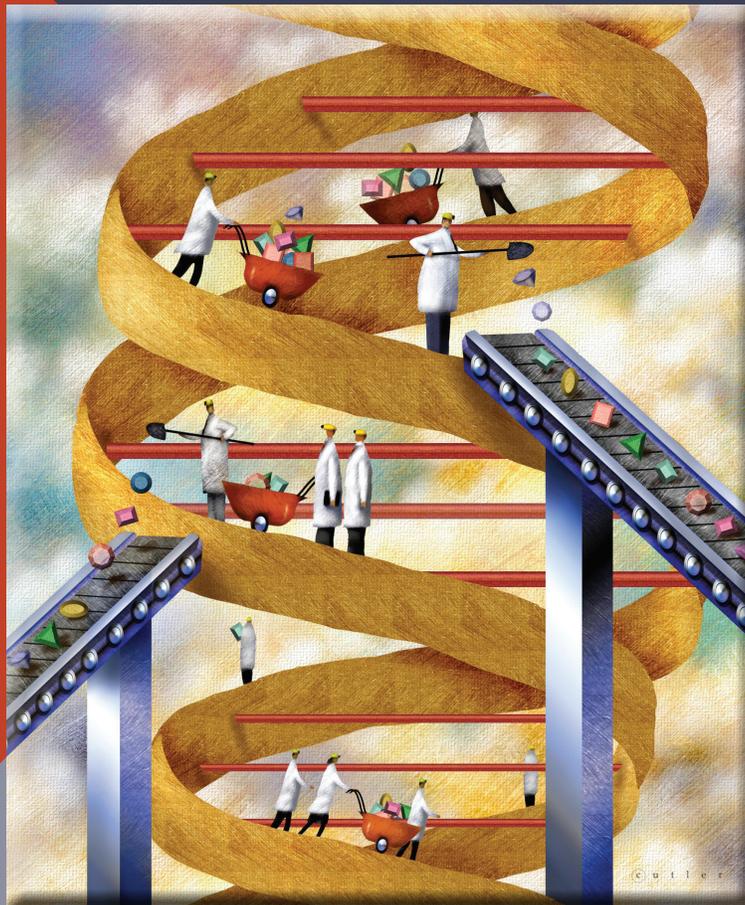


FIRST IN A SERIES

Making Productivity Real:
Essential Readings for Campus Leaders

The Innovative University:
Changing the DNA
of **Higher Education**



Based on the forthcoming book:
*The Innovative University: Changing
the DNA of Higher Education from the
Inside Out*

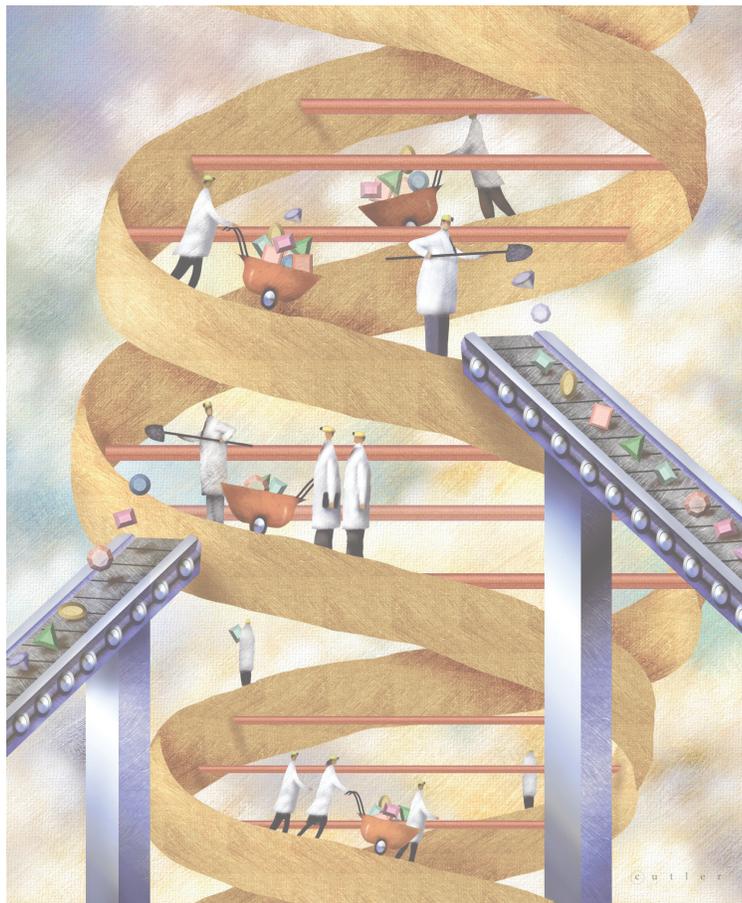
by **HENRY J. EYRING** and
CLAYTON M. CHRISTENSEN

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PREFACE

Improving productivity in higher education is essential to strengthening the nation and positioning it to remain competitive in an increasingly global marketplace. Without sufficiently increasing student access, enrollment, and attainment in our higher education institutions, the United States risks being surpassed by other nations, becoming less competitive, and failing to tap the full potential of its citizenry. According to the American Council on Education's (ACE) *Minorities in Higher Education 2010 Status Report*, the tradition of young adults in the United States attaining higher levels of education relative to prior generations has stalled and for some racial and ethnic groups, the percentage of young adults with some type of postsecondary degree has actually fallen.

