

## **Universities Under the Microscope: An Organizational Sociologist Looks at the Future of U.S. Universities**

**By Steven Brint**

The University of California where I teach has been on a roller coaster over the last year. The cratering California state budget has been replaced by an unexpected surplus. Nevertheless, we expect another round of budget reductions to make up for lost revenue during the pandemic year. We have witnessed bitter struggles over the budget allocations across the UC system, with veiled accusations of racism by the poorer against the richer campuses. We have been teaching remotely for over a year and now anticipate returning to the classroom, though with many courses remaining online. The protests following the George Floyd murder have supercharged a social movement, at once demanding reckoning for the racial injustices of the past and, at least in the estimation of some, threatening to politicize knowledge production methods that have served the University well.

The tribulations of the UC system mirror those experienced by higher education institutions across the country. Twenty-one states cut their higher education budgets. Undergraduate enrollments barely held their own, and enrollments at two-year colleges declined by ten percent, continuing a decade-long downward trend. Low-income, first-generation, and under-represented minority students struggled to

stay in college, as family finances faltered and support services suffered.

Meanwhile, new international enrollments plummeted by 43 percent. Jobs for graduates remained scarce, intensifying concerns about the value of college degrees. And Republicans continued to rail against the politicization of the humanities and social sciences, contributing to a surge in legislative efforts to restrict academic freedom.

The ups and downs of the pandemic year can be seen as intensifying longer term trends. For decades, we have read about the crushing weight of student loan debt, the dispiriting erosion of state funding for universities, the seemingly endless expansion of the ranks of adjunct faculty. We know that college graduates in this generation often do not always surpass their parent's standard of living and as many as 40 percent remain underemployed for long periods after graduation. Although access to postsecondary education has improved, racial-ethnic and socioeconomic gaps in graduation rates remain wide. We wonder whether the country's investment in research is sufficient to keep up with the competition from Western Europe and China.

In this article, I will provide a big-picture view, focusing on the environmental forces affecting universities – and I will prescribe an approach that can direct these forces in a way that strengthens rather than further weakens universities.

I will do it by adopting what organizational sociologists call an “open-systems approach.” Use of the term “open systems” is a way of saying that important forces in the environment shape the trajectory of organizations. Sophisticated open systems approaches pay attention also to the way these forces interact with the dominant structures of organizations – in the case of universities think mainly of academic departments -- and with university managers’ perceptions of the best paths forward for their campuses.

In the case of universities, there are potentially dozens of environmental forces to consider. Social scientists have often tried to tie them up in a singular framework, such as “academic capitalism” or “the rise of the market university.” I do not find these formulations to be very helpful. Instead, I will focus on the four largely independent environmental forces that are most decisively shaping U.S. universities. They are: federal patronage, state higher education budgets, technological opportunities, and movements for social inclusion. These multiple

and distinct forces pull higher education institutions in different, sometimes conflicting directions.

### The U.S. Higher Education Landscape

I will begin with a brief overview of the American system of higher education and of colleges and universities as organizations.

The core of American higher education is composed of two price/quality hierarchies -- one public and the other private and non-profit. There are nearly equal numbers of institutions in the two hierarchies, over 1600 in each.

The base of the public hierarchy consists of low-cost two-year community colleges. Next in line are the regional comprehensives. They offer mainly occupational-professional programs, employ professors who focus on teaching rather than research, and recruit primarily from their local regions. Research universities are at the next level. They offer a wide range of curricula, include many programs in graduate education, and employ professors who focus on research as well as teaching. Some two dozen stand out from the rest and are

competitive with the leading private universities. They have familiar names like Berkeley, UCLA, and Michigan.

