SYMPOSIUM

A Symposium on "The Troubled Future of Colleges and Universities"

Editors' Introduction

Gary King, guest editor, Harvard University Maya Sen, guest editor, University of Rochester

he American system of higher education is under attack by political, economic, and educational forces that threaten to undermine its business model, governmental support, and operating mission. The potential changes are considerably more dramatic and disruptive than anything previously experienced. Traditional colleges and universities urgently need a coherent, thought-out response. Their central role in fostering the creation, preservation, and distribution of knowledge in the world may be at risk and, as a consequence, so too may be the spectacular progress across fields we have come to expect as a result.

Although expertise from many disciplines is needed to address the problems in our institutions of higher education, political scientists may be especially well positioned to contribute to a solution. Many of the problems are essentially political, and our discipline includes those with the skills and knowledge necessary to understand and analyze the problems, to design strategies to ameliorate them, and to evaluate the consequences of any changes. We encourage political scientists to take up the challenge.

In this light, we wrote "The Troubled Future of Colleges and Universities" to offer a summary of the status quo, an analysis of the actual and likely economic and political attacks on the traditional system of higher education, a list of some largely inadequate responses that have been proposed or attempted, and some suggestions for more productive directions to go. We then recruited five distinguished political scientists familiar with the issues to comment on our article or the general issues we raised. Our commenters represent a "Who's Who" among the nation's leading political scientists who have also served in major leadership positions in university administration. As you will see, they have an enormous amount to contribute.

Our contributors include current and former (and likely future!) university presidents, chairs, and deans. We start

the symposium with Michael Laver, presently the dean for the Social Sciences at New York University. He explains that we don't have to panic quite yet and shows that we can leverage some of the new, and possibly threatening, educational innovations-like online learning-to universities' distinct advantage. Henry E. Brady, currently the dean at the Goldman School of Public Policy, University of California, Berkeley, comes next. His essay draws nuanced parallels between the challenges faced by higher education today and the disruptive changes faced by newspapers, railroads, and other industries of years past. Next, Nannerl O. Keohane, now the Laurance S. Rockefeller Distinguished Visiting Professor at the Woodrow Wilson School at Princeton University, identifies five important threats to the university business model, while also reminding us of the components of traditional universities that are essential to protect. The next commentary is by Virginia Sapiro, the dean of Arts and Sciences at Boston University, who brings a historical perspective to the symposium. Her essay puts our current difficulties in the context of 70 years of recurring disruptions, and she reminds us that higher education has weathered strong challenges in the past, too. The symposium concludes with an essay by John Mark Hansen, now the Charles L. Hutchinson Distinguished Service Professor, and senior advisor to the President, at the University of Chicago. He brings a big picture perspective by focusing on the point of the university, the central role of academic freedom, and the delicate relationships with the various forces at work affecting higher education. Taken together, our commentators address a complicated set of challenges faced by higher education today. They raise new and unexpected problems, while also suggesting real and creative paths forward.

The existing and coming disruptive changes in higher education require the immediate attention of our academic community. Each of our commenters provides compelling insights into the challenges facing universities, and all make important arguments and proposals deserving of much discussion and analysis. We hope other political scientists will follow up so that we may collectively begin to tackle these issues, important to so many in and beyond our discipline, departments, and universities.

We are grateful to our commentators and the editors of *PS* for making this symposium possible. We also thank the countless scholars, students, citizens, and analysts who have engaged this important subject, many with us directly. We do not know what the future holds for colleges and universities, but it is difficult to be anything but deeply impressed by the support out there for these institutions and their goals.

SYMPOSIUM AUTHORS



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Nannerl O. Keohane served as president of Wellesley College (1981–1993) and Duke University (1993– 2004). She is the author of Thinking about Leadership (2010); Higher Ground: Ethics and Lead-

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The Troubled Future of Colleges and Universities

Gary King, Harvard University Maya Sen, University of Rochester

he American system of higher education appears poised for disruptive change of potentially historic proportions due to massive new political, economic, and educational forces that threaten to undermine its business model, governmental support, and operating mission. These forces include dramatic new types of economic competition, difficulties in growing revenue streams as we had in the past, relative declines in philanthropic and government support, actual and likely future political attacks on universities, and some outdated methods of teaching and learning that have been unchanged for hundreds of years.

Most importantly, technological advances, the Internet, quantitative social science (recently known to the general public as "Big Data"), and the computer revolution have massively reinvented or disrupted travel, music, commerce, sports, newspapers, publishing, and many other information-based businesses. Is higher education next? Remember *Newsweek*? It was also in the business of creating and distributing knowledge. In 2010, the entire company was sold for \$1.00 (Clark 2010; Vega and Peters 2010).

We think that university officials should now begin to act and with this symposium hope to facilitate a larger conversation about what is happening and what action we might take. In our view, political scientists are uniquely positioned to understand the situation, to study the effects of governmental and economic forces on universities, to analyze the fragile political situation, and to help design new strategies and institutions to respond. It is time the profession engages this crucial issue. If universities fail to rethink their strategic situations and business models, they may well fall to the coming educational "tsunami" (Auletta 2012). Doing nothing different, and imagining that nothing will change, is delusional. Inaction at this point may be as irresponsible to students, faculty, and staff at universities as it is to the country and world that depend on the continuing flow of breathtaking innovations that stem from university research to improve the economy, create wonder, and make the world a better place to live.

THE STATUS QUO BUSINESS MODEL

The raison d'être of modern universities has long been the (1) creation, (2) preservation, and (3) distribution of knowledge. Universities function best when all three work together. The resulting synergies have produced dramatic progress for hundreds of years: universities are not only the primary stewards of the scientific community but the most sought after way to become educated, a primary driver in reducing income inequality (de Gregorio and Lee 2002), and a major generator of economic growth (Goldin and Katz 2008). These successes have allowed universities to become even more valued for their abilities to create and distribute knowledge.

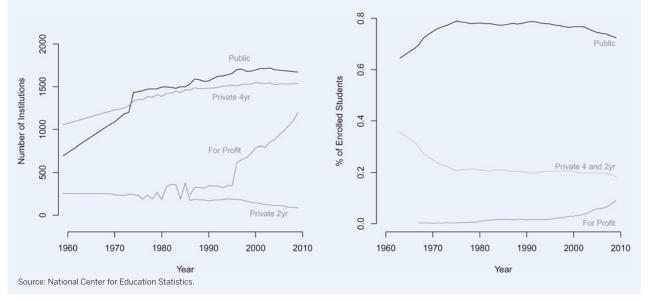
But how are universities paid for? The business model of most universities relies primarily on tuition revenue from teaching, with some additional funds from sponsored research and philanthropy. However, sponsored research dollars do not even cover their own costs: each year, universities lose between \$700 million and \$1.5 billion in administrative and operating costs that are not covered by sponsored federal research grants (Goldman and Williams 2000). For example, the University of California alone reports that it loses approximately \$500 million each year in unrecouped indirect costs associated with sponsored research (University of California 2012). Given the lack of support in the current political environment for increased funding, and the strict limits placed on indirect costs and overhead, universities shoulder this burden by relying on other sources.

For the top universities, philanthropy is a significant source of funds, and the donors (especially alumni) are extremely loyal citizens of their university-created communities. They will undoubtedly be counted on for much progress going forward. However, overall philanthropic contributions to higher education are down for only the second time since records have been kept, having dropped more than \$400 million since their peak in 2007-08 (National Center for Education Statistics 2010d). The largest gifts have, of course, historically come from the most wealthy, but among this group giving has dropped significantly both in terms of numbers of donors and numbers of dollars and is far more sensitive to changes in economic conditions. Despite huge increases in the concentration of wealth, giving by the wealthiest donors decreased 9.8% from 2005 to 2007, compared to a 1.8% overall philanthropic decrease (Center on Philanthropy 2009). Even the generous billionaires who have pledged to give away half their money (http://j.mp/ScJN4g) will leave with them a breathtaking concentration of remaining wealth. Empirically, it takes years for wealthy people to learn how to become productive philanthropists, and so universities also struggle with the fact that the increasing numbers of younger wealthy (especially from technology ventures) do not presently give as much as the wealthy from previous eras.

Tuition and fees are paid by students, their families, governments, and endowments, but increasing revenue at the same



Left: Number of Colleges and Universities in the United States (including branch campuses). Right: Percentage of Enrolled Students at Public, Private, or For-Profit Universities.



rates from these sources seems unlikely. For most of the twentieth century, increasing tuition was a reliable, economically sound way for universities to raise revenue because family incomes were rising. When family incomes stopped rising, as they have for the last two decades (Federal Reserve Board Division of Research and Statistics 2012), federal and state governments intervened by providing basic grants and assistance. Today, tuition is outstripping that assistance, and state and federal budgets are more strained and their legislatures less generous. In addition, academics, especially those receiving federal support (such as in schools of public health), are disproportionately liberal Democrats, and so their ability to stay above the political fray may become more difficult to sustain (Fosse and Gross 2012).

In recent years, families have turned directly or indirectly to home equity loans to pay increasing tuition, but, after the real estate crisis, this is no longer a viable option. Today, many students borrow hefty amounts from private lenders without basic consumer protections. Although this was never planned or expected, student loan debt now even exceeds total credit card debt (Federal Reserve Bank of New York 2012)! The top universities are now charging around a quarter of a million dollars for four years of tuition, and so increasing that much more is likely to be untenable given stagnating family incomes. Universities are also tying their own hands by simultaneously offering more financial aid from their endowments, resulting in larger proportions of endowment payouts being devoted to cover tuition. Even in the midst of the economic recession of 2008, many universities increased their student aid. As laudable as this practice is, it does not help their bottom line. Clearly these paths to growth are all being cut off.

Another way to raise revenue is by admitting more students, which universities consistently did through the early twentieth century (National Center for Education Statistics 2010c). However, at this point, the number of students is relatively fixed because of physical constraints at universities, colleges, and even community colleges (see figure 1); unless universities spend what scarce resources they have on large residential, classroom, and other infrastructure upgrades, meaningfully increasing student enrollments on campus is not feasible. Today even the largest universities are not taking many more students, and private institutions long ago gave up on the idea of increasing enrollments as a way to increase revenue.

ECONOMIC ATTACKS

We now explore some of the external forces undermining the university business model. In all likelihood, the biggest threat to any university is not another traditional university. After all, when Harvard's or Princeton's endowment surges, so does Stanford's. When the Wisconsin State Legislature cuts the university budget, similar patterns soon follow in California and Ohio. When community colleges in the Northeast are overwhelmed with students and cannot expand to keep up, the same pattern is usually found in the rest of the country. In fact, the relative quality of universities changes little except over the long term, which is, of course, more evidence that universities do not pose much threat to each other. (U.S. News and World Report rankings of universities and departments vary far more from year to year than the quality of these institutions, almost surely because the measurement methods are changed frequently to sell magazines; see Avery et al. 2004.) To the contrary, academics actually spend a great deal of time helping colleagues in other universities, reviewing each others' programs, writing tenure reviews, serving on visiting committees, and so on. Except perhaps when poaching each other's faculty, they compete but do not usually threaten each other.

Instead, the biggest threat to modern universities comes from four interrelated waves of attack. Together, these four waves have not only fundamentally altered the way that universities operate, but also have substantially changed how and what people around the world learn. Some universities have responded well and absorbed some of these changes, but others have been mostly caught by surprise. All four attacks are going after the main revenue source: teaching revenue. We explore these waves in, more or less, chronological order, although all four continue to have substantial contemporary impact.

Attack #1: the Internet. The first attack on the traditional brick-and-mortar university came from the Internet, which made knowledge previously attainable only on college campuses available to all. Today, Khan Academy, YouTube Edu, Academic Earth, and other outlets make educational videos available for free; many of these videos cover topics that would be standard in many college curricula, particularly in mathematics, engineering, and science (Kolowich 2011; Sengupta 2011). The Internet also makes it possible for people from all over the world to find practice exams, problem sets, visual examples and walk-throughs, worksheets, lecture notes, academic presentations, interactive exercises, webinars, and more for free. In principle, a villager living in a remote part of China or India can read scholarly papers, practice computer coding, witness scientific experiments, engage in original data gathering, practice mathematics problems, ask follow-up questions in online chat rooms and forums, and solicit feedback from experts and teachers. The Internet has created a community of learners.

The rise of the Internet has perhaps most profoundly affected university libraries. Today, significantly more academic journals and books are available over the Internet than are found in any one university library. Google Books, for example, has scanned some 20 million volumes, establishing a collection that now approximates the size of the US Library of Congress, the world's largest library (Howard 2012). Much of this content comes directly from collections at Harvard, Stanford, and Oxford, which comprise some of the largest university library systems in the world. Putting it most starkly, consider this: if you were creating a university from scratch, would you choose to invest as much in a library system as today's universities have historically done? And would you choose to spend additional money on library buildings, heating and cooling systems, and inventory and access control services, just to maintain a collection that everyone else in the world already has free access to online?

Attack #2: distance learning. Another wave of attack on the brick-and-mortar universities came in the form of distance learning initiatives beginning in the late 1990s and early 2000s. Some grew out of university "extension" or continuing education schools, while others were born out of for-profit companies; some remain, and others have gone bankrupt. But the impact they have made on education is clear: today, around 20% of all university students take at least one university course online, with 9% taking all of their courses online (US Department of Education 2011). This is different from the kind of informal Internet-based education we mentioned in the first attack; these are students taking actual courses with actual professors for actual credit with the same credentials as those of traditional universities.

Several institutions now have large for-profit extension or distance operations—for example Harvard's Extension School, New York University's School of Continuing and Professional Studies, and Yale's Continuing Education School. Tenuretrack faculty routinely teach in these programs, which offers students enrolled in distance learning the experience of taking courses with "brand-name" faculty without going through the bother of admissions, tuition and housing expenses, or extra-curricular obligations. (For faculty, teaching via these extension programs means increased enrollment, additional compensation, more exposure, and more teaching assistants—a win-win proposition.)

Attack #3: for-profit universities. The third wave of attack comes from the still fast growing group of large for-profit (or "career") universities, which have the same accreditation as traditional universities but have the intention and potential to scale up to much larger size.

The rise of for-profit universities in the last 10 years has been staggering (figure 1). Today, about 1,200 for-profit colleges operate in the United States, and they comprise 26% of all colleges and universities (National Center for Education Statistics 2010a). Indeed, the university with the most enrolled students is not the University of California or the State University of New York. It is the University of Phoenix (Wilson 2011; University of Phoenix 2011).With half a million students, what started out as a small suburban commuter college is now larger than the University of Arizona, Ohio State University, and the University of California combined and about nine times as large as New York University, the largest (mainstream) private university in the country.

For-profit universities have followed a fundamentally different business model than mainstream universities. If modern universities are high-touch operations, with residential programs, in-person teaching experiences, and many extracurricular activities, the for-profits are low-touch operations, without residential campuses but with accessible instructors and teaching assistants. This alternative model, with its lower salaries for teaching staff and the absence of scholarly research operations, is considerably less expensive compared to traditional universities.