ACE believes that postsecondary education institutions and systems must be open to the implementation of cutting-edge strategies to enhance productivity, with the end goals of expanding capacity, improving teaching and learning, and better serving an increasingly diverse 21st century student population. At the core of significant and sustained progress in advancing productivity in U.S. colleges and universities are leaders who understand the challenges and have the right tools to effect change and lead a new era of progress and innovation on their campuses.

To this end, ACE and the Forum for the Future of Higher Education, with the support of Lumina Foundation for Education, have launched Making Productivity Real, an initiative designed to foster a national conversation around the topic of productivity. This paper, *The Innovative University: Changing the DNA of Higher Education*, is the first in a series that seeks to provide campus leaders with the latest scholarship and perspectives in this critical area. Authored by campus leader Henry J. Eyring and eminent scholar Clayton M. Christensen, this essay is based on a plenary session delivered at the American Council on Education's 93rd Annual Meeting held in Washington, DC in March 2011.

For additional information on the *Making Productivity Real* series, please contact Diana Córdova, director, American Council on Education's Center for Advancement of Racial and Ethnic Equity, at Diana_Cordova@ace.nche.edu or (202) 939-9481.

THE INNOVATIVE UNIVERSITY: CHANGING THE DNA OF HIGHER EDUCATION

Henry J. Eyring and Clayton M. Christensen

The language of crisis is nothing new in higher education. In 1973 Clark Kerr, then Chairman of the Carnegie Commission on Higher Education, spoke at the annual meeting of the American Council on Education. Kerr cited recently published books on the state of the academy that included in their titles these descriptors: anarchy, bankruptcy, blind[ness], chaos, confrontation, crisis, death, degradation, destruction, embattle[ment], explo[sion], and fall. (He stopped after titles beginning with the letter “f.”) In the face of such extreme language, Kerr urged moderation and optimism:

To those who see only gloom and doom, we can say that much that is good is occurring. To those who say that everything fails, we can say that much is, in fact, succeeding. To those who see only problems, we can say that there are possibilities available for their alleviation.¹

Today there is similar need for moderation and reason for optimism. Yet the current “crisis” is not the same as past ones. For the first time, disruptive technologies are at work in higher education. For most of their histories, traditional universities and colleges have had no serious competition except from institutions with similar operating models. Now, though, there are disruptive competitors offering online degrees. Many of these institutions operate as for-profit entities, emphasizing marketable degrees for working adults. However, the innovative learning technologies they employ have significant potential to serve young students as well, especially given these “digital natives” comfort with online communication.

Fortunately, America’s colleges and universities (hereafter called “traditional universities”) have unique competitive advantages. They perform vital functions that other institutions do not. As Jonathan Cole has pointed out in his book *The Great American University*, they are founts of discovery — including many of the discoveries that make high-quality, low-cost online learning possible. Traditional universities also preserve and refresh cultural memory, helping society build on the wisdom of the past as it embraces new possibilities. Perhaps most importantly, they involve young students in these processes of discovering and remembering, mentoring them in a special community of scholars.

Two unique assets facilitate traditional universities in the jobs of discovery, memory, and mentoring. One is their physical campuses, built up over decades at great expense. The other distinctive asset is the professoriate. The graduates of master’s and Ph.D. programs who enter academic life bring unusual skill and commitment to their work. They choose the pursuit, preservation, and sharing of knowledge over greater financial rewards to be had elsewhere. The learning environment they create in their face-to-face classrooms, offices, and laboratories is uniquely valuable.

[I]ronically, and thankfully, the glorious abundance of the virtual has created an even greater longing for the real.²

