb stressed Brown's interpretation that universities were free to use whatever standard they saw fit in determining what the statute described as "equivalent pedagogical work." He noted that it was not uncommon for the California universities "to grant certificates based on professional training rather than formal pedagogical work."⁵⁹ After further correspondence between himself, Angell, and Brown, Webb would eventually receive the necessary certificate.

More significant than the individual certification of an alumnus, Webb's experience underscores the fundamental role of universities as

independent agents not only accrediting schools but also defining the profession of teaching. Interestingly, while the Los Angeles County Board of Education oversaw teacher credentials, they relied on the universities to determine the particular skills and knowledge necessary to become a teacher. No one on the county board questioned the value of Webb's experience. Webb's difficulties stemmed from the need to demonstrate expertise in the form of an appropriate certificate.⁶⁰ Such troubles demonstrate that while states relied on universities as independent agents, their support was not without complexities. Difficulties occasionally arose, but the developing network of loosely coupled universities would work to overcome them and would begin formal definition of professional standards and expectations for secondary education.

Defining Advanced Work: Standardizing University Degrees

As the nineteenth century drew to a close, universities not only oversaw standardization of the credentials required to teach in secondary schools; they attempted to standardize their own advanced degrees as well. Over forty-eight institutions would grant PhD's by the end of the century, but uncertainty existed as to the place of graduate education and advanced degrees at American universities. In response to the common practice of using undergraduate work as criteria for graduate degrees, T. C. Chamberlin, head of the University of Chicago's Geology Department and, later, dean at the University of Wisconsin, suggested taking the quality of work into greater account. Writing to Wisconsin president Charles Van Hise and Michigan's James Burrill Angell, Chamberlin expressed a wish "that in all our institutions the master's and doctor's degrees could be made to stand upon their own bases and be more independent of the—at present—dominating influence of undergraduate and preparatory work." For graduate education to be valued, there needed to be standards and distinctions. Chamberlin rhetorically asked his compatriots, "if the master's and doctor's degrees are differentiated, why should not the differentiation be based upon the work for these degrees, and not undergraduate and preparatory work?"⁶¹

Chamberlin was far from the only educator concerned with the development of uniform standards for the pursuit and awarding of graduate degrees. In one striking instance, W. W. Campbell of Berkeley's Astronomy Department wrote of a colleague who had received an honorary MS degree from Michigan in recognition of his work at the Detroit Observatory but had found that "it actually injured his stand-

ing with many profs., students, and high university officials." Because Berkeley bestowed the MS for only one year of postgraduate work, it was considered quite commonplace, especially since all of the man's colleagues had received doctorate degrees for similar work.⁶²

Academic leaders wanted to grow their graduate programs but worried that proliferation of degrees might devalue the credentials. In addition to awarding many of the nation's first doctorates, Johns Hopkins also offered the first fellowships. However, as Harvard's Charles Eliot reported, once this practice spread, leading academics grew concerned over the dangers of competition between universities for graduate students. Writing to Angell after having visited Baltimore, Eliot stated:

In my opinion the business of hiring students to pursue advanced studies by offering them free tuition, board, and lodging, is likely to be decidedly overdone. I was much pleased to hear Pres. Gilman and Profs. Ramsey and Gildersleeve of the JHU say that that was their opinion. The John Hopkins University began the method in this country for reasons which were good at the time; but it is already clear that the policy if carried on a large scale by several universities will have just the same effect on graduate schools that [university-affiliated seminary] education of ministers has had on the ministry.⁶³

For Eliot, Gilman, and others, the question was whether too many fellowships would weaken the overall quality of graduate schools by broadly dispersing talented students between the various universities as competition rose over prospective students. Additionally, Eliot and others expressed concern about the resources required to fund not only fellowships but the apparatuses (libraries, laboratories, etc.) of advanced scholarship. Some academics and public officials even suggested maximizing resources by encouraging disciplinary specialization between institutions.