This is not to say that the for-profits ignore teaching. The University of Phoenix, for example, spends approximately \$200 million a year on teaching-related research and development, a figure that dwarfs the investment in teaching made by all the Ivy League combined (Myers 2011). It has invested \$75 million in an online learning company, developed a Phoenix "Mobile App" for smartphone access, created the "PhoenixConnect" Academic Social Network, and established group-based "Learning Teams" for its students. To be

fair, this investment is not in social science research about human learning and behavior, but rather applying research to the online environment. It is nevertheless a staggering figure compared to what is sometimes the traditional university's "see no evil, hear no evil, speak no evil" approach to the competition.

Attack # 4: online start-ups. Fourth, more recently, a wave of education startups like Coursera, Udacity, and Udemy, and a Harvard and MIT spin-off called EdX have formed to provide smaller numbers of courses to massive online audiences. The companies create what have come to be known as MOOCs (massive open online courses), some of which have enrolled as many as 160,000 students (most recently in Stanford's "Artificial Intelligence" class). Whereas traditional universities are high touch and large for-profits are low touch, MOOCs operate in "no touch" mode, where every interaction with students is automated, often with peer interaction, chat rooms, peer review, and automated (or peer) grading. Partisans of traditional universities believe that the in-person experience adds considerable value over this type of online-only education. But how much and under precisely what circumstances has not been fully quantified. Moreover, the widespread impression that MOOCs are isolating experiences for student participants is flat wrong: student participants all over the world spontaneously join together into study groups, simulated classrooms, and other joint learning experiences, and this does not even count the automated ways of encouraging students to interact (Duneier 2012).

industry realized. Learning comes in many forms; clearly this innovation has barely begun to take shape.

POLITICAL PROBLEMS

The current economic situation is troubling, but the political situation is hardly more promising. We might ask first whether it is reasonable to think that our elected officials will save traditional universities. After all, in recent years, members of Congress have been battering the leaders of for-profit universities for taking unfair advantage of federal financial aid and students, often convincing students to take out loans for programs with very low graduation and job placement rates. Some university officials scoff at the for-profits, thinking that they have gotten their comeuppance and so the threat has subsided (and indeed private equity investments did sharply drop). However, political scientists should recognize that this as merely an example of successful rent-seeking behavior: although the most extreme abuses are being eliminated, these companies have found a stable, predictable, and locked-in source of US government funds. Some of these funds previously went to traditional universities, and some are new, but either way the political situation is not favorable.

But an even more serious problem is coming. Traditional universities have long been proud to admit and train only the best students. These students certainly make the environment better for learning, but we can think about this differently: the goal of most universities has been to educate only the most educationally advantaged students, for which our

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Although recent quantitative comparisons have concluded the opposite (Means et al. 2010), it seems reasonable to assume that researchers will eventually be able to document the benefits of in-person over online education. But if so, will these benefits persist? What are the benefits of taking four courses in the same semester from the best professors at four different universities, without travel and at far lower cost? Could extracurricular activities go online, too? Eventually, when immersive video technology is good enough so that we can go out to dinner at different restaurants but still have the experience of dining together, it is difficult to see what could not be put online.

MOOCs are still in their infancy. Today, many more students start these courses than finish, and an astonishingly low percentage do what it takes to get any type of formal record (credit, badges, certifications, etc.) of having completed the course. This may mean that MOOCs are closer to entertainment than education, a sort of TED.com on steroids, and we may instead be learning that people enjoy leisure activities with intellectual stimulation more than the entertainment deeply held diversity norms are rarely applied. Indeed, the implicit theory here is trickle-down education: if we select the best, train them to be better, and send them out to the undifferentiated and uneducated masses, they will make a difference, not only for themselves but for all the others not fortunate enough to attend college. If this claim is true, is it politically sustainable?

Here's the political problem: in 2012, only about 30% of Americans are getting college degrees (US Census Bureau 2012). This leaves approximately 70% of the population shut out of the American system of higher education, resulting in a huge and growing economic divide between the educational haves and have-nots (Dillon 2007).

One reasonable speculation informed by political science is that this issue will be adopted by some enterprising politician. It could be a progressive wanting more people to get college degrees or a populist trying to bring education to the masses. To this politician, traditional universities have no bandwidth to help, and might well be the enemy. But it could also be a conservative Republican, fed up with universities filled with liberals serving, or maybe even creating, other liberals. Or it could be a member of either party merely trying to increase overall wealth. Economists have demonstrated that the massive increases in income inequality since the 1970s are largely due to the growth in education not keeping up (Goldin and Katz 2008) or, to put it another way, due to the failures of traditional colleges and universities in serving the broader American population. The issue could even be adopted by a libertarian who wants to make room for businesses trying to serve the 70% without degrees and upset that the government pays a fortune to subsidize only one segment of the industry. Whoever adopts the issue, and whatever the policy prescription, having the potential for 7 in 10 Americans to benefit would seem to make it a winning political issue, even though it does not benefit traditional universities. Universities clearly have not anticipated the problem and may not be able to respond; they are not ready to increase their student bodies and have no plans to make it possible (Lawton and Katsomitros 2011).

Second, other universities have actively sought to develop branch campuses overseas. Prominent examples include New York University's campus in Abu Dhabi, Yale's campus in Singapore, and Duke's attempt to open a campus in the United Arab Emirates. (In contrast, prominent failures include the Michigan State and George Mason University Middle East campuses.) This strategy is expensive, however, and does little to help the 70% of Americans locked out of higher education.

Third, the number of mainstream universities has increased during the last 60 years, but the growth has slowed substantially over the past 30 (figure 1). Today, as many public universities, private colleges, and two-year colleges exist as did 35 years ago. The greatest growth during the past 30 years has come from for-profit colleges.

Finally, universities have moved toward generous financial aid policies, and increasing numbers of students are receiving some sort of financial aid (National Center for Education Statistics 2010b). Although this action has changed the pop-

Ultimately, humans tend to regard anything standing still for a while as permanent, and they are often surprised when stasis is followed by a sharp change. Universities, colleges, and society at large will be much better off if we can learn to act in anticipation rather than waiting for the change to define us.

The paradox is that the biggest supporters for expanding the educational franchise and supporting the competitors of traditional universities may well be those within traditional universities. After all, most officials at traditional universities, their boards of trustees, and their faculties are extremely liberal relative to the national electorate. We can see this reflected in sociological studies of faculty (Fosse and Gross 2012), generous university financial aid policies, progressive Affirmative Action policies, aggressive attempts to recruit minorities and economically disadvantaged students, and considerable efforts to keep students from dropping out. Indeed, although they are presently unabashedly in favor of biasing their institutions toward the educationally advantaged, university administrators are highly committed to diversity based on many other variables, such as race, ethnicity, gender, sexual orientation, age, ideological persuasion, geographic and national origin, and academic interests.

INADEQUATE UNIVERSITY RESPONSES

Universities have responded in at least four ways, all important, but none that would lead to an increase in the numbers of students educated or a more sustainable business model. First, as we noted, some have gone after the untapped market of educationally disadvantaged students by establishing extension or distance components—Harvard's Extension School, New York University's School of Continuing and Professional Studies, and Yale's Continuing Education School. However, the largest of these is tiny compared to the for-profits, much less the MOOCs. ulation of students who can feasibly attend, it has not greatly increased their numbers or made it possible for educationally disadvantaged students to attend.

WHAT SHOULD WE DO?

Making progress in studying and influencing higher education requires an understanding of government, policy, politics, human behavior, institutions, conflict, social organization, and economic forces—which means that political scientists have much to offer in understanding the new landscape. A vast and important opportunity exists for using the theories, approaches, and methods of analysis of our discipline. The results could be measured in knowledge learned but also in the possibly of doing a great deal of good for those who have devoted their lives to higher education, to prospective students everywhere, and to society at large.

In our view it is time to study and to act. We offer here a few initial suggestions on how the profession might get started. First, we can build on our tremendous advantage in research to improve teaching and learning. Whereas universities have always produced among the best research, their new competitors don't even try and are not positioned to change that any time soon. That means that the research-teaching synergy that we have benefited from all these years is not available to them. To make progress, we should apply social science research to revamp university pedagogy. Huge advances in social science and psychology have changed the way we understand the human mind and learning; but, despite this revolution, most college lectures have not changed, literally, in millennia. It is

time to incorporate social science research into our pedagogy. This can include leveraging social networks; introducing, evaluating, and improving peer instruction, team-based learning and other collaborative approaches; and building better automated tools to educate large numbers of students. We offered some ideas along these lines in King and Sen (2012).

Second, although we have a tremendous advantage in educating the educationally advantaged, we need to reach out and learn how to educate other types of students. To learn how to do this, universities need to educate more students of more types. Our physical campuses may be the best way to have some types of impact, but today's technological changes are making it possible to educate (and learn from) large numbers of not-so-advantaged students even when they are not on campus. Some universities have already started: they are expanding their distance learning offerings (Korkii 2012; Jaschik 2009), forming partnerships with some of the new startups (Markoff 2012), and creating their own startups (Lewin 2012). Thus far, these are small experiments, affecting relatively small numbers of students, but we might look for ways of greatly expanding them.

Third, universities should flex their traditional dominance over the creation and preservation of knowledgeeven if their role as sole distributors of knowledge is under attack. We should change the university from a place where knowledge learned outside the classroom is reported to students to one where students themselves directly experience having a hand in creating knowledge. It is a travesty for a student to spend four years at a world-class university and only read about major discoveries in the campus newspaper. Just as spending a semester in a foreign country can change your life, having a seat at the table when a major discovery is made can also be life-changing. Many university faculty are terrific teachers, but those who survive excel at research, are motivated by research, and earned their position in the university because of their research; we should give students that same experience. We should lead with what we are good at, which is in large part research. All research groups on campus should strive to have some type of participation by students or apprenticeship component. This experience students cannot get at any of the forprofit competitors, and although university faculty often love to teach, what gets them up in the morning and keeps them fascinated with their subject matter is the thrill of discovery and invention. Is there a more meaningful gift we can give our students?

Of course, these are just a few possibilities. We hope the discussion that follows reveals other strategies, perspectives, and plans for action. Ultimately, humans tend to regard anything standing still for a while as permanent, and they are often surprised when stasis is followed by a sharp change. Universities, colleges, and society at large will be much better off if we can learn to act in anticipation rather than waiting for the change to define us.

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Chin Up; Chest Out; Don't Panic

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hin up; chest out; don't panic, yet. Yes, we who work in universities do face epic challenges described eloquently by King and Sen. Yes, we have indeed mostly ignored these—or rather have tended to wring our hands and wail operatically before planting our heads deeply in the sand. We will certainly experience massive technological disruptions of our traditional modus operandi and have only dim notions about how to respond to these. And all of us, if we are brutally honest, are deeply complicit in contributing to an unsustainably rising cost curve that, unchecked, will blow apart the very system that currently sustains our comfortable lives. These sorry truths are self-evident.

But, and it is a big but, we still offer something *very* special—so special, in fact, that we find it hard to describe using mere words. Put crudely using a few of those mere words, we offer permissive, creative, and exciting intellectual campuses that place the highest possible value on having really smart people do blue skies research without any expectation of commercial return on the considerable investment required. Vast benefits to humanity have arisen from the resulting accretion of human knowledge and understanding over decades and generations. Every human and humane society needs cradles for intellectual development. Universities provide those cradles. A world without universities would be a much poorer place ... a world in which few serious-minded people would freely choose to live. We all believe this, but we must strive tirelessly to find better ways to put that case.

Universities do much more than provide essential intellectual cradles. Modern societies have chosen to educate the best and the brightest of their young people in these very same intellectual campuses. Rather than gathering the researchers on one site and the teachers on another, we have evolved the profession of teacher-researcher, have called these people professors, and have corralled them in universities. And we do honestly believe, although we have to do a *much* better job of articulating this, that it is far better to educate young adults in a vibrant and eclectic intellectual campus patrolled by brilliant, inquisitive, undisciplined, and (not infrequently) ornery university professors than in specialist teaching academies staffed by finely honed and hyper-effective teachers. Whisper this quietly, but we are unreservedly prepared, and we are not wrong, to sacrifice (some) pure teaching effectiveness to expose students to (sometimes) shambolic but ferociously creative thinkers.

It gets even better. We offer something else that is unique and irreplaceable. We may not like to admit this to ourselves but universities offer a rite of passage for young adults as they move from being children and teenagers, ultimately dependent on their parents, to the self-sufficient grown-ups who form the basis of the next generation. Furthermore, in

providing an attractive and exciting setting for this informal rite of passage, while simultaneously offering a more formal education, we are in an excellent position to identify the best and brightest for others who might want to hire them. We are not just research campuses and training or even education academies. We fulfill a crucial economic role in any society by socializing and grading young adults. Young adults will be socialized somehow, of course, whether they go to university or spend those same years in prison, down a coalmine, in the navy, or flipping burgers. Mere socialization is not the issue. But, by socializing young people while we educate them on a vibrant research campus, we contribute to a mindset that sees any new problem as susceptible to analysis using a portfolio of general intellectual skills that can be applied in as-yet undreamed of settings. This belief is why we do not join the philistines in arguing there is no value, for example, in a bright young person studying for a university degree in Latin, even setting aside the argument that knowing Latin helps you to understand and use most European languages more effectively. That university degree in Latin, well-taught, will build and reinforce a portable system of rigorous thinking that is valuable in many unanticipated contexts. Although it is amusing to sneer at the British Civil Service for its long tradition of recruiting Oxbridge classics scholars, the cream of the British Civil Service is justifiably regarded as being pretty darn good, and no evidence has been adduced that they would have been even better if only they had studied something "useful" at university.

To see this from another perspective, think of yourself as a big employer needing to hire a steady stream of talented and versatile young people. Who do you prefer-whiz-kids with stellar scores from the very best online courses and training mills, or graduates with good, even if not stellar, grades from top universities? I think you know the answer. This preference is at least in part because universities add value even without imparting any formal education at all. Think of the archetypical Oxbridge or Ivy League scallywag who regularly cuts class and does the absolute minimum necessary to avoid being thrown out, while spending the time drinking and/or playing sports, making music, acting, or running some political campaign. Professors may shake their heads and scold but, for the most part, the scallywags emerge from university better knowing their own talents and, more importantly, better knowing how to put these to good use.

In all of the debate about threats to the traditional university system in the United States arising from changes in the technological and economic contexts, little has been learned from the experience of the Open University (OU) in the United Kingdom.¹ Since its founding in 1969 the OU has offered a path to a university education that does not depend on attending a university campus. It grants degrees that are highly regarded by both employers and the wider community. The OU has educated more than 1.6 million students since its first intake in 1971, and currently has more than 260,000 registered students and 1,200 full-time faculty.² Its department of politics and international relations has 31 faculty.3 The OU has been a huge success in realizing its original mission of opening access to higher education. Starting by broadcasting course materials late at night via the BBC, the OU now works with the web, YouTube, and iTunes to offer the remote delivery of top-quality educational materials as cheaply and conveniently as possible.⁴ Despite more than 40 years of offering the type of "competition" now dreaded by traditional US universities, the OU has not disrupted the traditional British university system in the process. On the margin, no doubt, some students did not go to traditional universities but took an OU degree instead, but the main effect of the OU has been to offer the possibility of a top-quality higher education to disadvantaged groups and other people who, for one reason or another, would otherwise have found this dispiritingly out of reach. I am not aware that the data on these outcomes exist, but my strong sense is that far more people have been fed into the traditional university system via the OU than have been leached away from it. One thing is certain: despite the success of OU, and by many accounts it is very good at what it does, only traditional universities offer students the special benefits of a university campus.

tinguish between *training* and *education*. We have traditionally engaged in both, but it is education, not training, that is part of our core intellectual mission. If people can be trained more effectively to speak French, do calculus, or solve games for equilibrium using massively online platforms that capitalize on state-of-the-art pedagogic research, stellar teachers, and prodigious investment, then so much the better. We should welcome this with open arms and move on, not smashing the new machines but taking advantage of the huge resources they free up to do things much better and realize major improvements in our core business of education.