Private institutions are more expensive than public institutions and therefore recruit more often from higher income strata. At the bottom of this hierarchy are minimally selective, often religiously affiliated baccalaureate-granting institutions, typically of small size. These are followed by master's granting and doctoral-granting institutions of middling status. Next are a few dozen highly selective liberal arts colleges with large endowments and few or no graduate programs. At the pinnacle are approximately 20 highly selective private research universities, with billion-dollar-plus endowments and prestigious, highly productive, and well-paid faculty. These include the most familiar names of all: Harvard, Princeton, Stanford, and Yale among them.

A typical large research university has as many as ten to 15 major academic units, such as colleges of arts and sciences and schools of engineering. Each of these units houses a number of academic departments. Faculties are organized through academic departments and departments are therefore the most important educational units in the university. Research is organized through labs and centers, with most large research universities operating 100 or more interdisciplinary

research centers. Administrative staff now outnumber the faculty. They attend to internal organizational functions such as accounting, admissions, human resources, security, and student clubs. They also attend to outward facing functions such as alumni, donor, government, and industry relations.

Other types of colleges and universities are organized similarly but with fewer academic units, weaker research infrastructures, and more limited administrative functions.

#### Four Powerful Environmental Forces

From an open-systems perspective, there are dozens of environmental forces that can matter for higher education institutions. Social scientists have often tried to tie them up in a singular framework, such as “academic capitalism” or “the rise of the market university.” I do not find these formulations to be very helpful. Instead, I will focus on the four largely independent environmental forces that I have highlighted in previous work as instrumental in shaping the trajectory of U.S. universities. They are: federal patronage, state higher education budgets, technological opportunities, and movements for social inclusion. Given the shaping power of these environmental forces over four decades, I anticipate that their influence will continue to be highly consequential.

By federal patronage, I mean the financial resources the federal government allocates to colleges and universities in the service of budgeted public policy objectives. Federal patronage is decisive for academic research and financial aid. Research expenditures from federal sources stand at about \$33 billion in 2018 dollars and financial aid expenditures approximately \$60 billion, if one counts a reasonable estimate of loan defaults. Figure 1 shows the still-predominant role of federal funding of university research relative to states and localities, private industry, non-profits, and university self-support.

In research, federal patronage has been a primary source for the extraordinary productivity of academic scientists and engineers who have published more than 10 million papers over the last three decades in high-quality journals, according to the Web of Science. These include breakthrough discoveries in genetic engineering, quantum computing, renewable energy, cancer treatments and many other areas that have improved the quality (and quantity) of life. Facilitated by larger scientific teams and broader access to data and materials, publications and citations more than doubled between 1980 and 2010 alone, according to research I conducted with Cynthia Carr, with remarkable gains in virtually every one of the top 185 research universities.

[Insert Figure 1 Here]

Following four decades of similar actions, both the House and the Senate have recently passed bipartisan bills that would provide tens of billions of dollars in funding for the federal science agencies. The House bill provides greater autonomy for the science agencies to make investments, while the Senate bill is more prescriptive and more strongly focused on competition with China. Both the Senate and the House have targeted spending on emerging technologies such as artificial intelligence and advanced computing. Given international competition, it is likely that applied science will continue to grow more important and that rivalries with China will loom large in budget allocations. The U.S. academic research enterprise remains strong, though it is not as dominant as it once was.

Figure 2 shows the still-predominant role of federal grants, loans, and tax benefits as sources of student financial aid. Although it provides billions of dollars in student support, the financial aid system is faltering and will require repair if the country wishes to maintain current or higher levels of access. Many students think that they cannot afford to attend college – and others are burdened by loan repayments that come due early in their post-college careers when their incomes are lowest and least stable. Lower-income students have been priced out of public research universities in many states, according to Educational Trust studies. The



decade-long decline in community college enrollments indicates that those who are least able to afford higher education are opting out in larger numbers.