Despite such talk, the leading universities continued to build their graduate programs with recent graduates. With some exceptions, the common practice was for students to attend graduate school at their undergraduate alma mater. This custom minimized competition, but it did little to foster quality, as students did not always find themselves studying under those best suited to guide their research. Writing to Angell in regard to this "matter of inter-scholastic courtesy," Provost Charles Harrison of the University of Pennsylvania acknowledged the custom but suggested:

Does it not seem desirable, however, that the Graduate students of our American Universities should be encouraged to move freely from Univer-

sity to University, much as is done in the Universities of Germany? That the need of some such system is becoming felt among the students themselves is sufficiently evinced by the publication of the Graduate Handbook, which has been recently undertaken by the Federation of Graduate Clubs.⁶⁴

Harrison's long-term ambitions for cooperation were large, but his immediate plans were limited. He ended his note to Angell by simply asking if he might send along Pennsylvania's graduate catalog and if Michigan would send its catalog in return.

Angell agreed with Harrison's suggestion, and an exchange of catalogs was begun. Angell had discussed the need for improvement in and coordination of graduate education a few years earlier. Writing to Michigan's Board of Regents in his 1885–86 annual report, Angell emphasized the need to increase standards in order to give graduate degrees value.

In thus establishing a high standard of work for the attainment of the Doctorate, we are acting on harmony with the better American Universities, which are aiming to give significance and value to that degree. . . . It is certainly one of the functions of a university like this to furnish the higher training which our graduate school is attempting to provide.⁶⁵

It would still be almost a decade before the American Association of Universities would discuss formal agreement on various aspects of graduate education, such as standards for degrees, the nature of fellowships, and intercollegiate exchanges. Nonetheless, the discourse between leading academics reflected concern over not only the quality of graduate education but the significance of such education to greater society. As the sole regulators of these newly developing advanced pursuits, universities could largely define society's expectations for and demands of graduate education as well as the nature of their peers.

At this time, universities also began to exert nationwide influence over a number of professional domains, such as law and medicine. Unlike today, professional school was most often an alternative to, rather than an extension of, undergraduate education. No law school required college education for admission until those of Harvard and Columbia did so in 1903. Requirements for medical school were similar. The first medical schools to require college education, those at Harvard and Johns Hopkins, did not do so until 1901. While the number of students attending professional schools increased in the decades following the Civil War, the relative percentage of college graduates attending professional schools at such elite institutions as Yale did not increase (see table 2). Additionally, while the percentage of college

graduates in law and medicine remained small, the percentage of college graduates pursuing divinity degrees remained high.

For the most part, professional education in law and medicine would not undergo significant reform until the first decades of the twentieth century. In the last half of the nineteenth century, university leaders motivated by and associated with concern over the quality of graduate education began discussing and seeking ways to improve the quality and stature of professional degrees overall and their own professional schools in particular.

At Yale, for example, Arthur Twining Hadley complained in an 1895 address that Yale was losing many potential professional students to Harvard and Columbia because of the allure of Boston's and New York's courts and hospitals.⁶⁶ Despite this handicap, Yale sought to emulate the courses of study offered by its more urbane colleagues. Beginning in 1896, after lengthy and sometimes contentious debate, Yale finally extended its law course from two to three years and its medical course from three to four years, in keeping with the practice of its peer institutions.

Similarly, Cornell sought to develop professional programs. In keeping with the institution's avowed mission of offering instruction in all fields and endeavors, Andrew Dickson White had attempted to establish both law and medical schools at the outset of the university's development, but a lack of funds and concerns over the perceived elitism of professional education had thwarted his efforts. Stressing the need to offer courses and programs comparable to other institutions, White's successor, Charles Kendall Adams, was able to found a law school at Cornell in 1887. The law school's fortunes were significantly boosted in 1891, when the university won a suit with the state of New

TABLE 2. Yale Professional School Enrollments

Year	Law		Medicine		Divinity	
1871	5/23	23%	6/33	18%	40/53	76%
1876	25/75	33%	12/42	29%	84/97	87%
1881	31/58	53%	6/25	24%	65/86	76%
1886	21/52	40%	10/25	40%	78/98	80%
1891	47/111	42%	22/62	35%	107/119	89%
1896	69/186	33%	31/119	26%	73/87	84%

Source: George Pierson, *A Yale Book of Numbers: Historical Statistics of the College and University, 1701-1976* (New Haven: Yale University, 1983).