All of this implies that we should think about four basic types of courses. First, any course that can sensibly be evaluated using a multiple choice test, or graded by a machine, should be treated as training and should be bought in and taught online, leveraging all of that state-of-the-art pedagogic research, stellar teaching, and prodigious investment. It makes no sense to put in lots of little efforts all over the profession, however worthy these might be, to hand-craft course offerings that are manifestly better for students if they are mass produced to the highest possible standards. Maybe these courses will have local teaching-assistant support and maybe they won't ... whichever works best on a case-by-case basis is what we should do. This will be liberating. It by no means implies we won't *educate* students in French or calculus or the techniques of formal theory. It means that *basic*

To see this from another perspective, think of yourself as a big employer needing to hire a steady stream of talented and versatile young people. Who do you prefer—whiz-kids with stellar scores from the very best online courses and training mills, or graduates with good, even if not stellar, grades from top universities? I think you know the answer.

The fact that our universities offer something really special means that the sky won't be falling in on us tomorrow but doesn't mean we should do nothing. It buys us time to get our act together. What follows is going to be easy to say but hard to do because universities are essentially communities of academics, and it takes a certain sort of person to be an academic. Many of us gravitate to academic life because we have high opinions of ourselves and firm ideas about what we want to do. We don't take kindly to being ordered around by others. We think of ourselves as smart but fiercely independent thinkers who don't take discipline easily. That's why we like the tenure system. This means that academic policy makers don't just have to address the challenges faced by the university system—in many ways that's the easy part—they also have to build a consensus among their colleagues, especially their tenured colleagues, that they all need to change many of their cozy and convenient ways of doing things.

So what needs to be done? Let's start with teaching and move on to research. I may be Pollyanna but I'm not in the least bit worried about a future full of massive open online courses and a shift to web-based *training* more generally. I stress training here because we will increasingly need to dis*training* in these subjects will be the very best the profession can offer wherever, whenever, and to whomever this might be delivered.

Building on this solid foundation, we the specialists then will devise a second type of course, in which we will each bring our own unique perspective to bear on *educating* students about why, when, where, and how to use the skills for which they have just been trained. This will be close-in, hands-on teaching, which can only be done in person on a university campus. In these courses, for example, we won't be *training* our students in statistical techniques—we'll have bought in the world's best pedagogy to achieve that objective. We'll be *educating* students in how to *use* the statistical techniques they have learned. We will have banished the pedagogical drudgery of training and opened up the educational Pandora's Box of how to design and conduct well-designed, valid, and convincing analyses of important datasets.

The third type, of course, will be a challenge for political science, because we have not come to a consensus about what is at the core of the discipline. But imagine we had come to such a consensus—and perhaps we have, for example, about the classics of political philosophy or the political institutions

of the European Union. Here, we are thinking about courses for which we could all agree on using one of a small number of core textbooks, each adapted to different teaching styles and audiences. It makes sense to work exhaustively on these textbooks to make them better and better over time, rather than forever writing new ones-with only paradigm shifts in the profession generating a need for a new set of texts. Just as it makes sense for authors from a range of different institutions to collaborate on a great course text, it makes sense for professors to collaborate on ways to deliver the associated course to the highest possible standard-taking full advantage of modern pedagogy and new technology wherever appropriate. For example, I teach "Introduction to Comparative Politics" at New York University and would love to put together an "all-stars" version of this with a consortium of four or five top-notch colleagues from around the world-some of whom are departmental colleagues. Who knows precisely how this might evolve, but I can easily imagine each colleague taking responsibility for course materials and lectures on parts of the course in which they excel, with 40-minute lectures teleconferenced live across all sites, followed by a teleconferenced question-and-answer session for students in all sites featuring a brains trust of the full consortium of professors. Small group local backup with teaching assistants could proceed exactly as before. The essence of the course would not be so different from how it is now. We would just use existing technology to making it much better by having it developed, refined, and delivered by an all-star multi-continental team of professors. The big breakthrough

as opportunities not threats, the net result will be that we outsource routine training and double down on what we do best, which is delivering a high-quality education that depends fundamentally on a human interaction between teacher and student. What we need to do *right now* is to take a hard look at our curricula in political science (or any other subject) and figure out how much of what we currently have is training that could be more effectively outsourced if we could only get over our atavistic fear of outsourcing and how much is the close-in education that can only be delivered effectively on a university campus. Nobody I know has done this survey yet, but this is what needs to be done.

Thinking about challenges and disruptions to the place of research in the future of universities is easier. This is not because it is an easy problem but because the fundamental issues are not really new, even if the funding environment in which these play out is turning more hostile. I referred earlier to the critical role of universities as cradles for intellectual development, and we have a sacred duty to protect this with the utmost ferocity, more or less whatever the cost. To make another crude distinction that may help clarify the debate, we can think of two sources of funding for basic research, "patrons" and "investors." The patronage of arts and sciences by the Medicis, or self-patronage by rich aristocrats like the Marquis de Condorcet, resulted in extraordinary achievements, yet were not motivated by any explicit desire for a quantifiable return on investment. Contrast this with materials scientists in an Intel research lab paid to find ways to build better, faster,

The big breakthrough will be nothing to do with technology, which is already in place, but having both professors and universities think about leveraging this technology by developing collaboration. At the end of the day, this technology will not have made us redundant; quite the reverse, it will have helped us all to do a better job, which is the purpose of new technology.

will be nothing to do with technology, which is already in place, but having both professors and universities think about leveraging this technology by developing collaboration. At the end of the day, this technology will not have made us redundant; quite the reverse, it will have helped us all to do a better job, which is the purpose of new technology.

The fourth type of course—seminar courses on specialized topics involving a close-in interaction between a professor and a small group of students, typically on a topic close to the professor's research interests—may not change very much. In many ways this type of course is the essence of a university education. New technologies will obviously enhance such courses in idiosyncratic ways but will not essentially change them. There nothing fundamentally new to worry about here, just the age-old concern about how to do what we do best even better, using whatever new tools are available.

The bottom line is that new technology will surely disrupt our traditional model of university teaching, and our job is to ride the tiger not get eaten by it. If we treat these disruptions smaller, and cooler processor chips. The materials scientists may well engage in blue-skies research, with a very slim probability of unearthing something really big and valuable. Hugely risky research investments may be made, but these are still *investments* in the sense that some cost-benefit calculus is involved, with some bottom line for the investor. It is not my sense that Intel is investing in research on how to save pandas from extinction.

The wonderful thing about the tenure system in universities in particular, and the traditional university research ethos more generally, is that research is not seen as an *investment* with a bottom line, however far out on the horizon, but as a good in itself that contributes to human welfare in the round. Over the past hundred years or so, universities have become the core *patrons* of research, and *this* is the role we have to fight for. When times are tough there is a strong and in many ways understandable tendency for those who fund universities to start thinking about research in terms of investment ... to think in terms of bottom lines and of the "usefulness" of particular research projects. After all, when we need to cut back, why would we not first cut back on the least useful activities? This seems like plain old-fashioned common sense. Seeking value for money, funders start to think about measuring "value." Although it is not a new challenge, there is a considerable challenge in crafting the right response to all of this.

Clearly, we can't tell funders to go jump in a lake and stop whining about value for money. (A) The funders have all the money. (B) This is a patently unreasonable response. Clearly, we can't be forced into the position of dreaming up some dollar value, however speculative, for every piece of university research. This will undermine the very ethos of basic research. But surely we do have to find a way to convince the outside world that we can reliably separate the "good" from the "bad" in university research, and that our notions of good and bad are not self-serving. I look with envy compounded by bottomless ignorance at the "hard" sciences and think this job must be easier for them. It doesn't seem like it should be too hard to convince at least reasonable outsiders that scientific research leads to consistent small gains and occasional massive breakthroughs that manifestly improve the human condition. Most people in the developed world make daily use of useful innovations that started life in a research lab so the argument about the value of this type of research is easy to intuit. The social sciences face a much more difficult task, because almost everyone thinks they can do social science as well as if not better than a social scientist. I don't how to do it, but we have to solve this problem.

Professional associations have done sterling-but in my view misguided-work on occasion by putting together and publicizing portfolios of "useful" social science research. This is misguided because it takes us down the "value for money" road. What we need, although I'm not sure how we achieve this, is a beauty parade of really smart social scientists who are doing really great work that connects in important ways with the interests of people who live outside the groves⁵ of academe. Take networks. There is interesting but difficult rigorous work to be done-both theoretical and empirical-on social networks, and this is intrinsically interesting to people outside the academy because it plays into and deepens intuitions they have about their own lives. Popular books on networks have sold well, and the press has not been slow to report results from network research. This is just an example. and I am not suggesting that we should only do research that might eventually find its way into a popular book that sells well (although that is a point of view). However, we all have to work on our "elevator" pitches. We must be able to explain to outsiders-very quickly and very clearly-why what we do is interesting and important. That may include mention of potentially huge economic benefits, which are interesting and important in themselves. But the advantage we often fail to capitalize on, as social scientists, is that most people are intrinsically interested both in themselves and in how they interact with others—and we have a wealth of fascinating things to say about this.

So, while we definitely should not go out and about selling what we do as a valuable investment for society, we definitely should go out and about spreading the word about all those insights and intuitions we have about how human beings interact with each other. We should not feel under a burden to demonstrate value for money, because putting a monetary value on what we do is a losing proposition. But we should indeed feel under a burden to demonstrate, in the clearest possible terms, that what we do is important and interesting for large group of people outside the academy. If we can't do that, then we probably don't deserve their support.

Putting this all together, we can pull through this time of transition stronger than ever. We need to develop red-hot elevator pitches for our research and assemble the full portfolio of these into a rationale for why we need research campuses driven by an intrinsic thirst for knowledge rather than an instrumental return on investment. We need to refine the argument about why we need to educate the young adults of the next generation on these research campuses. And we need to welcome with open arms the coming technological disruption of how we best deliver that education. This approach will involve a crystal-clear separation of essential *training* that can be outsourced, automated, and delivered in a mass context from education that is an essentially personal interaction between teacher and student—best taking place in person on a university campus.

We will probably fail and get ourselves in trouble because we are stuck in our comfortable ways and will respond too slowly and too timidly to move effectively with the times. But we need not fail if we move forward with a *very* clear vision of the simply irreplaceable and invaluable things that happen on a university campus and an implacable determination to defend these.

NOTES

- 1. http://www8.open.ac.uk/about/main/
- 2. http://www8.open.ac.uk/about/main/the-ou-explained/facts-and-figures
- http://www.open.ac.uk/socialsciences/about-the-faculty/departments/ politics/our-staff.php
- 4. http://www.open.edu/openlearn/
- 5. In an earlier draft, a spellchecker corrected a typo to replace "groves" with "gravies." I was tempted to leave this in, since unexpected wisdom can reside in a spellchecker, but thought better of it.

Let's Not Railroad American Higher Education!

Henry E. Brady, University of California, Berkeley

olitics, economics, and technology have conspired to make this an exceptionally challenging time for American higher education. Some critics claim that costs are out of control in traditional public and private nonprofit higher education. They believe these institutions will soon go the way of the railroads as for-profit institutions displace them and the Internet replaces college campuses and classrooms. Other critics bemoan the privatization of higher education and the increasing role of market forces. Still others think higher education has lost its way and fails to focus on educating undergraduates.¹

With their cries of alarm and simple nostrums for change, these critics often miss the mark because they do not recognize the strengths of the current system and the complexity of the problems it faces. Yet defenders of American higher education who paint a rosy picture are held too much in thrall by its venerable traditions, manifest accomplishments, and worldwide reputation for excellence.² King and Sen pursue a middle course by recognizing that the modern university is worth protecting but that it must also change in substantial ways.

To make the right changes, the peculiar features of higher education must be understood before any diagnosis can be made of what is to be done. The world of higher education is a bit topsy-turvy. Prices depart significantly from costs, teaching students is not the only mission of most universities, performance is hard to measure, credentialing students is just as important as imparting knowledge, government programs provide subsidies for tuition and research, and markets, prices, and competition operate in unusual ways.

The challenges are very clear. The United States is counting on institutions of higher education to educate students and to provide the research to meet the needs of a twenty-first century economy that increasingly depends on learning and innovation. Public institutions educate the vast majority (roughly three-quarters) of those in college, but as state governments have struggled with increasing health-care, correctional, and K-12 education costs in the last decade and with precipitously declining tax revenues in the last three years, they have opted to balance their budgets by making severe cuts in higher education-thus forcing public universities to increase tuition.³ State governments have done so even though Americans since Thomas Jefferson have considered higher education to be essential for creating a truly free and educated citizenry and even though studies show that investment in higher education pays off handsomely and is strongly supported by the public-in fact, the increasing price of higher education is a growing concern of Americans.⁴ The result of these actions is that the supply of higher education has become

more expensive (and is in danger of becoming constricted) just at a time when there is enormous need for more of it to educate millions of students.

Federal aid to colleges and universities has not yet decreased in the same way, but federal deficit problems may lead to large cuts in discretionary programs such as Pell grants for low-income students, student loans, and research funding at the National Science Foundation, US Department of Energy, and National Institutes of Health that supply a large fraction of dollars for academic research. Philanthropists besieged by requests from the nonprofit sector to cover shortfalls do not have anywhere near the necessary capacity to make up the difference. Additional challenges arise from forprofit (and some new nonprofit) institutions that are developing new models for educating students that compete with established institutions and from Internet and distance learning programs that provide new capabilities that must be mastered and used. Both public and private institutions face many serious challenges.

Books and articles about higher education talk about how colleges are in crisis, academically adrift, failing our children, administratively bloated, in need of revolution, and losing a generation of students.⁵ Those on the Left and those on the Right are concerned about America's universities, although they have different diagnoses. Critics on the Left worry about commercialization (often called "marketization" or "privatization"), the increasing number of administrators, declining access, and the focus on ancillary activities such as sports, dining, and recreation. Those on the Right worry about increasing costs, failures to innovate, an entrenched professoriate, and resistance to market pressures. Still, no sober person would trade America's higher education system for any of those in Europe or Asia, much less those in Latin America or Africa. What then, is the "troubled future of colleges and universities?"

IS AMERICAN HIGHER EDUCATION GOING THE WAY OF STEEL COMPANIES OR THE RAILROADS?

In 2006 the Secretary of Education Margaret Spellings released *A Test of Leadership: Charting the Future of U.S. Higher Educa-tion* that warned that:

History is littered with examples of industries that, at their peril, failed to respond to—or even to notice—changes in the world around them, from railroads to steel manufacturers. Without serious self-examination and reform, institutions of higher education risk falling into the same trap, seeing their market share substantially reduced and their services increasingly character-ized by obsolescence.⁶

Will higher education go the way of the steel manufacturers or railroads that are mere shadows of what they were in the halcyon days of U.S. Steel and the Union Pacific Railroad? Indeed, will higher education go down the path of obsolete enterprises such as quill manufacturers, blacksmiths, buggy makers, or typewriter companies who are now gone from the scene?