[Insert Figure 2 Here]

State investments in public higher education systems, the second environmental force, have been unstable since the 1970s, falling during recession periods and rising during periods of prosperity but rarely reaching previous levels of support. Together with cost increases, these declining investments have been the major contributor to tuition hikes. State investments continued on a downward trajectory during the pandemic year – with declines in nearly half of the states and flat budgets in most of the others. Budgetary constraints in public universities will continue to encourage a focus on marketable fields, lean staffing, very large enrollments in high-demand majors, and the employment of ever-higher proportions of expendable teaching labor. The quality of undergraduate education will consequently continue to suffer.

By contrast, there are reasons to be hopeful about the role of technology, the third environmental force. Researchers such as the policy analyst Michael Gibbons and the sociologist Brian Uzzi have shown that the size of scientific teams has grown dramatically over half a century, and they have attributed much of this change to reliance on the ease of communication and the computing power that digital

technologies allow. Digital technologies will continue to facilitate the output of university researchers while creating new opportunities for collaboration. They may also open new possibilities for improved undergraduate teaching through advances in adaptive learning systems, which provide feedback to students on their areas of weakness and are more patient than humans in explaining how to make improvements.

At the same time, technology-mediated remote learning has proven to be no substitute for the on-campus experience, at least not for traditional college-age students. The evidence from the first pandemic year suggests that most students find online classes lonely and alienating. Lower-division students, especially men, under-represented minorities, and students with low GPAs continue to fare poorly in the online environment. Students also miss campus clubs and organizations, which they deem “very important” to their experience of college, according to research my team has conducted.

The drive for social inclusion, the fourth environmental force, has brought a bounty of new talent and ambition into the university, and it has contributed, albeit modestly, to reducing the inequalities that have plagued American society for a half century. It has broadened academics’ research scope to encompass previously

neglected populations and regions of the world. At the same time, the drive for social inclusion is the backdrop to intensifying political struggles that divide social-justice advocates from faculty whose research does not touch on race or gender inequalities. During the last year, it is likely that no academic discipline has escaped the accusation of serving as an instrument of white supremacy.

### Mediating Structures and Strategies

As I have indicated, environmental forces do not simply reshape institutions in their image. Pre-existing institutional strengths and vulnerabilities influence the capacity of colleges and universities to steer their own directions in a relatively autonomous way. Institutions with the advantages of financial strength, higher selectivity, increasing enrollments, and a wide range of curricular offerings have greater independence from environmental forces and tend to fare better in competitive and turbulent environments.

In addition, environmental forces are filtered through the departmental structures that organize so much of academic life and through administrators' perceptions of the opportunities and incentives in their environments. As long as academic departments control hiring and curriculum, they will have great influence over which subfields are supported, the extent of the shift toward applied research, how

technology is adopted, and how the tensions between social movement activists and traditional scholars are resolved.

Here are a few examples of the variability we can expect: The sciences and engineering are responsive to federal R&D priorities, of course, but tensions continue to exist between a federal government increasingly interested in technological innovation and the traditional role of the university as the fount of basic research. The transformation of the sciences in applied directions is consequently slowed by the recognition that no other institutions have the time horizons that allow for the pursuit of basic research and by the investments of faculty in basic research topics. This recognition is behind the commitment of many scientists and engineers to curiosity-driven science.

Meanwhile, the arts, humanities, and social sciences are becoming more heavily influenced by power-centered epistemologies and specializations related to diversity, equity, and inclusion. The new epistemologies began to enter the American academy in the late 1970s, challenging the conventional notion that scholarship could be dispassionate and evidence-based. Beginning in the 1990s, researchers demonstrated the faster growth trajectory of humanities and social science fields that engaged with the experiences of women, minorities, and non-

western populations. The two movements are now frequently linked, and we have seen over the last few years a significant rise in conflicts between scholar-activists and those whose work is in specializations not closely related to social-justice concerns. Accommodation has been the norm, but accommodation is less likely in steady-state or contracting fields like many of those in the arts, humanities, and interpretive social sciences. It is here where the struggles are intense or have been won already by scholar-activists.