Note: Numbers reflect the ratio of college graduates in Yale's professional schools. For example, only 23 percent of law students in 1871 had a college degree.

York over ninety thousand dollars in interest from sales of Morrill land grants. A portion of these funds went to build classroom facilities and a library for the law school; another portion was used as seed money for Cornell's medical college, which admitted students beginning in 1898. The use of Morrill funds for the study of law and medicine certainly was removed from the Morrill Act's original fields of agriculture and the mechanic arts. However, this use was not distant from the original entrepreneurial spirit that had fueled Cornell's initial development.

The push toward development and standardization of law schools was driven by the move toward a national system of universities and by the rising influence of the American Bar Association, founded in 1878. However, law schools' efforts to create national standards were undertaken with awareness of the need to negotiate state and local politics. In the process of hiring the first dean of Cornell's law school, Charles Kendall Adams recognized this need and expressed frustration over being unable to find a suitable candidate: "we have been trying to find a man for the Deanship of our Law School who unites the proper knowledge and experience to a familiarity with New York law and New York lawyers."⁶⁷ Such local concern was not always welcome, however. As mentioned earlier, before the emergence of the American Bar Association and the reform of statewide exams, legal education and credentialing were conducted by an array of apprenticeships and clerkships. The move to systematize accreditation of attorneys through statewide bar exams would eventually rely heavily on law schools with the requirement that all who sit for the exam graduate from a bar-accredited law school.

Michigan was one of the first states to consider requiring graduates of its law school to take examinations for admission to the bar. The university's president, James Burrill Angell, moderately supported such efforts. His primary concern was a desire to raise the standards of the law school, which in turn would elevate the standards of the profession.⁶⁸ Angell proposed working with state bar examiners in this effort. However, some university officials objected to what they saw as an unnecessary and unwarranted intrusion. The hostility and disregard felt by some for the bar examiners could be seen in the objections of Henry Wade Rogers, dean of Michigan's law school, to two potential faculty candidates on the basis of their having served on the local board of examiners. Writing Angell, Rogers noted: "those examinations, as is well known, have been farcical—absurdly loose. The fact may well be kept in mind in reaching a conclusion as to whether Mr. Knowlton or

Mr. Cramer would seek a high standard and force the students up to it."⁶⁹ Rogers's immediate concern was the qualifications of those administering the exam; his deeper concern lie in the relationship of the bar exam to the law school.

Rogers and others feared that a scheme requiring bar examinations would undermine the law school's authority. However, Angell justified such efforts as supporting the movement toward national standards of legal expertise. Angell stressed that the school would maintain its share of autonomy but would also work with bar examiners in developing a more thorough system of exams. He reiterated his desire to improve the standards of the school as well the need for greater specialization. In the following year's annual report to the regents, Angell noted that the "experiment of grading the course" had been "successful in a gratifying degree." He explained: "Both teachers and students heartily approve of it. More, thorough, systematic, and efficient work is secured by it."⁷⁰ Angell also praised plans to improve instruction by calling on nonresident lecturers from across the country to share their expertise in particular specialties. In the following year, Angell reported to the regents that coupling more stringent examination with more specialized course offerings had "materially raised" the school's standard of work.⁷¹

Angell had satisfied the critics of the bar and those who sought to improve the standards of the law school. Yet he still harbored concerns regarding the school's national reputation and the quality and reputation of the bar itself. In keeping with the demands of developing western communities, Michigan's law course was only two years. But Angell acknowledged, "the fact that some of the leading schools in the country have extended their course to three years forces on us the inquiry how long can we afford to ask less work than they." While Angell complained about the need for such advanced work to "be more completely organized and provided for,"⁷² by the next year, the law school had begun offering an optional third year of courses, for which fifteen students enrolled.