— Mary Sue Coleman, President of the University of Michigan

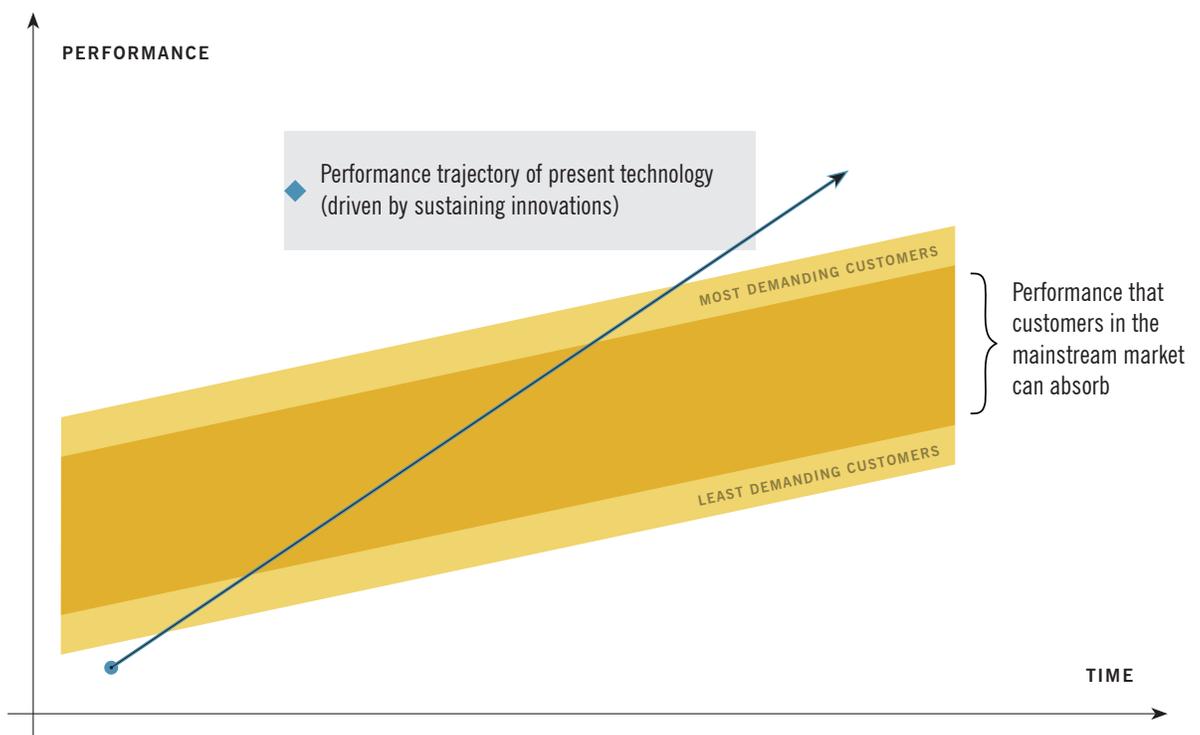
But the university learning environment is not *invaluable* in the strict sense of the word. There is a price to be paid by students, state and federal governments, donors, sponsors of research — and by the very employees whose sacrifice of higher pay elsewhere must be justified by the rewards of academic life. Increasingly, many who pay those prices are judging them to be too high. Given new competitive alternatives, that puts traditional universities at a grave risk, their unique physical and human assets notwithstanding.

THE TENDENCY TO GET BIGGER AND BETTER

Responding to the risks facing traditional universities requires understanding not only their current competitive environment but also their evolutionary behavior. Like most organizations, universities resemble living organisms in an important way: they seek not just to survive, but to grow and improve in scale, scope, and prestige. Once the typical organization has more than a few employees and has experienced a degree of success, predictable genetic tendencies switch on. These tendencies start to dominate planning and investment processes, driving the organization to make things bigger, better, or both. Diminishing in size or quality violates the genetic code — it introduces a mutation unlikely to survive the natural institutional response. Becoming bigger and better is “in the genes.”

Members of the higher education community readily recognize this tendency. With few institutional exceptions, universities continuously increase the quantity and quality of what they do. Courses become more numerous and more specialized. New degree programs are created. New buildings are added and older ones upgraded. The university seeks more-qualified faculty members and entry into more-prestigious athletic conferences increases. Through a series of “sustaining innovations,” the university’s quality and costs grow with time, as shown in Figure 1.

Figure 1: The Progress of Sustaining Innovations



The university's aversion to shrinking or simplifying is more than just a matter of personal preference; it is driven by institutional decision-making systems, individual rewards, and culture. For example, no risk-averse department chair can think seriously about cutting courses or degree programs. Even if such a proposal could be pushed through the curriculum committee, the only reward to the chair would be collegial ostracism. For similar reasons, no athletic director can view dropping a popular sport or moving into a less-expensive conference as a good career move, nor can a university president take lightly the risk of offending a major donor who envisions a new building. Through mutually reinforcing formal and informal systems — the institutional DNA so to speak — the university demands bigger and better.

Though the Carnegie classification system reinforces this tendency, it is by no means unique to higher education. Most established organizations, including for-profit companies, readily adopt innovations that show potential for enhancing their size and standing. However, they are much less likely to see the value of innovations that would reduce the price a customer pays, especially when quality might be adversely affected. As an illustration, the established makers of X-ray equipment, General Electric, Siemens, and Phillips, quickly adopted CT, MRI, and PET imaging technologies as they were developed.³ Each of these new technologies allowed them to make enhanced, more expensive equipment that vaulted them ahead of the competition and generated better profit margins.