Obsolescence is not going to happen. There are no close substitutes for a highly educated person unless IBM's Watson gets a lot smarter. College graduates will not soon go the way of elevator operators, assembly-line-workers, toll-takers, or phone operators. Robots will not be replacing highly educated people anytime soon. The pressing need is for a greater supply of higher education to increase access and to train the millions of workers needed in a high-tech economy, not to mention the importance of higher education for a politically knowledgeable, civically engaged, and tolerant citizenry.

Individual Americans also have strong economic incentives to get more higher education. The return to a college degree is very high, and Americans with bachelor's degrees can expect to make one to two million more dollars in inflationadjusted dollars over their lifetimes than those with only a high school degree.⁷ There are also many reasons for society to encourage people to get more education because of the societal externalities it produces. Not surprisingly, the demand for higher education is growing, not declining. might have a comparative advantage. Similarly, if Internet searches often give the wrong answer or even just a seriously incomplete answer, then classroom instruction with an instructor with a PhD might continue to play an important role—especially if the interaction between that instructor and the student improves the quality of learning. Because getting knowledge and information is about quality and nuance as well as about speed, the railroad analogy seems forced and incomplete.

IS AMERICAN HIGHER EDUCATION GOING THE WAY OF NEWSPAPERS?

Maybe higher education is like newspapers, which, like higher education, communicate knowledge and information and have been devastated by the Internet. As more and more people have moved to the web to get their news and information, it makes less and less sense to go to all the trouble to cut down trees, to pulp them to create paper, and then to move about a pound of paper through printing presses, into trucks, and onto people's doorsteps. All the news that's fit to print now can be made available online, instantly, and without all the trouble of the old system. So just as government-sponsored airports and superhighways replaced railroads for many forms of transportation, the government-sponsored Internet has replaced newsprint and newspapers.

Could higher education be like the railroads? Will the speed and accessibility of the Internet replace the classroom just as planes and cars replaced the railroads for passenger travel? Certainly the Internet provides access to information from greater distances and at greater speed than the average classroom.

Might higher education go the way of the steel industry where demand for steel is still very high, but foreign competitors now dominate the market? Will foreign competitors start to make higher education more cheaply and more attractively? Certainly there have always been students who went abroad for higher education, but there is a simple reason that most of these students go to Britain, Canada, or Australia for four-year programs—namely language. It seems unlikely that outsourcing of this type will overtake American education especially for the two- and four-year public colleges and universities that educate most of our students.⁸

Could higher education be like the railroads? Will the speed and accessibility of the Internet replace the classroom just as planes and cars replaced the railroads for passenger travel? Certainly the Internet provides access to information from greater distances and at greater speed than the average classroom. From almost any location, I can now search for "film noir" and get some relevant information much more quickly than signing up for a course at a local university (if there is such a course). Yet the railroads-airplanes analogy suggests that the only feature that matters is speed of delivery. If airplanes, for example, often ended up in the wrong place (as they sometimes do in bad weather) then railroads But the Internet did not do this alone. Decisions by newspapers and others have contributed to the devastation of journalism. Newspaper companies were late to utilize the web, mistaken in their decisions not to charge for news online, surprised by their replacement by bloggers and aggregators, and, perhaps most importantly, decimated by the flight of advertising away from newsprint with the creation of Craig's List (replacing the classified ads), online commerce (eliminating the need for advertisements in newspapers), and webbased advertising.

Perhaps the biggest danger for traditional higher education is being late to the Internet, but some institutions are now moving there, and they seem aware of the dangers of giving away all their course content. After a quick search, for example, I found an online course on film noir at Exeter University in Britain offered at 140 pounds.⁹ It is true that massive open online courses have been offered for free, but these can be thought of as efforts at branding and promotion that assure a niche for the university in the Internet firmament. Universities seem to be moving toward providing many courses online with a fee attached.¹⁰

Higher educational institutions also have an "ace-inthe-hole" for generating revenue. It is not just the content of

higher education that matters; it is also the certification that someone has mastered the content. It is only with certification that someone can claim to truly have the "human capital" that comes with mastering skills,11 and certification means more when it comes from a high-prestige and established institution. One can perhaps imagine a world in which people get certificates for reading The New York Times or The Wall Street Journal, but it is not clear that there is any market value for these certificates. A certificate from Berkeley, Harvard, Stanford, San Francisco State, or Contra Costa Community College, however, has real market value, while it is not clear that simply taking online courses from these places has much direct market value. Some people might just take courses (without getting certificates) and learn a lot, but how will employers know this? They might know from increased performance at work, but it seems more likely, given the difficulties of measuring performance, that credentials will continue to serve as convenient signaling devices for employees and certainly for job seekers.

There is also another distinct feature of education interaction with others matters a lot. Interaction produces ideas, creates social support networks, and provides motivation. Bringing people together on a college campus is one of the best ways to do this. It is true that modern social media provide another way, but so far this is not as effective as getting people in the same place as revealed by the fact that business travel still remains robust. In fact, social media may be more of a complement to traditional ways of organizing societies than a substitute for it. This may be especially true for many young people who need the in-person motivation of a peer group to struggle through calculus, economics, physics, and art history.¹²

Nevertheless, it would be foolhardy to dismiss the Internet—at the very least it is a powerful complement to traditional methods of education, and in some circumstances, it clearly can provide a substitute. It seems unlikely that the Internet will fully replace traditional higher education, but it surely will reshape it in important ways. Perhaps the correct analogy is church-going where televangelism has attracted some congregants, especially those who are older or isolated, but it has not replaced going to church. Indeed, mega-churches, like college campuses, still attract people who want to have an in-person experience and who want to meet with, socialize with, and be inspired directly by others.

IS AMERICAN HIGHER EDUCATION LIKE HEALTH CARE?

Higher education may be a lot like health care where in-person visits with highly trained and costly professionals are essential, thus driving up the price of care. Just like health care, the price of higher education has gone up much faster than inflation in the past decade. Between 2000–2001 and 2010–2011 increases beyond inflation were about 42% at public institutions, 31% at private not-for-profit institutions, and 5% at for-profit institutions.¹³

These figures certainly provide the right sense about what is happening to prices, but they must be used with great care because the price of higher education differs from its actual costs. First, the prices at public institutions have gone up substantially relative to inflation (thereby getting closer to actual costs, not farther away) partly because state support for higher education has declined precipitously in the last decade and tuition increases have made up for part of the difference.¹⁴ Second, these "sticker prices" do not take into account substantial increases in university, state, and federal aid for going to college. Hence, the actual cost of educating students has gone up, but the cost-to-the student has not gone up by as much and, especially at public institutions, at least part of the increase in price is simply due to state disinvestment that has led to increases in tuition.¹⁵

Why do college and health-care costs keep going up? In a classic 1967 paper, William Baumol described how the need for personal attention in service industries leads to a "cost disease" that makes it difficult to have productivity improvements when proper delivery of the service irreducibly requires a fixed amount of labor. His classic example is live performance:

A half hour horn quintet calls for the expenditure of $z^{1/2}$ man hours in its performance, and any attempt to try to increase productivity here is likely to be viewed with concern by critics and audience alike.¹⁶

One can protest that the performance can be recorded and seen (or heard) by many others, but the obvious response is that there is something special and important about live performance that necessarily limits the number of people who can experience it directly. This seems to be true for in-person visits to the doctor, and providing patients with a recorded online doctor is unlikely to be satisfactory to them. To the extent that higher education is like live musical performances and in-person doctor's visits, it will resist technological improvements.

Baumol also showed that these kinds of intensive services will become more expensive relative to everything else as societies become richer because the demand for them will remain the same (or perhaps even increase) while the supply will depend on attracting workers away from other increasingly well-off sectors of the economy. For universities this means that they must compete with Silicon Valley for computer scientists, Wall Street for economists, bio-tech companies for life scientists, corporate America for lawyers, private hospitals for doctors, and on and on.¹⁷

In their book, Why Does College Cost So Much?, Robert Archibald and David H. Feldman provide a detailed articulation of this argument. Using empirical data on prices over time, they show that the real prices of higher education track with those of dentists, physicians, and lawyers-that is, with other highly educated professionals offering professional services. They also amend Baumol's theory to consider the role of technological change and the details of the labor markets for those people providing the services. They show that the tremendous demand for highly educated people in our society has driven up the salaries for professionals and PhDs while the wages of less-educated service providers have remained stagnant because of the large number of people available for those occupations. As a result, the costs for some personal services such as haircuts have not increased very much, while those requiring professionals with a great deal of education have increased a lot. In addition, they argue that just as technological changes in health care such as expensive diagnostic and surgical techniques have increased the costs of healthcare services rather than decreasing them, so too have expensive new technologies increased the cost of higher education.

Archibald and Feldman contrast their explanation of the growth in the price of higher education with two other theories. One is the revenue model of Howard Bowen that argues that universities simply spend everything they are given in the pursuit of dominance, prestige, and influence.18 Another is the somewhat related arms-race model of Zemsky, Wegner, and Massy in which universities are engaged in wasteful tournaments to recruit the best students, faculty, and staff.¹⁹ In both models, the result is enormous inefficiencies in public and private nonprofit higher education. Yet Archibald and Feldman show that tuition increases at four-year not-forprofit universities, in fact, have been very similar to those at comparable private for-profit institutions. Moreover economists have documented the many changes in public and nonprofit higher education (such as the increasing number of adjuncts and lecturers) that have lowered costs and transformed higher education.²⁰ These results do not prove that traditional higher education is efficient, but they demonstrate that efforts are being made by the traditional sector to be more

wedges between prices and costs due to health insurance, and the fact that doctors often control the demand for services that makes it impossible for competition to drive down costs.

In fact, higher education already has a lot of competition for students, for faculty, and for prestige.²² This competition has led to economies and cost savings. What higher education does not have is an easily defined product or prices that reflect costs.

Traditional higher education engages in at least three complex activities: teaching, research, and service. Each of these can be further broken down into sub-activities. Teaching, for example, comprises undergraduate programs, masters' programs, and PhD programs. Each one has a different rhythm, cost calculus, and purpose, and the success of each program is typically measured in different ways.

Most for-profit higher education institutions offer a simpler line of products. They do not do research or service, and they do not train PhDs. They focus on degree or certificate programs for two- and four-year undergraduate programs or on masters' students—especially for those students who find it easier to work over the Internet. At most, for-profit institutions only compete with a narrow segment of traditional higher education.

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productive so that the Baumol argument is most likely at the root of the problem: it is hard to be more productive in the high-end service sector.

ARE MARKETIZATION AND THE PROFIT MOTIVE THE ANSWER?

An obvious criticism of these arguments is that they may have correctly described the reasons why higher education (and health care) costs so much, but they have merely diagnosed a chronic condition that must be cured.²¹ From this perspective, American higher education has become too fat, or, in a somewhat more generous interpretation, it has simply become muscle-bound. In either case, it needs to be changed.

One way to do this is to subject higher education to the marketplace and the profit motive. By allowing and encouraging private for-profit colleges and universities, higher education will be forced to find better ways to do business. The marketplace, however, is not a magical elixir that automatically creates efficiencies. Consider, for example, the heavily market-oriented health-care sector. Markets work best when there is a clear definition of what makes a good product, when prices reflect costs, and when there is true competition. Health care has suffered from lack of clarity about the product (Is it physician services or healthy individuals?), the

This competition from private for-profit universities might substantially affect public and nonprofit universities if two things are true. First, for-profit institutions might be able to offer a high-quality product such as four-year degree programs without the prestigious faculty, ongoing research, and involvement in service that characterizes traditional universities. Second, they might be able to offer this product more cheaply. The first condition questions a central article of faith among those in traditional higher education that research, faculty prestige, and service are major contributors to higher quality teaching so that for-profits simply cannot compete. Most academics believe that this is true, but the evidence is thinner than it should be, and more effort should be made to flesh out the argument to show exactly what research, faculty prestige, and a service orientation contribute to higher education. The second gets wound-up with the complexities of the pricing of American higher education.

The actual prices charged for each of the three major products of American higher education (research, teaching, and service) are different than their costs of production, and there is substantial cross-subsidization and interdependency of production. PhD students, for example, often get heavy subsidies for their tuition that comes from research funding, but they also play a big role in undergraduate education as

teaching assistants. As a result, with proper training (which, unfortunately, they do not get as much as they should), graduate students can provide high-quality teaching at a relatively low cost. Adjuncts and lecturers, who are often attracted by the prestige of traditional universities and by the exciting work that goes on there, provide another opportunity for reducing the cost of traditional higher education. As a result, many public universities manage to teach large numbers of students much more inexpensively than private nonprofit universities.²³

Although for-profit providers of higher education have a clear-cut objective—making a profit—it is not obvious that they can easily provide a high-quality product at a significantly lower price. In addition, it is not clear that private for-profits are working as hard as they might to ensure the quality of their product. Federal and state governments have expressed serious concerns about completion and job-placement rates for for-profit institutions. For many of these institutions, it is difficult to find information on the quality of the faculty or of the curriculum. And much of the advertising for them speaks of innovation and bright futures without much detail.

Furthermore, for-profit institutions are heavily dependent on government aid that ensures that the prices for students diverge from the costs of producing the program. For-profit institutions benefit heavily from federal Pell grants and state grants such as the Cal-Grant program in California that lower the price to the student, and they benefit from students who may heavily discount the future impact of large debt-loads from taking for-profit courses. tional university, with its mix of intellectual breadth and depth, its diverse campus social milieu, and its potentially life-changing professors, is needed now more than ever.²⁴

WHAT SHOULD BE DONE?

Traditional higher education institutions will not go the way of typewriter manufacturers, the steel industry, the railroads, or newspapers, but they cannot continue to have price increases that are greater than the cost of living and even greater than the growth of middle-class incomes.²⁵ They cannot deny access to some students because of constrictions in the supply of higher education.²⁶ They must find innovative ways to deliver higher quality education at reasonable prices. There is a growing literature on what might be done,²⁷ but four areas seem especially important.

Measuring University, Departmental, and Program Performance

One of the most distressing books about higher education of the last few years is *Academically Adrift: Limited Learning on College Campuses.*²⁸ The coauthors Richard Arum and Josipa Roksa report how much students learn between the beginning of their freshmen year and the end of their sophomore year at 24 colleges and universities. They conclude that "gains in student performance are disturbingly low," that students are too often "academically adrift," and that "there is noticeable variation both within and across institutions that is associated with measurable differences in students' educational experiences."²⁹ Their study is careful, thoughtful, and persuasive. Critics might argue that they have measured the wrong

We must be able to do a better job in explaining how students are helped by higher education. One reason is purely defensive: How can we complain about for-profit institutions doing the wrong things if we can't say what the right ones are?³⁰

So far, for-profit universities have been most successful in exploiting niches such as working students who have completed two-year colleges and who want to complete a fouryear degree over the Internet or students who need certificates in areas where community colleges cannot meet demand. The best of the for-profits have provided significant access for people who might otherwise not have had an opportunity to get higher education, and they have been exceptionally innovative in improving Internet platforms for distance learning. They fill an important niche.