Within a couple years, owing to the law school's efforts at expanding the curriculum and to Angell's own relationship with leading academics across the country, Angell would express satisfaction with the national position of the law school. Nonetheless, he continued to harbor doubts regarding the standards set by the bar. Reflecting Michigan's position as both a national institution and a regional leader, Angell assessed the school's position.

It must be admitted that the question of what policy to adopt in fixing the requirements for admission and the requirements for graduation is not so simple as it might first seem. In Michigan and several other western States students are admitted to the bar on so easy conditions [that] if a law school sets up very high standards the great mass of students may go to the bar after brief and perfunctory study in the offices and very little systematic training.

The woeful standard set by many of the region's state bars dismayed Angell. However, recognizing the university's position as an agent of reform and coordination, he stressed the far-reaching impact of and institutional responsibility for raising the law school's standards.

We profess and aim to be an institution of higher learning. We have already a reputation which gives weight and influence to our example. If we courageously, but not too rapidly elevate our standards, we can hold as many students to them as we care to have. The attainments and the mental discipline of the men we graduate will commend our work to all men of proper aspirations. By sending men of good general, as well as professional, education through all the west, we shall most effectively do our part in creating a sentiment in the profession which will insist on substantial requirements for admission to the bar.⁷³

In setting standards for professions such as law, the authority of universities was still relatively diffuse in the later years of the nineteenth century. As loosely coupled independent agents of a gradually evolving national state, universities did not always possess formal control over professional standards and expectations. Yet as Angell and others articulated, the development and expansion of professional programs offered an opportunity to systematically train students and to provide a new form of knowledge and expertise within the university. Additionally, such development and expansion also offered an opportunity to reshape existing local practices into a more unified, efficient, and national system.

New Professions, New Authority, a New State

The push to apply new and more systematic approaches to issues outside of academia did not end with the traditional "learned professions" of divinity, law, and medicine. Driven by societal expectations and the efforts of their peers, universities expanded their reach into such areas as engineering and commerce/business. At Berkeley, Dean Carl Plehn, reporting on the reasons for the College of Commerce's establishment, stressed:

Modern life requires of many people a higher training than was required in the past. And that requisite for success is being sought in the Universities. An increase in the number of those seeking a college education so vastly in excess of the increase of population can but signify that there are new spheres in life in which it is hoped to apply the learning of the schools.⁷⁴

For Plehn, the establishment of such a college was the “the natural and logical outcome of the economic development of the country.” Plehn hoped that the program would be a “forerunner of many similar courses in different parts of the United States,” but he also noted that other elite institutions, such as the University of Chicago, Columbia University, and the University of Pennsylvania, had already begun or were beginning similar schools.⁷⁵ In Plehn’s explanation, just as in Angell’s, we find university leaders seeking to serve societal demands as well as match the initiatives of their peers.

Coordination meant that national standards for doctors, lawyers, businesspeople, and engineers were not set by the federal government or a consortium of state and local leaders. Instead, such standards and related reforms were primarily initiated and overseen by a broad cadre of universities acting as agents of a developing national state. Examination of this public service highlights the prominence of institutional entrepreneurship in establishing and enforcing professional standards through courses and credentials. Such efforts provided the institutional entrepreneurs who ran institutions of higher learning with a highly visible purpose, as well as solidifying relations with the developing professional class on whom universities would rely for support.

Of course, as both the emerging university and the American state were in their formative years, the process was not flawless. Acceptance of standards and implementation of reforms were by no means universal. It would take the formal creation of the Association of the American Universities and the final failed efforts of John Hoyt to create a federally sponsored university to fully coalesce the influence of universities over the emerging professions and their relation to the national state. Nonetheless, in the years before the complete actualization of their influence, universities helped shape professions that were both a reflection of and an expansion on the reforms that defined the expanded federal government and the new American state.