However, for thirty years the industry-leading companies persistently overlooked the potential of ultrasound technology, precisely because it was simpler and more affordable for customers. The bigger-and-better tendencies built into these companies' institutional DNA, through systems such as profitability-based compensation for executives and salespeople, made ultrasound seem unattractive, because initially the image quality was relatively low. Now, with technology performance enhancements and with healthcare providers under pressure to reduce costs, the makers of advanced ultrasound equipment have a competitive advantage over more-expensive imaging technologies, particularly in outpatient clinics and other non-specialized care environments. The leaders in ultrasound are disrupting the status quo in medical imaging.

THE RISK OF DISRUPTION

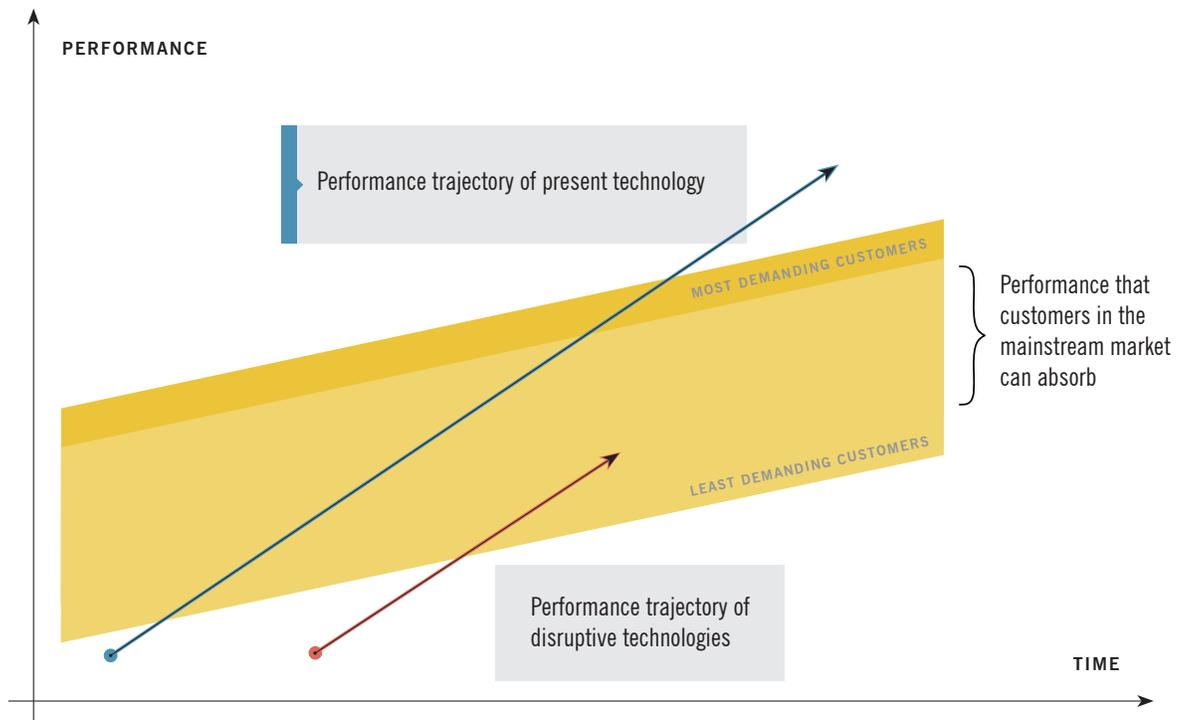
Because new entrants to an industry typically begin at the bottom of a market, selling simple, affordable products to easily satisfied consumers, the bigger-and-better tendencies in established institutions can blind them to disruptive technologies such as ultrasound. This tendency on the part of incumbents gives innovative entrants time to operate out of harm's way; they can perfect the new technology without interference from resource-rich competitors. Thanks to this competitive grace period, products that initially could be sold only to low-end customers of no interest to the incumbents steadily improve in quality.

That is what is happening in higher education. Traditional universities have spent the past century getting bigger and better, following standards set by the great research institutions, especially Harvard. In the past, that strategy of emulation proved highly successful. As community and state colleges slowly but steadily made themselves into universities in the twentieth century, they brought higher education to the masses and contributed to the advance of knowledge and of social and economic welfare. Taxpayers and donors willingly contributed to the cause, inspired by the institutional growth and the benefits that flowed from it.

However, as the costs of this climb have grown so has the number of students for whom a college education has become too expensive. Consequently, an increasing number of students are opting for online degree programs. Though they might prefer the traditional campus experience, the convenience of living at home, setting one's own schedule, and potentially retaining a job makes the online option

attractive. Online learning is a “disruptive innovation” that allows these students, who might not otherwise be able to attend college, to earn a degree. (See Figure 2.)

Figure 2: Disruptive Innovation



Though online learning initially appealed primarily to those unable to access traditional higher education, it is becoming more attractive to mainstream students. As represented conceptually in Figure 2, sustaining innovations are gradually enhancing the online learning experience. These enhancements include high-quality, low-cost videoconferencing that allows students to work in groups as though they were face-to-face, as well as computer simulations through which they can enter virtual laboratories and manage virtual companies.