Ultimately, even some of the most severe critics of traditional higher education conclude that for-profits are not the fundamental answer:

The traditional university is still indispensable.... Young college students in particular need an environment in which they can not only study but also broaden their horizons and simply "grow-up." Though for-profit educators can play important, complementary roles in higher education, the ideal of the tradithings, but that does not mean that we should wash our hands of the problem they have identified. We must be able to do a better job in explaining how students are helped by higher education. One reason is purely defensive: How can we complain about for-profit institutions doing the wrong things if we can't say what the right ones are?³⁰ But an even better reason is that we must ask ourselves hard questions about the quality of our programs and our teaching.

Improving and Evaluating Teaching

Modern cognitive science has begun to unlock the mysteries of how people learn, and there is persuasive evidence that we can do a much better job of teaching if we center our efforts on helping people learn.³¹ We should take those results seriously for our own teaching, and we should make sure that we do a better job of training our PhDs for a teaching as well as a research career. Finally, we should develop valid and reliable ways of evaluating teacher performance. The widely used "student evaluations" have serious defects, and new methods of evaluation based on mastery of the material and peer review should be developed. $^{\mbox{\tiny 3^2}}$

We should also take more seriously the excellent work that is being presented at the annual spring APSA Teaching and Learning Conference. At the margin, for most scholars, taking teaching more seriously and spending time at workshops and conferences on it would be better than adding a few more articles to their vita, which may not get many citations anyway. The chance that we will affect the world through our teaching is almost surely greater for most of us than the chance that one of our marginal and least-well-thought-out pieces of research will be cited-much less be influential in affecting the world. Promotion committees should bear this in mind, and greater credit should be given to those who have thought about and really tried to improve their teaching. This requires a sea change in university priorities that demands more attention, or at least more awareness, of the institutional difficulties of making this shift that vary with the status of the institutions.

Using Modern Technology to Improve Teaching through the Internet and Online Education

It is easy to be dismissive of online courses and technology. Efforts to revolutionize education with computers go back to the 1960s with the attempts of Patrick Suppes and Richard Atkinson to develop computer-assisted instruction, but progress has been very slow and promises have typically outstripped performance. For many years, online courses were low quality given the limitations of bandwidth and computer platforms, and university efforts often ended in failure. For example, after losing millions of dollars on its online venture Fathom, Columbia University closed it down in 2003.³³

Striving for a Better Allocation of Resources within Universities by Linking Decision-Making with Improved Budgeting

Many universities remain highly centralized with a commitment to a broad range of programs that have developed literally over the centuries. University budgeting and accounting systems make it hard to know how much any one program actually costs, and entrenched programs are often happy about that ignorance. "Responsibility Centered Management" (RCM)³⁴ tries to couple decision making with its financial ramifications by developing better budgeting data and by tying incentives to these decisions. A simple version would, for example, return part of the tuition paid by a student to the units that provide courses to the student. In a chapter of his book "Kafka was an Optimist," David Kirp shows how badly this approach can backfire as academic units sacrifice quality to attract students,35 but modified versions of RCM are gaining ground around the country for the simple reason that universities should know the consequences of their budgetary decisions and administrators should be provided with incentives to develop and nurture programs that maintain quality and that attract students. Pure RCM approaches may not be the answer, but the tangle of budgetary obfuscation and perverse incentives that face most academic administrators do not help anybody produce high-quality education.

CONCLUSIONS

Almost all of these suggestions for improvement require some kind of measurement.³⁶ Lord Kelvin famously said that "If you cannot measure it, you cannot improve it," but measurement makes many people in the academy nervous. How do

We must show that we are doing everything possible to improve learning and to control costs. To prevent the railroading of American higher education, we should follow Kelvin's advice and measure what we do and work to improve it.

But the quality of online education is increasing with better platforms for delivering content and for facilitating interaction, and some for-profit universities are using it with great success. At the very least, students have now become accustomed to finding information about courses online, to using online repositories of class readings, to looking at videos online, and to interacting with one another using e-mails, texting, and real-time chat rooms. There is every reason to think that this use of the Internet will grow innovation by innovation, and we must think about the comparative advantage of in-person classroom learning versus learning online. In the "inverted" or "flipped" classroom, for example, students watch lectures online and come prepared to work interactively with one another and with the professor in the classroom. There are lots of reasons to believe that now is, finally, the time when online education will at least become a complement to traditional modes of instruction, and in some cases a substitute for it. We should be leaders in this area.

you measure contributions to knowledge? How do you measure a more open and inquisitive mind? How do you measure those moments in a classroom when students begin to understand the magic of art, music, literature, or physics? We probably can't develop thermometers (using centigrade, Fahrenheit, or even Kelvin) to measure these things, but we should not immediately retreat to the current paucity of information.

We do, after all, find ways to assess the quality of young scholars when we evaluate them for tenure, and we do know that some faculty members are better teachers than others. If we work carefully, we can develop assessments of our universities, our departments, our faculty members, and our expenditures that will demonstrate our success and that will achieve cost savings. In doing this, we can also demonstrate that public and private nonprofit institutions deliver more and more value for the resources they consume.

We must continue to defend universities for their role in creating new knowledge, expanding our understanding of

ourselves, speaking truth to power, and serving as the cathedrals of civilization. But we live in a pecuniary age with real pressures on the American middle class and on state governments. We must show that we are doing everything possible to improve learning and to control costs. To prevent the railroading of American higher education, we should follow Kelvin's advice and measure what we do and work to improve it.

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NOTES

- 1. To be fair, many of the most misguided criticisms appear in newspaper editorials, partisan tracts, and blog-posts. The Spellings Report on Higher Education made some of these arguments about obsolescence, nonprofits, and the Internet in U.S. Department of Education, A Test of Leadership: Charting the Future of U.S. Higher Education (Washington, DC: 2006). Heritage Foundation scholar Stuart Butler makes them as well in "The Coming Higher-Ed Revolution," National Affairs, Winter 2012 at http://www.nationalaffairs.com/doclib/20111220_Butler_Indiv.pdf. Critiques of the privatization of American higher education include Christopher Newfield, Unmaking the Public University: The Forty-Year Assault on the Middle Class (Cambridge, MA: Harvard University Press, 2008) and Marc Bousquet, How the University Works: Higher Education and the Low-Wage Nation (New York: New York University Press, 2008). And a recent argument that higher Education? How Colleges are Wasting our Money and Failing our Kids—And What We Can Do about It (New York: Times Books, Henry Holt and Company, 2010).
- 2. For a loving, but highly realistic, account of the university and its accomplishments see the book by the former dean of Harvard College: Henry Rosovsky, *The University: An Owner's Manual* (New York: W.W. Norton and Company, 1990). For a more skeptical, but still respectful, analysis by the former president of Harvard, see Derek Bok, *Universities in the Marketplace: The Commercialization of Higher Education* (Princeton, NJ: Princeton University Press, 2003). David Kirp has written the best single account of the dilemmas of higher education in *Shakespeare, Einstein, and the Bottom Line: The Marketing of Higher Education* (Cambridge, MA: Harvard University Press, 2003).
- 3. The reasons for this seem to be the following. First, legislators are myopic and short-term cuts in higher education, especially when they are met by heroic attempts by institutions to maintain enrollments, appear as savings even though the long-term consequences are reduced human capital and growth for the state. Second, many state universities have an independent power to tax through tuition increases which can then be blamed on a group outside the legislature. Third, higher education does not have the lobbying power of prison guards, K-12 teachers, or medical institutions.
- 4. On the payoff from higher education see John Stiles, Michael Hout, and Henry E. Brady, "California's Fiscal Returns on Investments in Higher Education," at http://cshe.berkeley.edu/publications/docs/ROPS.Stiles %20et%20al.ReturnOnInvestment.10.2.2012.pdf. Also see Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology* (Cambridge, MA: Belknap Press of Harvard University, 2010). On public opinion about higher education see John Immerwahr, "Public Attitudes on Higher Education: A Trend Analysis, 1993 to 2003," paper prepared by Public Agenda for the National Center for Public Policy and Higher Education, February 2004 at http://www.highereducation.org/reports/ pubatt/Pub_Agenda_040210.pdf and see John Immerwahr and Jean Johnson (with Amber Ott and Jonathan Rochkind), "Squeeze Play 2010: Continued Public Anxiety on Cost, Harsher Judgments on How Colleges are Run," report prepared by Public Agenda for Public Policy and Higher Education, February 2010 at http://www.highereducation.org/reports/ squeeze_play_10/squeeze_play_10.pdf
- 5. For example: Richard Arum and Josipa Roksa, Academically Adrift: Limited Learning on College Campuses (Chicago: University of Chicago Press, 2011); Andrew Hacker and Claudia Dreifus, Higher Education? How Colleges are Wasting our Money and Failing our Kids—And what We Can Do about Lit (New York: Times Books, Henry Holt and Company, 2010); Benjamin Ginsberg, The Fall of the Faculty: The Rise of the All-

Administrative University and Why It Matters (New York: Oxford University Press, 2011); Richard P. Keeling and Richard H. Hersh, *We're Losing Our Minds: Rethinking American Higher Education* (Palgrave MacMillan: 2011).

- U.S. Department of Education, A Test of Leadership: Charting the Future of U.S. Higher Education (Washington, DC: 2006), page xii.
- 7. Stiles, Hout, and Brady, 2012 propose a figure of \$1.6 million that would be \$32,000 per year over a 50-year career. Does this make college worthwhile? The total cost (tuition, fees, room and board, and expenses) of going to the University of California is approximately \$32,000 per year for a total of \$128,000 over four years. Clearly this investment would be quickly recouped. Claudia Goldin and Lawrence Katz, 2008 estimate annual returns to college completion beyond high school graduation in the ten to fifteen percent range (page 84).
- 8. Graduate education is another matter. Now American universities have an enormous lead in producing PhDs, but once so did Germany and Britain.
- 9. See http://education.exeter.ac.uk/dll/details.php?code=DLFo2
- 10. Even the Harvard-MIT (and now Berkeley) edX initiative that appears to be an exception at first glance is described by MIT professor Anant Agarwal in these terms: "... it helped the MIT brand. It brought a lot of goodwill to MIT, and recruiting became a lot easier." see Larry Hardesty, "Is MIT Giving Away the Farm? The Surprising Logic of MIT's free online education program," *Technology Review*, August 21, 2012, at http:// www.technologyreview.com/article/428698/is-mit-giving-away-the-farm/. At Berkeley, edX is thought of as only one piece of a larger strategy that includes offering courses for a fee.
- 11. Some critics argue that higher education is just certification and that it does not necessarily impart skills—employers want college graduates simply because college graduation signals that the person is intelligent and capable. Almost all empirical research, however, suggests that college degrees provide real human capital. See Michael Hout, "Social and Economic Returns to College Education in the United States," Annual Review of Sociology, 38: 10.1–10.22, 2012.
- 12. It is also worth noting that many parents probably see great value in sending their children off to new places that provide a modicum of protection and support as they make the transition from adolescence to adulthood.
- Calculated from the figures at http://nces.ed.gov/fastfacts/ display.asp?id=76.
- See Ronald G. Ehrenberg, 2012, "American Higher Education in Transition," Journal of Economic Perspectives, 26: 193–216 and John Quinterno, The Great Cost Shift: How Higher Education Cuts Undermine the Future Middle Class (New York: Demos, 2012) at http://www.demos.org/sites/ default/files/publications/thegreatcostshift_0.pdf
- See Robert B. Archibald and David H. Feldman, Why Does College Cost So Much? (New York: Oxford University Press, 2011).
- William J. Baumol, "Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis," *American Economic Review*, 57: 415–26, June, 1967, page 416.
- 17. Obviously the cost pressures have been greatest in professional schools, engineering, the physical and life sciences, and some of the social sciences. Universities have struggled with equity issues as this sometimes leaves the arts and humanities behind. The average pay at all ranks of the professorate in 2011–12 was \$82,556 (see http://www.aaup.org/NR/rdonlyres/2223C57E-4F87-4C93-99F4-7BAA65C7CC80/o/Tab4.pdf), and after accounting for inflation, "the overall average salary of a full-time faculty member in 2011–12 is less than 1 percent higher than it was five years ago, in 2006–07" (see Saranna Thornton and John W. Curtis, "A Very Slow Recovery: The Annual Report on the Economic Status of the Profession-2011–12," *Academe*, March–April 2012.)
- Howard Bowen, The Costs of Higher Education: How Much Do College and Universities Spend Per Student and How Much Should they Spend? (San Francisco: Jossey-Bass, 1980).
- Robert Zemsky, William Wenger, and William Massy, Remaking the American University: Market-Smart and Mission Centered (New Brunswick, NJ: Rutgers University Press, 2005). Also see Ronald J. Ehrenberg, Tuition Rising: Why College Costs So Much (Cambridge, MA: Harvard University Press, 2000).
- Ron Ehrenberg, 2012 and Burton A. Weisbrod, Jeffrey P. Ballou, and Evelyn D. Asch, *Mission and Money: Understanding the University* (New York: Cambridge University Press, 2008), especially Chapters 3 and 11.
- 21. My own opinion is that the need for the personal involvement of highly priced professors is not so much a disease as a basic feature of how human learning occurs so that it may be very hard to change, but the

basic professorial input can probably be used much more effectively as we learn more about learning.

- 22. See Derek Bok, 2003; Kirp, 2003; Ehrenberg, 2000, 2012; Weisbrod, Ballou, and Asch, 2008.
- Ehrenberg, 2000 argues that public institutions control costs better than private institutions (pages 23–26).
- 24. Clayton M. Christensen and Henry J. Eyring, *The Innovative University:* Changing the DNA of Higher Education from the Inside Out, San Francisco: Jossey-Bass, 2011, page xxiii.
- 25. Ehrenberg, 2000, page 7.
- 26. The impacts of reductions in state funding for higher education in California are documented in Hans Johnson, "Defunding Higher Education: What Are the Effects on College Enrollment?" San Francisco: Public Policy Institute of California, 2012 at http://www.ppic.org/content/pubs/report/R_512HJR.pdf
- See Christensen and Eyring, 2011 and Ben Wildavsky, Andrew P. Kelly, and Kevin Carey (editors), *Reinventing Higher Education: The Promise of Innovation* (Cambridge, MA: Harvard Education Press, 2011).
- Richard Arum and Josipa Roksa, Academically Adrift: Limited Learning on College Campuses (Chicago: University of Chicago Press, 2011).
- 29. Ibid, page 30.
- 30. Methods of measuring economic value-added in higher education are described in Timothy Rodgers, "Measuring Value Added in Higher Education: A Proposed Methodology for Developing a Performance Indicator Based on the Economic Value Added to Graduates, *Education Economics*, 15 (1): 55–74, March 2007. In principle, similar methods could be devel-

oped to measure increases in citizenship, tolerance, life-skills, and appreciation for art and culture. If care is taken to measure the right things and to control for the vastly different populations served by various higher education segments, then these methods can be useful for evaluating programs, but there is far too much noise and uncertainty in these measures to use them to evaluate individual faculty members.