The incentives in the system, as they are understood by university administrators, also matter. A fundamental difference exists between the client-centered incentives of struggling colleges and universities and the knowledge production incentives of the three dozen or so leading universities. It is much easier to focus on knowledge production when resources and reputations are at elevated levels. The vitality of the sector may depend on how the managers of research universities in the middle balance client-serving and knowledge production interests. The common approach has been to expand undergraduate enrollments built along client-centered lines to subsidize faculty knowledge production. But bottom-line considerations can put knowledge production at risk and these considerations are more common where revenues are flat or falling. It is here that concerns for revenue production take hold and graduate education often suffers in the bargain.

Beyond this fundamental divide, we can expect that some universities will focus on each one of the environmental forces I have highlighted. Senior administrators understand that they cannot all compete equally for academic eminence. They will therefore innovate by trying to be a leader in a new kind of hierarchy. There will be universities scrambling for leadership in interdisciplinary activities (as pioneered by Duke University in 1980s), those trying to top the list of entrepreneurial universities (Northeastern University is an interesting example), technologically-enabled universities (Carnegie-Mellon is a leader here), and broad access, social-justice oriented universities (such as the University of California-Merced).

And indeed a few will attempt to incorporate all of the leading trends into ambitious new visions of the future. These new designs focus on committing universities to economic development and the solution of social problems through much more active interdisciplinary collaborations, enterprise models of external relationships, and vastly expanded access, typically through massive online “campuses.” We see efforts to promote this model, most notably, at Arizona State University which fashions itself as the leader of the next wave of university development.

## Better Paths Are Possible

These are the predictions an organizational sociologist can make based on open-systems theorizing. Likely paths, however, are not necessarily desirable paths. I will therefore close with a brief overview of what desirable paths of development would look like for our troubled research universities.

Two regions stand out as centers of basic science and scholarship linked to vibrant “high-tech”-oriented economic development: Boston-Cambridge and the San Francisco Bay Area. These geographical centers of knowledge production and venture capital are vital to the future competitive position of the United States. As fuel for a still higher level of competitiveness, the country will need to nurture at least two or three more “mega-university complexes” on the order of these two. Leading candidate sites include the Atlanta region, greater Los Angeles, New York City, and the Research Triangle in North Carolina. The country also needs to build capacity in the middle range of universities above the top 100 and below the top three dozen to shore up knowledge production. These universities are suspended between resource uncertainties that encourage a focus on expanding undergraduate enrollments and the demands of their regions and states for highly trained professionals, economically-relevant research and scholarship, and solutions to social and environmental problems.

Desirable reforms to financial aid would include the doubling of amounts awarded in Pell Grants and a comprehensive implementation of income-contingent loan repayment so that students can pay back loans when they are better able than at the beginning of their careers. These approaches are superior to the alternatives that have been proposed in “free-college” and loan forgiveness plans. The latter tend to provide more benefits for those who are capable of paying for college rather than for those who are struggling to do so.

This path would also lead to focused attention on the improvement of undergraduate education, the weakest part of the current structure of universities, including the shift of many contingent instructors to permanent teaching faculty lines based on the criterion of excellence in the classroom. It would also include the adoption of alternative forms of teaching evaluation using what we have learned from cognitive science to replace the largely invalid approaches currently used by universities. Remote education would continue to play an auxiliary rather than a leading role; for undergraduates fully online degrees would be priced to reflect their lesser value relative to the on-campus experience.



Finally, instead of continuously shifting resources toward technical fields while starving other disciplines, university administrators should think again of the arts, humanities, and social sciences as more than instruments to accommodate current political agendas. We need to put them back into the business of illuminating the wide world of complex texts, pivotal events, and evolving social patterns while at the same time continuing to engage the cultural and social lives of marginalized communities.

These steps would put universities on a stronger trajectory for the future. They are consistent with the open-systems approach because they do not deny the influence of environmental forces, but they direct these forces along the tracks of value-rational practices that enhance rather than compromise higher education's capacity for continuing contributions.

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