In addition, new-generation learning management systems are customizing the curriculum in a way not possible in the traditional classroom. For example, using algorithms similar to those of commercial web sites that infer what an individual web-surfer is likely to buy, these systems infer the ways that a student learns best, based on his or her learning performance and interactions with course materials. These systems can offer remedial learning opportunities when a student is struggling. They can also make recommendations to both students and instructors about the types of content and the instructional strategies likely to work best. For example, a student who learns better from video than from text can be offered more of that medium.

Historically, higher education has avoided competitive disruption. One reason for this past immunity is the power of prestige in the higher education marketplace, where the quality of the product is hard to measure. In the absence of comparable measures of what universities produce for their students, the well-respected institutions have a natural advantage. A related stabilizing force is the barrier to disruptive innovation created by the accreditation process, which in the past made conformance to tradition the price of entry to the industry.

Now, though, both accrediting bodies and state and federal governments are more focused on learning outcomes. With the steady improvement of low-cost online learning technology, the prospect of competitive disruption is real. Mere budget cutting will not be enough. For the vast majority of institutions, fundamental change is essential.

*When times are flush, we are apt to spread the wealth around like marmalade. [Now] we must make real, strategic decisions about academic direction, about programs for investment and disinvestment, and about how we meet today's enormous challenges.*⁴

—Gordon Gee, President of Ohio State University

THE DNA OF THE GREAT AMERICAN UNIVERSITY

The challenge that traditional universities face is not a lack of uniquely valuable assets. Even with the advent of fully online degree programs, there is a vital need for their physical campuses and communities of scholars. The problem is that these assets are being deployed in ways that most universities cannot afford. Understanding how that has happened and what to do about it requires understanding the history of one of the world's greatest universities, Harvard.

Between 1870 and the mid-1950s, Harvard established the main features of the American research university. (See Figure 3, next page.) Until the middle of the nineteenth century, Harvard was essentially a small liberal arts college with associated professional schools that students could enter without a college degree. Other than the traditional summer break and a collection of small academic departments, Harvard bore little resemblance to the modern research university. However, three towering presidents, Charles Eliot, Lawrence Lowell, and James Conant, changed that by engineering the DNA of today's Harvard University and setting the pattern that many American institutions have emulated.

Eliot, who was impressed by the discoveries of the great research universities of Europe, sought to emulate and improve upon their design. Beginning in the 1870s he created what became the Graduate School of Arts and Sciences; it undertook the granting of Ph.D. degrees, and its faculty also took responsibility for Harvard College. Eliot made a bachelor's degree prerequisite to entry into both the graduate school and the professional schools. In effect, he placed a European-style university atop the English-style college that Harvard's founders created in 1636.

In addition to placing graduate schools atop the College, Eliot broadened Harvard's classical, lock-step curriculum by creating what he called the "elective system," which allowed students to choose from a wide range of courses that grew increasingly numerous and specialized with time. Of the breadth of Harvard's disciplines, Eliot said, "We would have them all, and at their best."⁵ He was also a champion of faculty freedom, creating professional tenure and granting autonomy in curriculum development, instruction, and research. He paid for the cost of the expanding course catalogue and research portfolio largely through success in fundraising, increasing tuition only once in his forty-year term. In the spirit of laissez faire, though not without remonstrance, Eliot also stood by as Harvard's alumni built the nation's largest football stadium (30,000 seats) and paid the team's new head coach almost as much as Eliot made after four decades at Harvard's helm.

*It is very improbable that a game which involves violent personal collision between opposing players can ever be made a good intercollegiate game.*⁶

—Charles Eliot

Eliot's successor in 1909, Lawrence Lowell, sought to order and focus the intellectual free market that Eliot established; he intended to restore the discipline of the old "collegiate way of living." Lowell introduced curricular "concentrations" (or majors) for undergraduate students, as well as the grading curve and academic honors. Thanks to the philanthropy of a Standard Oil heir, he was able to build Harvard houses in which students lived and studied with tutors, as in the days of the early College.

The innovations of Eliot and Lowell made Harvard bigger, better, and more expensive. However, it was Lowell's successor in 1933, James Conant, who introduced the institutional features that would make the university unrivaled in its quality and cost. Before his selection as president, Conant was a world-class research chemist. Concerned that Harvard's scholarly reputation had slipped during Lowell's time and that many of the tutors hired for the houses held unjustified expectations of tenure, Conant raised the bar: tenure became tied to scholarly productivity and was granted on an "up-or-out" basis. From that time on, Harvard would hire and retain only "the best" scholars, those with potential to be world-leading in their fields.

As in scholarship, Conant also brought excellence, or what became known as "meritocracy," to student admissions. He advocated standardized testing to ensure that the rare privilege of a Harvard education was granted only to the intellectually most-deserving. New financial aid packages allowed Harvard to be "need-blind" in admissions.