- Susan A. Ambrose et al., How Learning Works: Seven Research-Based Principles for Smart Learning (San Francisco: Jossey-Bass, 2010), and Maryellen Weimer, Learner-Centered Teaching: Five Key Changes to Practice (San Francisco: Jossey-Bass, 2002).
- 32. The problems with student evaluations are analyzed in Scott E. Carrell and James E. West, "Does Professor Quality Matter? Evidence from Random Assignment of Students to Professors," National Bureau of Economic Research, Working Paper 14081, June, 2008 at http:// www.economics.harvard.edu/faculty/staiger/files/ carrell%2Bwest%2Bprofessor%2Bqualty%2Bjpe.pdf.
- David Kirp, 2003, Chapters 9–10, and Scott Carlson, "After Losing Millions, Columbia U. Will Close Online-Learning Venture, *The Chronicle of Higher Education*, January 17, 2003.
- 34. For a description see: http://budgetmodel.uoregon.edu/content/ introduction-responsibility-centered-management
- 35. Kirp, 2003, Chapter 6.
- 36. Certainly the assessment of university performance, the evaluation of teaching, and the improvement of budgeting requires better measurement. Creating Internet courses also leads inexorably to measurements of student clicks, attention, and performance.

Higher Education in the Twenty-First Century: Innovation, Adaptation, Preservation

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isruptive change is never easy for those who have helped construct the status quo. By definition, it undermines much that we take for granted and rely on, much that has evolved over time. It sometimes destroys things that are worth treasuring. This is why we fear it. But disruptive change also provides an opportunity for restructuring that can actually improve our institutions. Our task should be to adjust as nimbly as we can, taking advantage of new opportunities while we protect those aspects of traditional higher education that are of the greatest importance to our mission.

There is an old canard that higher education is always in crisis; but this time, we may think, it is really true. We face formidable challenges to the structures and practices of higher education as we know it. American higher education has proven itself resilient and resourceful in facing many other daunting challenges over the centuries, and we can hope that this will be the case today. But we will be neither resilient nor resourceful if we refuse to acknowledge the seriousness of the situation and assume that everything will automatically work out just fine. Past challenges have been most effectively met by enlightened leadership, and this will be required again.

The most distinctive aspect of the current situation is that threats are coming from so many different directions at the same time. This creates particularly complex challenges for the leadership of our institutions and for public policy. At least five new developments are already affecting "business as usual" in research universities and liberal arts colleges, and these seem likely to have an even more fundamental impact in the years ahead. (My list is somewhat different from Gary King and Maya Sen's, but there are, of course, overlaps in our analysis.) The most significant challenges I see are (1) the development of online education as a credible alternative to traditional classroom learning-the most exciting and novel but also the most potentially disruptive of these challenges; (2) the early signs of a migration of loyalties of some faculty and students to different modes of learning and away from their campus base; (3) the rising costs of doing business in the usual way when financial pressures are reducing the capacity of many students (and their families) to afford our tuition and fees; (4) the reduction of government support for research in many scientific fields; and (5) competition from institutions around the world as other countries develop their own systems of higher education.

ONLINE VERSUS TRADITIONAL LEARNING

Only four or five years ago it was common wisdom to observe that online learning had not proved itself and was unlikely to displace more traditional forms of education. Early experiments in this area foundered and lost traction, and it was easy to assume that this would be true for quite awhile. But today, the outlook is very different. Robust and successful online courses are just beginning to be developed, but things are moving fast. There are many reasons to feel confident that this form of education will account for a larger and larger share of the way faculty teach and students learn in the years ahead. Online education is powerful and appealing as well as comparatively inexpensive and increasingly effective in accomplishing its goals; the only safe assumption is that it is here to stay, and to flourish.

Many professors are engaged in fascinating and diverse efforts to enhance their traditional courses by using online methods and sources; their focus is primarily on their "own" students on their home campus. Others are designing massive open online courses (MOOCs) to reach students in farflung parts of the world who otherwise would never have the opportunity to learn from a faculty member at Stanford or Berkeley or Harvard or MIT. Both of these motivations are admirable, and much important work is now being done; but we need to recognize that the implications of each of these adventures for our business model are likely to be both significant and difficult to predict.

There are also implications for how members of the faculty do their work and how they are perceived within the professional guilds we call disciplines. Some are already recognized as the providers of content and creators of online courses that professors at other institutions will use. This may be in the best interest of the students who will get to learn from the most admired and productive teachers in any given discipline; but this development threatens to downgrade the status of those professors on other campuses who may be seen as teaching assistants or preceptors for someone else's course. Innovative and creative ways to "flip" a classroom can overcome this problem and turn this into a win-win situation. Teaching seminars based on material students have mastered online at their own pace and on their own time can be an exhilarating opportunity. But we need to pay attention to the effects of this "flip" at both our most prestigious and less prestigious institutions.

In online teaching as it is now conceived, we can discover much more about *how* students learn and which teaching methods are most effective in what contexts. This is one of many benefits of curricular development online. Many questions emerge about how all this will work out in practice. For instance: What will be the effect of this new system on the graduate students on whom professors in universities rely so much for research and teaching assistance and nascent colleagueship? How will their probable futures be affected? Will their motivations for choosing our profession be changed by these developments, and will more of them seek different kinds of work?

It is also not clear how we will pay for this. It seems unlikely that we can continue to provide extensive online education at no cost to the enrolled students; but no compelling for-profit (or even break-even) business model has emerged. What about issues of accreditation and accountability? How do we know the person who is "signed up" for the course and receiving certification, and potentially credit, is who he says he is? Systems for grading thousands of students online are beginning to be developed, but so far, these work best with multiplerewarding to design new online courses for an open-ended audience rather than tweak their familiar curricular offerings yet one more time, this competes with their commitment to traditional classroom teaching. This new time commitment adds yet another "pull" away from campus in addition to consulting, travel to conferences, textbook writing, and other familiar endeavors.

A new "social contract" between faculty members and their "home" institutions, suggested by several university leaders recently, is one step that could be taken. But what responsibilities, benefits, and duties, on both sides, will this involve? Developing a new understanding requires good-faith effort on the part of both faculty and administrators: the former cannot see themselves entirely as "free agents" while they rely on the reputation and resources of their university, but the resourceful educational innovation they provide should not be stifled by overly restrictive stipulations.

Students may also have less strong ties to any particular institution, seeing higher education more and more like a shop-

If instructors find it more intriguing and rewarding to design new online courses for an open-ended audience rather than tweak their familiar curricular offerings yet one more time, this competes with their commitment to traditional classroom teaching.

choice assignments or in disciplines where the mastery of relevant knowledge is relatively clear-cut and easy to assess. How would an instructor assess thousands of philosophy essays simultaneously submitted online? What about the issues concerning motivation to work in isolation from other students and faculty? Most people who enroll in a MOOC today drop out of the course somewhere along the way. Can there be any real supervision of the student in cyberspace, or serious interaction of those who are "taking the course" with each other and with faculty members?

These problems are not insoluble, and progress in addressing each of them has been made. The possibilities for interaction of those taking the course with each other, both in cyberspace and in regional discussion groups, are very promising, for instance. But all these issues require more thoughtful attention and creative ingenuity than some initial enthusiasts seemed to assume.

SHIFTING LOYALTIES

The second challenge is the migration of loyalties. While this is still a small cloud on the horizon, it is something we need to anticipate. Professors and students are deeply intrigued by these new forms of conveying knowledge, and many members of the faculty are engaged in developing the very online courses that undermine our conventional business model. These activities may also lead some professors to develop competing loyalties to the programs and entities that help them develop and distribute online courses, rather than the institutions (or the disciplines) to which they have been primarily loyal in the past. If instructors find it more intriguing and ping mall rather than an institutional home. As this happens, what is the future of residential education, a tremendously powerful form of learning for generations of young people over the past centuries? The two forms of learning are not incompatible, and can be mutually enhancing. But who gets the double benefits, and who chooses (or is limited to) learning in cyberspace alone? If it's only a matter of money, we know the outcome: richer students will enjoy the campuses and all their related opportunities and poorer ones will rely solely on the online courses. To avoid this inequity and not repeat the bad old days in which our most distinguished universities and colleges taught only the children of the wealthy, vigorous financial aid programs are more important than ever. Yet only a few institutions can commit to true "need-blind admissions" and pay the costs of this generous policy. Residential education can be expected to retain its appeal as a transition experience to young adulthood for many students for the foreseeable future, even as online education becomes more central; but we have not done a good job of figuring out how to make residential education, as we know it, affordablewhich brings us to the third disruptive challenge.

COSTS

The most important source of funds for many institutions of higher education has always been students paying tuition for residential education at the undergraduate and professional degree levels. This source is now undermined by the availability of online courses as well as the increasing perception that college is "out of reach" financially. While all this exciting online innovative entrepreneurship is happening, the most

selective colleges and universities are still in the mode of competing on rich curricular and extracurricular offerings, plentiful services for students-the country-club model-to bolster our reputations as residential institutions. This is very costly, as are the salaries for the professors we want to keep, many of whom are the very ones whose migrating loyalties threaten the status quo. The days of the underpaid dedicated faculty member or university officer are fortunately long past, but we have veered in the opposite direction when we can ill afford to do this. Paying top dollar for a few stars is not a sustainable long-term strategy in the current financial context. Because we don't have the pressure of the bottom line that leads businesses to be more efficient, we need to take charge of this problem head-on. We need to question some of the decisions and practices in our internal bureaucracies, not just see all our current problems as the result of external attack.

Rising costs also stem, in part, from the steady growth of administrative services that many observers have noted. This increase in staff happens partly because of growing government requirements; but as campus leaders we must recognize that we bear much of the responsibility for this. It's easier to add staff than to subtract, and there are always plausible arguments for why *this* new program is critical to our college's

FEDERAL FUNDING

Our research universities—and to a lesser extent, the strongest liberal arts colleges—rely heavily on federal funds to support sponsored research. Today's fiscal problems in Washington, DC, and many of the states have led to an erosion of support for scientific research, and more dramatic cuts are threatened in the future. We can make a strong case for the crucial importance of scientific research and development, and many university leaders are spending time trying to make these arguments persuasively. But the political climate is not propitious. The current political arena—firm resistance to more taxes, disdain for compromise to achieve our goals—means that we face an uphill battle. As political scientists, we have a special responsibility and a special opportunity to frame this discussion with government offices and public leaders most positively, and in a way most likely to yield good outcomes.

We need to continue to press hard to make our case, because robust scientific research and development truly are in the best interests of our nation and the world. But we should also think about alternatives, including private philanthropy (which often comes with strings attached) and corporate support (which almost always does). Despite these potential pitfalls, both corporate partnerships and private philanthropy are

Despite these potential pitfalls, both corporate partnerships and private philanthropy are promising sources of support that we should explore and cultivate, always mindful of the fundamental importance of protecting the independence and integrity of our research.

success. The recent fiscal crisis (which may repeat itself) helped institutions prune staff to some degree, but the problem remains. We must preserve the crucial managers as well as the front-line responsive staff who matter most so we don't become a robot-call-in, perpetually "on hold" institution. Unlike some corporations, we cannot address the proliferation of staff with harsh draconian cuts overnight without disrupting the community we prize. But we can take a harder look at our patterns of doing business and see how we might, gradually, shift some of these practices in new directions.

Salaries are always the most expensive part of the budget, and costs cannot continue to rise indefinitely. Part of the impetus for online learning comes from its greater efficiency and cost-effectiveness, and if campus-based learning is to compete, we need to recognize that costs do matter. Collaboration could be part of the answer in controlling costs: colleges and universities in the same region (or connected online) can cooperate in offering certain kinds of courses or providing certain kinds of services. Here, as elsewhere, priorities must be set; no institution can do everything. We can share information about best practices and try to find ways to avoid competing with each other out of business, even as we recognize that some competition among us is both healthy and inevitable. A more enlightened approach from the US Department of Justice, recognizing that nonprofit enterprises have a different business model from for-profit entities, could also be helpful.

promising sources of support that we should explore and cultivate, always mindful of the fundamental importance of protecting the independence and integrity of our research.

GLOBAL COMPETITION

Universities that were not on our radar screen in the United States a decade ago are now effectively competing with us for resources including both faculty and students. Many of these institutions have ample assurance of support from governments determined that their national image will be burnished by strong universities, compared with the laissez faire or even negative attitudes of the US federal and state governments today. Unlike the United States, which has been very fortunate in this respect, government support for higher education in many countries comes with strings attached, including potential repression and limitations on what can be taught and by whom. But the competition with our universities can still be very strong. It is easy for those who have long been rated in their sectors as the "best of breed" to be complacent; complacency unfortunately has become too common in American higher education because of our long predominance.

Today, much of the discussion of globalization concentrates on partnerships with universities in other countries, or the establishment of branches of our universities abroad. These strategies come with their own opportunities and challenges. A single-minded focus on these efforts, however, can obscure the ways in which developing institutions in other countries are now challenging us in ways we have not considered in the past. These institutions (and their supportive governments) may resist the incursion of online learning through courses "made in the USA," complicating our efforts to reach out broadly around the world. They will provide their own online offerings as this form of education becomes more prominent. And they will surely compete more and more effectively for students whose first choice for higher education has always been in North America.

PROTECTION OF FACTORS WORTH SAVING

With these five challenges in mind, what aspects of higher education most merit protection through a period of disruptive change?

The first factor worthy of protection is the community of learners that has been a distinctive aspect of education since the days of Plato's Academy. This community typically involves scholars of several generations learning and teaching with each other. It can be virtual instead of physical, to some extent, but we need to be careful about assuming that face-to-face interaction can ever be fully replaced in cyberspace.

The second factor to protect is the integrity of the teaching and research process. One reason the challenges of online learning are so complicated is that it is harder to maintain scholarly integrity in fluid, complex, online situations than in a community of people who know each other well and work together consistently. It should not be beyond our power to devise ways to do this, but we need to give that a high priority as we deal with the disruptive change.

Third, we need to preserve the canon of works from the past that have been inspirational to students and researchers for many centuries. It is tempting to be so intrigued by the novel and the unexpected that one underestimates the importance of the classics in many different fields-landmark achievements of the human spirit that have been protected and stewarded in our libraries, museums, and galleries. Some of this preservation can be facilitated by new technologies; but maintaining familiar forms of knowledge through the twists and turns of technological innovation is a challenge in itself. Amidst all of this change, we need to give high priority to preserving and handing on to our successors the foundational treasures that have done so much to make education worth our while. The student reading a great classic under a tree should not be totally replaced by the one absorbing the most up-to-date discoveries in cyberspace.

Finally, we also need to protect our openness to the future our flexible readiness to understand and address the next disruptive change—which will surely come. This means leadership that shows adaptation and ingenuity, at the same time that we keep our most fundamental values and priorities firmly in mind.

As we political scientists ponder how we might help our institutions and their leaders achieve these goals—adapting to disruptive change while we protect what is most essential—some policy recommendations are in order.

First, we should shape new partnerships between governments, universities, philanthropists, and employers to provide reliable funding for higher education in its diverse forms.

Second, as we do this, we should be particularly aggressive and creative in seeking sources of generous financial aid for students who cannot afford our increasingly costly higher education so that our "elite" colleges and universities do not become bastions of privilege again.

Third, we must find reliable new ways of storing knowledge so that the wisdom of the past (an ever-increasing resource) will not be lost to the future as technology changes with such dizzying speed.

And finally, we need to ensure that higher education organizations and governmental agencies craft new forms of regulation and accreditation for online learning from multiple universities around the globe, and do so in a timely fashion, before evolving practice sets the rules for us with no input from our wisest leaders.