While Conant was personally playing a leading role in the U.S. government's World War II efforts, facilitating among other things the Manhattan Project, he positioned Harvard to benefit from the rise of government-funded research, another dominant feature of the research university's DNA. He also oversaw the development of Harvard's first general education curriculum, an innovative attempt to improve on Lowell's distribution requirements.

Figure 3: The Traditional University Model

Traditional University Trait	Harvard Era
<ul style="list-style-type: none"> • Face-to-face instruction • Long summer recess 	 <p>Harvard College 1636-1707</p>
<ul style="list-style-type: none"> • Shared faculty for undergraduate and graduate programs • Comprehensive specialization, departmentalization, and faculty self-governance • Private fundraising • Competitive athletics 	 <p>Charles W. Eliot 1869-1909</p>
<ul style="list-style-type: none"> • Curricular distribution (GE) and concentration (majors) • Academic honors 	 <p>Lawrence Lowell 1909-1933</p>
<ul style="list-style-type: none"> • Up-or-out tenure, with faculty rank and salary distinctions • Admissions selectivity • Externally funded research 	 <p>James Conant 1933-1953</p>

The institutional traits established at Harvard were widely copied, especially after the 1970 creation of the Carnegie Classification System, which placed the elite research universities at the top of what became seen as a ladder to be climbed. Significantly, certain critical traits were not copied. One was the 1945 Ivy

Group Agreement, which prohibited athletic scholarships first in football and later in all competitive sports. Another was Harvard's house system, which ensured a supportive collegiate living experience even as the university increased its commitments to graduate programs and discovery research. A third trait that didn't transfer was Harvard College's discipline in limiting the number of courses required by its concentrations, or majors; that curricular self-restraint by the faculty facilitates a four-year graduation rate of nearly one-hundred percent. The consequence of the Harvard emulators' failure to replicate these elements of its DNA is that they pay more for intercollegiate athletics, provide less support for undergraduate students, and fail to graduate them as timely as Harvard does.

Even Harvard feels the weight of its expansive model. Having integrated vertically with the addition of research to teaching and of doctorate degrees to master's and bachelor's degrees, it continued to expand horizontally, adding subjects of study and corresponding faculty departments, programs, centers, and institutes. As each of these sub-units sought to become bigger and better, the cumulative growth of the institution and its budget was exponential. Conant's successor, Nathan Pusey, who presided over Harvard from 1953 to 1971, found the university all but impossible to manage and thus focused on funding it.

Thanks to Pusey's fundraising success, Harvard has sustained its model. However, its prodigious fundraising capability, which has produced a \$27 billion endowment even after the disastrous \$11 billion loss of 2008, is the most difficult trait of all to copy. Without financial might akin to Harvard's, institutions that adopt its model struggle to attract "the best" students and scholars and to achieve academic excellence in so many subjects, degree programs, and research initiatives.

THE NEED FOR ONLINE INNOVATION

The disruptive potential of online degree providers can be seen in their divergence from the Harvard model, as shown in Figure 4. In addition to what they save by eschewing the research activities, summer break, athletic teams, and campus infrastructure of the traditional university model, online degree providers enjoy significant advantages in the delivery of instruction. Online courses are developed centrally, allowing for a lower cost of development and more systematic focus on cognitive learning outcomes. Through innovative learning systems, remedial assistance can be provided online at reduced cost relative to face-to-face tutoring. Online learning is both low cost and of increasingly high quality. It is a classic disruptive innovation.

Figure 4: Online University Divergence from the Traditional Model

Traditional University Trait	Online University Copied?
• Face-to-face instruction	No
• Long summer recess	No
• Shared faculty for undergraduate and graduate programs	No
• Comprehensive specialization, departmentalization, and faculty self-governance	No
• Private fundraising	No
• Competitive athletics	No
• Curricular distribution (GE) and concentration (majors)	Focused offerings
• Academic honors	No
• Up-or-out tenure, with faculty rank and salary distinctions	No
• Admissions selectivity	No
• Externally funded research	No

Fortunately, traditional universities have natural advantages in delivering online learning. They have all of the assets needed to compete effectively in the online environment. In fact, the subject-matter expertise of their full-time faculty members and their existing campus computer systems give them a potential quality and cost advantage in delivering online education. Whereas new online degree providers must build their IT infrastructures from scratch and seek content experts on the open market, universities can add online offerings at low “marginal cost,” benefitting from spare computer capacity and faculty members who can temporarily trade teaching duties for course development.

The real advantage of the traditional universities, though, is their ability to blend online and face-to-face learning experiences. Hybrid instruction has proven more effective than either of the pure modes.⁷ Traditional universities can deliver the best of both — low-cost, convenient online learning blended with periodic classroom-based instruction. Moreover, the face-to-face learning at the traditional university goes beyond the classroom; it includes the important informal learning that comes when students interact with one another in social activities and with professors in research.