In the "Author's Introduction" to *Democracy in America*, Tocqueville noted that the privileged Europeans of his time were so focused on the pre-Revolutionary past that they were unaware of both the threats and the opportunities of the future that was inevitably upon them. He describes their stance in this way: "Positioned as we are in the middle of a rapid stream, we stare fixedly at a few ruins we can still see on the shore as the current drags us away backwards towards the abyss." His prescription for dealing with this dangerous short-sightedness: "A new political science is needed for a totally new world."¹

The references to "ruins" and the "abyss" seem inapposite for our topic; things are surely not *that* bad. One of my major themes has been the positive opportunities available to us in this "troubled" time. But the notion of a current pulling us in one direction while too many of us are looking the other way does seem appropriate for many leaders of higher education today. And the hope of new insights from political science in understanding this new world surely provides an exhilarating opportunity for those of us who profess this discipline to use our skills to help ease the transition to the future.

NOTE

Alexis de Tocqueville. 2003. Democracy in America, volume I, ed. Gerald Bevan and Isaac Kramnick, 16. London and New York: Penguin Books.

Comments on "The Troubled Future of College and Universities"

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share Gary King and Maya Sen's view that applying the knowledge, approaches, and tools of the social and policy sciences might help us be more intelligent about shaping the future of the American system of higher education and its component parts. I have even been surprised, in turning from the scholarly field of my training and academic field to a professional preoccupation with higher education, to search in vain for sessions at APSA meetings in which my fellow political scientists might focus their analytical eyes on our own sector and institutions. Taking more systematic analytical approaches might certainly be a good alternative to riding the most recent serious source of anxiety-and there have been many in recent decades-or mining a particular strand of data in search of indicators that might serve as tea leaves or life rafts, also known in the trade as "benchmarks."

But taking this call seriously requires more groundwork in some critical fundamentals about American higher education: a more informative historical framework that helps to identify the longer and repetitive forces that shape the system and its component parts; more clarity about the higher education system as a system; and more recognition of the efforts at change and transformation that have been taking place over the last generation. None of this reduces the urgency of King and Sen's call to action, but it might help frame what directions to take.

Before we go further, however, there is a definitional issue. King and Sen's essay is titled to speak of "colleges and universities" and "the American system of higher education." I say more about this in the following text, in probing the idea of the *higher education system*. Suffice it to say that, indeed, we would do best to encompass the higher education system into our analysis, including attention to the very different types of institutions that it comprises, as well as the relationships among them. Much of "The Troubled Future," however, seems mostly to consider research universities, especially the leading ones, and perhaps the private research universities. Some of the critical pressures on and preoccupations of other institutions in the system are not present enough. Here I attempt to write, instead, of the higher education system, understood more comprehensively.

HISTORICAL AND INSTITUTIONAL DEVELOPMENT OF HIGHER EDUCATION

No doubt, as Gary King and Maya Sen wrote, "The American system of higher education appears poised for disruptive change of potentially historic proportions because of massive new political, economic, and educational forces." But this assertion, to be more accurate, requires an additional word: *again*. The American system of higher education appears poised for disruptive change of potentially historic proportions *again*. Or maybe the added word should be *still*. The American system of higher education *still* appears poised for disruptive change of potentially historic proportions.

Studying the major changes that have transformed higher education on a recurring basis over its history, and certainly for the past 70 years, provides critical background for understanding the nature and likely impacts of the current disruptive forces, and perhaps assists us to construct timely, creative, effective responses to those forces. Universities have not remained the same for decades or centuries, let alone millennia. This should not make us sanguine about the challenges we face, but it should help us be smarter and rational about how to move forward.

There are many sources to consult for basic histories of American higher education, but two are especially relevant for a political- and policy-science understanding: Jonathan Cole's The Great American University (Cole 2010), on the rise and challenges of the major research universities, and Christopher Loss's Between Citizens and the State (Loss 2012), on American higher education in the twentieth century. These works make clear that it is not accurate to imply that the higher education system has been relatively stable and unchanging, only now rocked by the major forces delineated in "The Troubled Future of Colleges and Universities." Ignoring the many forces that have been rocking and turning the boat for decades will leave us unprepared for effective analysis for the future. As with other major sectors of society, including political systems, understanding the situation that faces colleges and universities today requires a theoretical and empirical grasp of the forces that shape longer-term patterns of transformation and continuity. Identifying current threatening developments is not enough.

Among the dramatic changes that have taken place in higher education since the end of World War II are the dramatic rise in the higher education sector, including the number of institutions, the proportion of the "college-aged" population enrolled, and the proportion of adults enrolled. These changes do not just reflect scalar differences; they are linked to many kinds of transformations in expectations about education, its impact, the nature of what these institutions should be offering students, and even how they will contain and house the students, faculty, and staff.

It is difficult to overestimate the significance of another aspect of the growth of the higher education sector: its diversification with first-generation men due to the GI Bill (which

included diversification of the ethnic base of the white male college population), then with women, members of American ethnic and racial minorities, more first-generation students and students without great financial means, students with physical and cognitive disabilities, and international students in successive waves from different parts of the world. Even more than the growth and change driven by the GI Bill (Mettler 2007), the successive struggles and debates about welcoming and accommodating each of these groups-and, after they entered, their perspectives and demands-made substantive changes in educational institutions and the larger system. Many of these changes were supported by federal legislation such as the Higher Education Act of 1965 (including the Pell Grants) and the Education Amendments of 1972 (including Title IX on equal opportunity across gender). Each wave of inclusion threatened the university as it was and, as advocates and opponents suspected, left colleges and universities changed places. They changed the expectations and perspectives on education found in the broader population. These waves of new students ultimately took their place as faculty, education leaders, educated parents of college-aspiring students, and public and private leaders.

Jonathan Cole (2010) has documented the forces that gave rise to government-sponsored research and the research university. The turns toward science and technology, toward language study and study-abroad programs, all provoked by the Cold War, also transformed the university. So did the increasing professionalization of many disciplines and the increasing view that if a profession is worthy, it should require a bachelor's degree ... and later, a master's degree ... and finally, a doctorate. What some academics have termed "degree inflation" changed the profile and mission of American higher education. It, arguably, fueled the demand for continuing education and degree programs among adults seeking to upgrade their earnings potential. It also created a ready market for online courses that did not require people with family obligations and jobs to be hampered by geographic or time limitations in their quest for improvement.

King and Sen rightly emphasize the impact of economic forces, but we need to go much further in understanding the changes in the political economy of higher education. They write that, "The business model of most universities relies primarily on revenue from teaching, with some additional funds from sponsored research and philanthropy." Here, as elsewhere in their article, we need more attention to important variations in the sources and dynamics of financial support for different kinds of institutions, and the different pressures they face with respect to shifts in budget models and funding. The "status quo" business model for public institutions once relied substantially on state funding, of course, and the story of the reduction in that funding, in particular for the public doctoral institutions, is crucial to understand. But also, the political, structural, and market forces, as well as the issue of philanthropy, work very differently for different types of institutions. Other forces that shape the cost structure of universities include the changing demands of students (the dorms of old simply won't do any more; we are seeing a turning of the tide in the attractiveness of revenue-producing masters programs), and the options for covering major costs such as energy and health insurance.

Understanding the business model of colleges and universities and their history also requires paying careful attention to their *business*—what they are in business to do and how that is related both to their chief priorities for expenditure and resource deployment—and the sources of funding they attempt to access, and why those sources of funding may be made more or less available. That is not the same across different kinds of colleges and universities; systematic differences bear investigation. This raises another major point for which social scientists have useful tools and perspectives to bring to bear: the higher education sector as a *system*.

THINKING SYSTEMATICALLY ABOUT THE HIGHER EDUCATION SYSTEM

Gary King and Maya Sen open their essay by making a (welljustified) statement about "the American system of higher education." Here, I would like to underscore that attacking this problem well requires that we seriously analyze American higher education as a system. The nature, challenges, and opportunities of the institutions of that system are far more diverse than our stimulus article implies, and they are linked together in interesting and important ways. Some of the generalizations about these institutions that appear in King and Sen's article mask some of these points, and even the some of the "economic attacks" enumerated in the article must be understood as changes—and certainly challenges—within that system rather than attacks wholly from the outside.

The United States has developed one of the most diversified and complicated systems of higher education in the world, and that system is part of the reason for both the evident comparative successes of American higher education and its challenges. Any few-sentence brief history must be too potted to be useful other than to serve as a reminder that our higher education system is too heterogeneous to be investigated other than as an internally diverse system. From the founding of the original American universities that served white men of a small socioeconomic range to the Jeffersonian Enlightenment idea embedded in the founding of the University of Virginia; through the profound effects of the Morrill Act; the opening of the first community colleges at the turn into the twentieth century, we already see the development of a differentiated set of institutions over a century ago.

The early post-World War II era arguably initiated the really systematic diversification of institutional paths when the Presidential Commission on Higher Education ("The Truman Commission") pushed the ideas of supported *systems* of higher education that would ensure greater access through subsidy in light of the returning veterans (including specific reference to the necessary end to racial, ethnic, and gender discrimination), expansion of two-year community colleges, and of continuing and adult education (The President's Commission on Higher Education for Democracy 1947). Thus was the access agenda, still so challenging today, and the subject of intense political pressure and public outrage, truly born and given institutional forms.

At the same time, as Jonathan Cole has pointed out, Vannevar Bush (1945) was pushing for the partnership of government and universities to advance science, an effort that blossomed with the creation of the National Science Foundation (NSF). The creation of the research university, stimulated and mightily assisted by government-sponsored research, primarily in the basic and applied natural sciences but also parts of the social sciences as well as the arts and humanities, had some effects on the higher education system that are probably not much noted. It likely drove a clearer wedge between two groups of private institutions notable for educating the academically talented members of the elite sectors of society (plus "legacies" for whom elite qualifications were primary), the research institutions (such as the Ivy League, Stanford, Chicago), and the highly ranked liberal arts colleges (such as Williams, Swarthmore, Amherst, and Haverford). For public institutions, it drove a clearer wedge between the "flagship" research institutions, such as the Committee on Institutional Cooperation (CIC) institutions and Berkeley, and the "comprehensive" publics that came to be bound in the same public systems, which also created sibling rivalry and political tension.

The differences and relationships created by the matrix of public and private; research, liberal arts, and comprehensive; and two-year, four-year, and four-plus year institutions must be taken into account to understand the political economy of higher education, even of discrete sectors of this system, and the political and technological challenges. It cannot, for example, be said that, "The goal of most universities has been to educate only the most educationally advantaged students" (King and Sen 2012. this issue). That goal is true only of certain subsectors of our higher education system, and they have long come under attack because of their contrast with those institutions whose mission is based more on access. This is certainly a major source of conflict in many states, where politicians, the public, and the faculty of the state comprehensives resent the apparent wealth of their flagships. The majority of the educated public did not receive their degrees at Association of American Universities (AAU) institutions, or even those in combination with the top-ranked liberal arts colleges.

The lines among these institutions are often blurred. This is certainly true at the flagship public land-grant universities that have significant outreach and continuing education missions. As in the broad field of comparative politics and political systems, however, the point is not just to inventory the variety of cases, but first to develop a useful comparative approach to understanding higher education and second, to understand the different cases as they are linked in systematic ways that affect them all.

Let us consider one of the major challenges to universities that King and Sen highlight—the variety of ways that new information and communication technologies provide fresh opportunities for shaping and institutionalizing teaching and learning. The authors are correct in saying that colleges and universities must make systemic efforts to understand the implications of these technologies for their own practices of teaching and learning and business operations. But it is most unlikely that all types of institutions share goals that will lead

them to shape their technology use in the same way or to respond to the new institutional forms of technology-mediated teaching and learning similarly. It would not be appropriate. The top research and liberal arts institutions, public and private, do not compete with the University of Phoenix, and they will not be competing with massive open online courses (MOOCs) in the near future for their primary undergraduate population (from which they derive revenue) or their PhD programs (from which they derive prestige). For research and liberal arts institutions, the competition is seeking alternative sources of revenue from learners whom they have had little or no interest in serving on campus. They need to enter and be successful in a revenue-producing education business before the market becomes saturated, and alter their business models for executive and other extension education in a more contemporary, competitive manner. They must learn how to develop and use technology mediated teaching and learning systems that will surely be essential everyday features of the top residential colleges and universities some day. Worrying about whether Harvard or Michigan or Stanford or Pomona will lose significant numbers of undergraduates to the University of Phoenix or MOOCs is not a good use of time.

The real shake-up in basic business and education models is more likely to take place in among the public comprehensives (even more than in community colleges) because many of these offer relatively few advantages over online courses, including graduation rates that beat a flip of a coin. Today, about 90% of people aged 18-24 have completed high school, and of those who have, more than 70% of today's high school graduates enroll in an institution of higher education within a year (US Census Bureau, 2012a, US Census Bureau, 2012b). But a large portion of those students do not complete a degree. In the current, hightechnology era, there are solutions that could be workable were politics not a problem: close smaller, less-successful campuses and offer more online education opportunities, perhaps even coordinated by refreshed extension colleges based at universities with the research and technical prowess to develop sophisticated and successful teaching and learning experiences, combined with clustered and mobile student services. But politics is an issue because some state legislator and member of Congress represents the district that is proud of the local college, even if it graduates less than half of its students.

Comparing the graduation rates of different "four-year" institutions to course and degree completion in the primarily online options (whether degrees at University of Phoenix or courses at the MOOCs) suggests that, contrary to King and Sen's observation, it is not necessarily that people are taking these courses and not finishing them because they are entertainment experiences one might drop at any time, but that they lack the characteristics of the best residential universities support completion. The array of advisors, high-touch academic experiences, support services, residential programs, efforts aimed at stimulating engagement and a sense of place and community, the face-to-face interaction with other students (even if they are all simultaneously texting) is an expensive and time-consuming infrastructure without which it is difficult to achieve the highest graduation rates, even with students of excellent academic background.

Community colleges play different roles in the higher education system and probably have a different relationship to the challenges of the new institutional structures of technologymediated education. Whereas comprehensive public institutions aim to graduate students with a four-year degree—and relatively few do graduate even half their students in four years (*Chronicle of Higher Education*, "College Completion"), one central goal of many community colleges is to launch a significant proportion of their students on the path toward a four-year institution and a bachelor's degree. This type of goal requires an excellent advising system.

For-profit institutions are not *external* threats; they are finding their way as a part of the system. Online education is not a special sector; it is a mode that is used to varying degrees by different types of institutions for different reasons. MOOCs are in pilot- and market-testing stages. They will not disappear, but as King and Sen argue, we cannot just ignore them, even if we work in institutions whose targeted students population is not going to decide between our institution and a series of badges.

In the end, astute investigation of the current challenges King and Sen discuss-and others-depends on the development of a rigorous analysis of the higher education system as a system, understanding both the specifics of the different kinds of institutions in comparison with each other, and the empirical significance of the fact that they exist in a system. Of course, I have not even mentioned all the important lines and categories that determine the nature of this system and the categories within it. And, of course, the American higher education system is not an isolated, self-contained entity. As King and Sen's article suggests, we have to consider the nature of the global and international system. This means more than identifying the ways that many universities are filling their seats with international students, especially from China, or looking at the popular locations for attempting to establish international beachheads.

WHAT SHOULD WE DO?

The "we" of this question is a very complicated group of institutions. Political scientists may well have much to contribute in analyzing the American system of higher education and its current challenges.

It is certainly no longer possible for university faculty and administrators to be self-assured in assuming that it is obvious that what we do and how we do it is always worthwhile. It is not self-evidently so. Even after two decades in the growth of accreditation and assessment initiatives, it is not easy to get university communities to regard these as anything but annoying and invasive intrusions. But we must be able to explain why investment in our research is worthwhile, why education is expensive, and what is the value of the different degrees and educational experiences we offer, to whom, and why.

As King and Sen point out, we must keep improving our approaches to teaching and learning. But fortunately, there is significant progress in some of the areas they highlight. Certainly this is the case in the expansion of involving undergraduates in research and other discovery methods of learning, which are approaches that have been becoming increasingly important parts of undergraduate curricular at research universities since the publication of the Boyer Report (Boyer Commission 1998). Given the changing structures of knowledge, information, and communication, it is now even more important for students to have research and discovery experiences to prepare them for their professional futures, and here research universities have the advantage over other higher education institutions, residential and virtual.

The higher education sector expanded for decades. This expansion has included a certain amount of degree inflation. The public is less trusting in all sorts of institutions, including our own. Education is increasingly expensive during a sustained period of economic compression. It is not surprising that if people seeking education simply as a means for credentialing and specific types of job advancement take the option of earning certificates or badges if offered (Carey 2012). But that means that institutions of higher education of all sorts whose mission is to offer more than certificates and badges for discrete accomplishments must go further to make it clear what we do, to demonstrate (not just explain) why that is important, and to show that we are able and willing to use our smarts to get better at it.

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Paying the Piper: Higher Education Financing and Academic Freedom

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he university occupies a peculiar space in democratic societies with market economies. Higher education serves the cause of democracy by fostering a more able and enlightened citizenry and the needs of the economy by producing a more skilled and creative workforce. The university likewise depends on the state and the market for its resources, for the tuitions, the grants, the contracts, the licenses, the royalties, and the gifts that are the lifeblood of every institution of higher learning.

At the same time that the university serves society and draws on its means, the university also declares the right to deliver education and scholarship on the terms determined by the university's scholars and teachers—and only by its scholars and teachers. The content of the curriculum and the mode of its delivery, the agendas for inquiries and the conclusions to be drawn from them, and the standards of evaluation of students and teachers and scholars, the university claims, all should be left to the university itself. It is an audacious assertion relative to the norms of the democratic polity and the capitalist market, but it is not a brazen claim of privilege or a selfish plea for indulgence. Rather, the university can only fulfill its role in society if its members, the faculty and the students, are free to explore ideas, to debate their implications, and to follow the inquiries wherever they may lead. If the resources the university draws from the polity and from the economy are its lifeblood, academic freedom is its oxygen.

And therein lies the tension. The university forever has been in but not of the polity and the market. Its values are not the preferences of the majority or the prejudices of the powerful, or the returns of its investors, or the wants of its customers. Its ideals are the Enlightenment principles of reasoned argument, systematic evidence, and judicious inference. Interference in the process of inquiry threatens the university by bending truth to the needs of power. In asserting academic freedom, that is, the university is not being needlessly provocative. The task of the university is not to bite the hand that feeds it, nor to reject the hand that receives its ministrations. The imperative is to ensure that the hand that supplies it and the hand that receives from it does not also hold its leash—or worse still, its muzzle.¹

PRESSURES ON UNIVERSITY FINANCES, AND ACADEMIC FREEDOM

The financial model of higher education has changed dramatically during the last half century. National and state governments have curtailed their support for higher education and research, but public agencies still rank among the primary patrons of American colleges and universities. Partly out of necessity, and partly responding to the opportunities in the marketplace, colleges and university have raised their prices, taking in more of their resources in tuition from students and their families. Mandated by government and encouraged by industry, they have sought to profit from their research through grants, contracts, and the commercialization of intellectual property. Like all other kinds of eleemosynary institutions, but in the advance guard, colleges and universities have solicited philanthropic support for current activities and enduring priorities.

This new financial environment in higher education has only complicated the protection of academic freedom. While governments have pulled back their financing, for example, they have in no way loosened the strings that are attached to it. Naturally, government agencies are accountable to elected officials, and elected officials to the public, and many of the regulatory demands that governments make on colleges and universities are prima facie reasonable on that basis. The line between accountability to the public and government control, however, is not a bright one. For instance, many social scientists object to the requirements for prior review and approval of research on human subjects, even though they acknowledge the ethical obligations that social scientists owe to participants in their research and even though they recognize that the federal government (which mandates the review) delegates the actual oversight largely to the community of researchers themselves. The concern is that the actual effect of the regulation—if not the actual purpose—is to discourage particular kinds of scholarly research and to steer it away from topics that might be deemed controversial. Even in instances in which government regulations do not venture as near to the conduct of research and teaching, for example in the reporting obligations for government grants or the process requirements in employment, the impact on colleges and universities is substantial. Every institution of higher learning spends more of its money-and the time and the energy of its faculty and staff—on regulatory compliance than it ever did before. The university's continued reliance on government affects the university's priorities. Dollars spent on compliance are dollars diverted from other core activities, like instruction and research. That the reward for compliance is a diminishing share of the operating budget is an aggravation to every academic leader (particularly in public institutions).

The shift toward private support through contracts, licenses, tuition, and philanthropy presents its own challenges to academic freedom. The university faces increasing pressure from government and increasing encouragement from industry to commercialize the products of its research and teaching. As we have recently seen, the financial rewards to colleges and universities that are successful in such "knowledge transfer" are enormous. The concept of ideas made private property and sold in the marketplace, however, runs contrary to the university's traditional commitments to free exchange of ideas among scholars, teachers, and students, within the academy and beyond it. Policymakers have grappled with the issue in setting the rules for patents and copyrights. The university itself has lived for some time with the tension and the internal conflicts it creates, for example between engineers and natural scientists and between faculty in business schools and faculty in liberal arts departments. As pressures escalate, and temptation beckons, many scholars fear that the value of ideas in intellectual exchange will yield precedence to the value of ideas in commercial exchange, both in establishing the priorities of the university and in setting the university's standards for membership.

thropy who might seek to exert influence within the university. Study and inquiry that is truly free often strays outside of social and political bounds. The members of the university, therefore, both the students and the faculty, are wont to read, write, say, and do things that challenge, provoke, upset, or offend others. Whether their purpose is to influence the public debate or not, social scientists and scholars in allied fields like business and law are particularly likely to explore questions in their teaching and research that bear on some of the most important and contentious issues of the day. (Much as we might flatter ourselves, however, we are hardly unique in our ability to generate controversy, as climate scientists, evolutionary biologists, and ethicists will testify.) Presidents, provosts, deans, and department chairs in every college and university are familiar with communications expressing indignation, disappointment, anger, or distress over particular acts of certain students or (more often) specific members of the faculty, some demanding a remedy. In certain cases, the griev-

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The turn to tuition as a larger funding source has stressed another aspect of academic freedom: the prerogative of the faculty to legislate the curriculum and the standards by which the students' performance in it will be judged. The rankings of colleges and universities by U.S. News and World Report and other publications certainly have played their part in convincing students and their families to regard higher education not as a means of self-improvement, self-knowledge, or selffulfillment but as a straightforward consumer purchase. But financial necessity has also spurred colleges and universities to compete more intensively to serve students, both to earn the vital tuition dollars they provide and (for the lucky and relatively few institutions that can be selective) to attract the high-ability students who burnish the reputations that justify the premium prices. On the whole, the increased attention to the quality of the experience that the university gives to students has been much to the good. As many who have children (or grandchildren) in college now (or recently) attest, the university expects more of itself, and instruction is better, academic and career counseling is better, and services are better than a generation or two ago. Whether the education students receive from the university is improved, however, is up for greater debate. The "commodification" of higher education, many critics argue, has made colleges and universities reluctant to demand as much in the curriculum and to expect as much from students in its fulfillment. The commercial principle of consumer satisfaction, they say, has limited the faculty's ability-or sapped its will-to prioritize intellectual merit.

Finally, the new financial formation in higher education has given additional leverage to officers of the public, leaders of commerce, families of students, and contributors to philanances call attention to relationships with the university. In all cases, whether the source makes a connection to the university explicit or not, academic leaders make it their business to find it out. They have a duty to the university to ensure that the students and faculty will be judged solely according to principles of intellectual merit. They also have a responsibility to the university to manage relationships that are important to the university in the present and for the future.

PROTECTING ACADEMIC FREEDOM IN THE NEW FISCAL ENVIRONMENT

Serious as they are, however, the university is not powerless against the challenges to academic freedom in the new world of higher education finance. First, remarkably, the authoritative response to many of the threats to free inquiry is the response that the university itself chooses to give. Governments leave the determination of many of the details of their regulations, such as acceptable practices in ethical human subjects research, to the university and its faculty, that is, to the colleagues and peers of the teachers and researchers. Colleges and universities enter into contracts for knowledge transfer as informed and equal parties, free to accept or refuse or negotiate the conditions offered by commercial collaborators. Even today, students (and their parents) willingly submit to the judgment of teachers, either in deference to ancient custom, out of respect for the teacher's qualifications, or as an investment in the value of their degrees. Finally, many benefactors of higher education are motivated-quite literally—by philanthropy, by love for the university, and by commitment to its mission, and they eagerly accept the guidance of the university's leaders so that the terms of purposes

of their gifts serve the university best. Apart from the polity and the market in its core commitments, the university even today possesses considerable authority and prestige, and so it enjoys a great deal of autonomy. To a significant extent, the university opens itself to pressures that it determines.²

The university's ability to influence the demands made on it is not absolute. Colleges and universities have a great deal of say in their dealings with the institutions and individuals that provide their resources, but governments, businesses, students, and donors are also free to take their resources elsewhere if they do not like what they hear. In extremis, the university has the choice to starve or to suffocate.

Even when the university is not given deference, however, it still has several resources to influence its investors, customers, and patrons toward respect for academic freedom.³

clarity in the expression of principles directs attention upward from the particular to the universal. The provocation in the words or actions of members of the university community, it says, is not specific to this issue or this complainant, and neither is the university's response. By its nature, the intellectual work of the university rouses many grievances, but by adhering to its express principles, the university exercises consistency in its response to complaints, and to the words and actions themselves. (Principles have meaning as principles only if they sometimes force conclusions that we would otherwise not wish to accept.) Indeed, it says, the university does as it does in pursuit of its higher calling, the advancement of knowledge, in service to society. In short, a statement of principles gives an explanation for the university's responsibilities to its stu-

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The first asset is a clear—and clearly articulated—sense of the university's values. As a dean, I counted myself fortunate that the University of Chicago has recourse to statements of principles of decision and action authored by its faculty members. Of several, the most directly relevant to this discussion is the "Report on the University's Role in Political and Social Activism," the product of a 1967 committee led by the distinguished First Amendment scholar Harry Kalven, Jr. The Kalven Report takes as given the likelihood that free inquiry creates controversy. "A university faithful to its mission," it notes, "will provide enduring challenges to social values, policies, practices, and institutions.... In brief, a good university, like Socrates, will be upsetting." The Kalven Committee enjoined the university to "embrace, be hospitable to, and encourage the widest diversity of views within its own community." To do so, the committee argued, the university as an institution must eschew comment of any kind on the great issues of the day, including responses to the utterances and pronouncements of individual students and members of the faculty. The university's role in social activism, it averred, is to be "the home and sponsor of critics" and "not itself the critic."⁴

The value of the Kalven Report is less in its particulars admirable as many, myself included, may find them—than in its simple existence. An open statement of principles like the Kalven Report serves two important purposes in defending academic freedom. For members of the immediate university community, for students, members of the faculty, and academic leaders, it is a reminder of the core values of the academic community. As such, it serves as a guide to action within the university, ruling some courses proper and other courses not. For audiences outside the immediate community, and particularly for individuals and institutions that might be disposed to attach troublesome conditions to financial support, dents and its faculty, to its friends and supporters, and to society at large. And explanations, we know, help make respectful disagreement possible.⁵

A second asset for the university in the protection of academic freedom is a faculty who uses it and defends its use. On one level, the faculty advances academic freedom by taking provocative positions and "forcing" the university to defend its exercise. Although the faculty tends to underestimate the resolve of academic leaders in guarding the prerogatives of scholars and teachers-they do not see the half of it—the university is stronger for the "trouble" its faculty creates. In a negotiation, there is often value in not being able to control the actions of third parties. More important still, the faculty advances academic freedom by using it to follow ideas where they lead, without fear, favor, or preconception. There is no more powerful demonstration of the social value of free inquiry than a scholar who revolutionizes a field by advancing ideas that were unorthodox, unfashionable, unpopular, or even heretical in their time. (There is also no better illustration of the importance of the university's being home and sponsor to critics regardless of point of view. Revolutionary advances begin with heterodoxies, so it is impossible to pick the winners in the marketplace of ideas in advance.) Like it or not, many of the patrons of colleges and universities-particularly government-support higher education because it gets results, for them narrowly, for society broadly, and if it takes a great measure of deference to free the mind to approach problems in productive new ways, then a great measure of deference they will give.

Finally, in the promotion of academic freedom, the university has a tremendous resource in its students and alumni. Higher education is a pathway to wealth, position, and influence in American society, and so the alumni of colleges and universities are well placed to influence government, direct business, and underwrite philanthropy in ways that benefit the university *and* support free inquiry. Many alumni are motivated to want to help the university because they share the university's values. In my experience, even when alumni feel offended by something the university or its faculty or its students has said or done (or not said or not done), they understand the university's defense of academic freedom because they appreciate the importance of free inquiry. Likewise in my experience, even when alumni have their own ideas for their philanthropy, they respond to the university's sense of its needs and priorities because they love the university and they care about its mission.

The facility with which the university navigates the brave new world of higher education finance may turn, then, on its success in the cause of liberal education. An institution that stands apart from the polity and from the market and proclaims the right to operate by its own distinctive values must be thoughtful about the point of crossing between the university and the polity and the market, about its students as they become its alumni. If students experience an education that liberates the mind, that supports them as they jostle with ideas that are stimulating, challenging, perplexing, or merely delightful, then they will also understand the value of free inquiry, because they will see its power in their own lives.

NOTES

- For an indication of the timelessness of the challenges to the university, see Henry Rosovsky, *The University: An Owner's Manual* (New York: W. W. Norton, 1990).
- 2. Cf Raymond A. Bauer, Ithiel de Sola Pool, and Lewis Anthony Dexter, *American Business and Public Policy: The Politics of Foreign Trade* (New York: Atherton Press, 1963).
- Put differently, the university has ways to influence the processes of "partisan mutual adjustment." See Charles E. Lindblom, *The Intelligence of Democracy: Decision Making through Mutual Adjustment* (New York: Free Press, 1965).
- 4. Note the careful use of the plural and the singular. The main point of the Kalven Report is that the university cannot speak in one voice—nor should it. It would not be a university if it did. The Kalven Report is available on the University of Chicago's website at http://www-news.uchicago.edu/releases/o7/pdf/kalverpt.pdf.
- Which is why they are used so often by elected officials. See John W. Kingdon, Congressmen's Voting Decisions (New York: Harper & Row, 1981), and Richard F. Fenno Jr., Home Style: House Members in Their Districts (Boston: Little, Brown, 1978).