The combination of online technology and the campus experience has the potential to take innovative traditional universities to new levels, allowing them not only to respond to disruptive competition but also to serve many more students with their existing resources.⁸ The risk of disruption is real: institutions that fail to employ online learning technology will find it difficult to grow, and the less-prestigious ones will lose students as the cost disparity between the traditional model and the technology-enabled one increases. However, innovative institutions that marry the benefits of the on-campus experience and online learning are likely to find growth opportunities beyond what they had imagined.

THE NEED FOR FOCUS

It won't be enough, though, to simply adopt online learning as a fundamental trait of the university. In addition, most institutions need to focus their current activities to be less Harvard-like in their aspirations. Online learning will allow for low-cost growth, but to compete in the new higher education environment it is necessary to revisit the assumption that the traditional university can have, to paraphrase Eliot, “everything at its best.”

*[I]f there are no trade-offs [institutions] will never achieve a sustainable advantage. They will have to run faster and faster just to stay in place ... The essence of strategy is choosing what not to do.*⁹

—Michael Porter, Harvard Business School Professor

Many universities, for example, need to narrow the range of students they attempt to serve. An institution may see replacing undergraduate students with graduates as a profitable move both financially and in terms of the Carnegie climb. But graduate programs that are under-enrolled and lightly regarded hurt more than they help, on both counts. The cost of hiring better-credentialed faculty and giving them more time for research is hard to offset with increased graduate tuition and research funding, particularly when the range of graduate studies is broad. Many institutions need to reassess their commitment to graduate programs that compete for resources with their undergraduate offerings.

Breadth of subject matter is another dimension of university choice that requires focus. For-profit institutions derive a significant cost advantage over traditional universities by targeting majors and graduate degrees that engender marketable skills and are thus highly enrolled. Traditional universities have a quality advantage in the breadth of their offerings, especially when it comes to liberal education, something that every college graduate should have. However, universities must be selective in choosing which subjects to pursue in great depth. Course catalogues and department rosters should reflect the choice to emphasize some fields more than others.

Scholarship is another crucial dimension of choice, though in this case the focused university may actually broaden the definition implicit in Harvard's notion of "the best." Traditional discovery research is becoming more expensive, both because of the growing cost of laboratories and field studies and also because of competition from a growing body of international scholars pursuing the same prizes and publications. Largely overlooked is the opportunity suggested by Ernest Boyer in 1990 and encouraged by the new Carnegie Community Engagement Classification — to take seriously the scholarship of integration, application, and especially instruction.¹⁰

*[W]e must justly prize those faculty who are truly gifted, magical teachers ... We will never totally forsake recognition for publishing in the usual academic journals, but we must be brave and wise enough to appreciate and reward other forms of scholarship as well.*¹¹

—Gordon Gee

CHALLENGING CONVERSATIONS

In tackling these challenges of innovating and focusing, the university community must put questions of people ahead of questions of strategy. That may sound un-businesslike, but it is in fact a key conclusion reached by business researcher Jim Collins in the study that led to his best-selling book *Good to Great: Why Some Companies Make the Leap...and Others Don't*. Likening a business organization to a bus and its strategy to the destination of the bus, Collins says, "Leaders of companies that go from good to great start not with 'where' but with 'who.'"¹² According to his research, the most successful businesses make sure that they have the right people on the "bus" before they decide where the company is going. These must be people who are both capable and committed to "A-plus effort."

Traditional universities benefit from having invested heavily in getting the right people on the institutional bus. The tenure process assures intellectual capacity and work ethic, and the compensation level means that most professors have put the love of discovery, memory, and mentoring ahead of financial wealth. Though the organizational structures and systems of the university may promote defensive and even self-serving behavior, the typical university has a team of remarkable capability and commitment. Its potential for innovation is vast.

However, maintaining individual commitment while changing fundamental aspects of the university's DNA requires an equally high level of commitment from the institution. With tenured positions in many fields at low ebb, faculty members cannot be expected to vote themselves "off the bus." Innovation may require them to alter their activities, but no meaningful discussion of change can be undertaken without assurances that capable members of the community who commit to innovating can remain with it. That principle guided Charles Eliot, who implemented tenure at Harvard as he undertook the innovations that established the great American university. His innovations were premised on the guarantee that the bus was big enough for its current riders. He believed that was true because of the growing need for higher education, the large number of people who could not then access it, and innovations with the potential to make it more accessible — all conditions that hold today.

Successful conversations about tradeoffs also require new measures of success. The traditional university not only prefers bigger to smaller and more-focused, it defines "better" in terms that matter more to traditional scholars than to students or employers. Faculty members in particular need the assurance of supportive success measures before they take the risk of moving to a new seat on the institutional bus, such as by rerouting their scholarly efforts into questions of instruction or application. University presidents will need to worry less about the success measures valued by the producers of rankings, foundations, and elite bodies such as the Association of American Universities (another one of Charles Eliot's innovations).

*[B]y establishing new criteria for success, we are choosing not to participate in a race that has already been lost.*¹³

—Michael Crow, President of Arizona State University

ROOTED, SELF-AWARE INNOVATION

We're cautiously optimistic about the future of traditional institutions of higher education. The caution stems from Clayton's research, which shows how difficult it is for established organizations to respond to disruptive innovation of the kind occurring now. If traditional universities and colleges can change their DNA quickly enough to avoid serious disruption, they will have defied a huge amount of experience and data.

Our optimism, on the other hand, flows from personal experiences in higher education that can't be quantified but are powerfully felt. Universities — and especially university professors — have changed our lives for the better. If anyone can beat the odds against being disrupted, it is our remarkably capable and committed colleagues in higher education.

The online technology that threatens to disrupt the university also vastly expands the university's capacity. Eliot's view of technology, as expressed in his 1869 inaugural address, suggests that he would have jumped at the opportunity to use it:

The revolutions accomplished in other fields have a lesson for teachers ... In education, there is a great hungry multitude to be fed. [I]t is for this American generation to invent, or to accept from abroad, better tools than the old; to devise or transplant ... prompter and more comprehensive means than the prevailing, and to command more intelligent labor, in order to gather rapidly and surely the best fruit ... and have time for other harvests.¹⁴

At his inauguration Eliot also prophesied, "It will be generations before the best of American institutions of education get growth enough to bear pruning."¹⁵ Some five generations later, the time for pruning has come. Even the strongest universities will do well to re-focus their activities. Most university communities will need to go further, asking fundamental questions about what they can do well and abandoning much of what they have undertaken in a spirit of emulation. Those that continue to imperfectly imitate Harvard's strategy will find their costs increasing and their market share shrinking, whether they accept the metaphor of a higher education marketplace or not.

On the other hand, those university communities that commit to real innovation, to changing their DNA from the inside out, may find extraordinary rewards. The key is to understand and build upon past achievements while being forward-looking. Lawrence Lowell spoke of looking fifty years into the future as he led Harvard.¹⁶ The universities that survive today's disruptive challenges will be those that recognize and honor their strengths while innovating with optimism.

*Look to your roots, in order to reclaim your future.*¹⁷

—Ghanaian proverb, quoted by Mary Sue Coleman

Leaders of universities will do well to remember what Eliot, Lowell, and Conant knew. Harvard's strength doesn't derive merely from its world-leading reputation and endowment, or even from its extraordinarily gifted faculty. It certainly isn't a product of clinging to tradition. Harvard's most persistent tradition, according to Lowell, is the tradition of change.¹⁸

Harvard's greatest strength is its sense of unique identity and its gift for innovating in the service of that identity. Eliot, Lowell, and Conant always had a vision of making Harvard the world's best university. But their most important innovations, many of which have since become unquestioned higher education traditions, were situational — inspired adaptations that Harvard needed at the time. Conant's up-or-out tenure, for example, addressed both the goal of assembling the world's best scholars and the peculiar problem of the large cadre of relatively undistinguished faculty members Lowell hired to staff his new houses just as the Great Depression hit. Conant's innovation allowed Harvard to simultaneously raise the scholarship bar and right-size the university's workforce and operating budget. It was a practical course correction not unlike Eliot's creation of the elective system, which addressed the excessively rigid mid-nineteenth century classical curriculum. Lowell, in his turn, created the innovative system of distribution and concentration, an innovative enhancement to Eliot's elective system.

Harvard's great strength, which can be the strength of every university, is a pattern of innovation that is continuous and focused on the university's unique mission, without undue concern for either tradition or what other institutions are doing. Harvard steadily advances, heedless of any "ladder" or the crowd of would-be competitors. Harvard pragmatically climbs its own mountain. On a higher education landscape that needs institutions of many types, that is the one Harvard trait that all should emulate.



- ¹ Clark Kerr, *The Uses of the University, Fifth Edition* (Cambridge: Harvard University Press, 2001), 157-158.
- ² Mary Sue Coleman, "Look to Your Roots, to Discover Your Future" (speech, University of Michigan, Anne Arbor, MI, March 27, 2003), <http://www.umich.edu/pres/inauguration/address.html> (accessed January 1, 2011).
- ³ CT, MRI, and PET stand for computerized axial tomography, magnetic resonance imaging, and positron emission tomography, respectively.
- ⁴ E. Gordon Gee, "A Call for 'Intentional Upheaval,'" *Minding the Campus: Reforming Our Universities*, http://www.mindingthecampus.com/originals/2009/03/a_call_for_intentional_upheava.html (accessed January 1, 2011).
- ⁵ Samuel Eliot Morison, *Development of Harvard University, 1869-1929* (Cambridge: Harvard University Press, 1930), lix.
- ⁶ Andrew Schlesinger, *Veritas: Harvard College and the American Experience* (Chicago: Ivan R. Dee, 2005), 134.
- ⁷ U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, and Office of Educational Technology, "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies," U.S. Department of Education, <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf> (accessed January 1, 2011).
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- ¹⁶ Henry Aaron Yeomans, *Abbot Lawrence Lowell, 1856-1943* (Cambridge: Harvard University Press, 1948), 46.
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