The Emergence of the Fifth Wave

he increasing selectivity of the top private research universities and liberal arts colleges in the United States no longer surprises anyone. Harvard, Stanford, and the rest compete on the basis of this selectivity, proudly announcing to the world that they accept a mere 4% or 5% of applicants each year. Their top positions in the US News & World Report rankings are in part a reward for this selectivity. And despite growing enrollment demand, the leading public research universities are becoming more and more selective as well. Although some selective schools go to great lengths to recruit socioeconomically disadvantaged students, the fact remains that the scale of such efforts is negligible and admission to these elite institutions is most strongly predicted by students' socioeconomic status-as captured by zip

code—than by any assessment of their future potential.

What does it say about today's society that it celebrates the increasingly restricted access to the essential public good of excellence in higher education? We believe that society is not made stronger by a system of higher education whose de facto concern is to connect the students most likely to succeed to schools that boast the most resources while relegating other capable and creative students to second-order educations. A system that rewards only a few fails to animate hope in meaningful societal progress. Alternatively, we view higher

in American Higher Education

America's future depends on embracing the idea that excellence and access in higher education are not incompatible, but synergistic. education as an abundant system. Like languages or open information systems, higher education becomes more valuable for individuals and society when it is widely adopted. An abundant systems perspective calls for high-quality undergraduate education to be available to anyone qualified to access it. The impact of implementing such a goal at a national scale would be transformational and empowering across society.

More than mere access

If individuals are to succeed in an era when knowledge correlates with prosperity and well-being—and if the United States is to retain its leadership and competitiveness in the globalized knowledge economy—millions more people will need access to learning environments that integrate

comprehensive liberal arts curricula with the cutting-edge of new knowledge and research techniques essential to the postindustrial workforce. The demands of both equity and prosperity argue that society needs to expand its capacity to produce millions of additional graduates during the next several decades. As the economist and former Princeton president William G. Bowen and colleagues recognized in their acclaimed 2005 book, *Equity and Excellence in American Higher Education*, "Society at large can build the educational scale that it requires only if its institutions of higher education tap every pool of talent."

We agree. But the conversation about equality and opportunity in American higher education must not focus simply on the production of more college graduates. Mere access to standardized forms of instruction will not deliver desired societal outcomes. Nor is narrowly focused vocational or technical education sufficient to prepare graduates for the challenges and complexities of the decades ahead. The model of higher education that we advocate in our new book, The Fifth Wave: The Evolution of American Higher Education (Johns Hopkins University Press, 2020), insists that excellence and accessibility in college education are not only compatible, they are synergistic. The point should be obvious: by excluding huge proportions of the population, the nation excludes the experience, ideas, intelligence, and ambitions of those millions. Equity and excellence are complementary because talent is distributed throughout the socioeconomic spectrum; national competitiveness in educational attainment depends on extending opportunities to sufficient numbers from all demographic strata; diversity enhances the quality of the educational experience; and the success of the nation's democracy depends on an educated citizenry.

Our argument goes further still. Granting increasingly exclusive status to the privileged few guarantees that the interests and agendas of elite universities will drift farther from the needs of most citizens. To strengthen the public purpose of higher education, it will be necessary to leverage the synergies between access and excellence, thereby empowering the nation's research-grade universities to advance discovery and innovation that contribute to broadly distributed prosperity and societal well-being.

The evolutionary perspective we lay out in the book identifies highly selective research universities as the Fourth Wave, which helped to deliver enormous prosperity to the nation during the twentieth century but did not attend to the distributional implications of its own assumptions. The Fifth Wave calls for a subset of large-scale public research universities to spearhead a transformation in American higher education that negotiates the tensions between broad accessibility and academic excellence. We envision the emergence of a league of colleges and universities unified in their resolve to accelerate positive social outcomes through the integration of world-class knowledge production and cutting-edge technological innovation with access by the broadest possible representation of the socioeconomic and intellectual diversity of the nation. This will require pursuing innovation in teaching and research, including the creative use of learning technologies and, in many cases, cooperation rather than competition among colleges and universities, as well as seeking out institutional partners from business and industry, government agencies and laboratories, and organizations in civil society.

Whose excellence?

Whether or not one subscribes to the notion that the quest for excellence inherently and inevitably reduces accessibility to higher education for large numbers of underrepresented students, it remains true, as one of our colleagues, the sociologist Craig Calhoun, has found, that the pursuit of excellence as it is commonly understood by academic culture has compelled institutions to "invest in a competition that has become an end in itself." As a consequence, he observes, "Universities are becoming much more unequal at the same time that higher education and research are being organized, funded, and marketed in more integrated ways and on larger scales—nationally, regionally, and globally."

The very concept of excellence, moreover, is fraught with connotations that reflect societal values in transition. As Calhoun points out, what was once a robust (if rarefied) estimation of merit has degenerated into facile and irrelevant hierarchical rankings that do not accurately reflect any aspect of academic quality. The resulting hierarchies exaggerate the excellence of a few elite institutions that educate a relatively small number of generally affluent students. The distortion is especially pernicious because rankings related to excellence reward the exclusion of worthy but disadvantaged applicants.

It was not always thus. During the first three-quarters of the twentieth century, public higher education in the United States produced world-leading levels of educational attainment and served for countless millions as a springboard to intergenerational socioeconomic mobility, the economists Claudia Goldin and Lawrence Katz have shown. Sciencebased technological innovation on the nation's campuses in the decades following World War II meanwhile spurred innovation in products, processes, and ideas. But too much self-congratulation seemingly blinded society to the fact that the United States had no real economic competitors in the early years of the Cold War, and a vibrant manufacturing sector helped to translate economic growth into an increasingly widely shared prosperity built on rapidly rising productivity. Starting in the 1970s and '80s, corresponding to the rise of formidable economic competitors and a political turn toward opening up global markets, wealth disparities in the United States began to widen. Private universities began to experience runaway tuition inflation, and state governments began a gradual process of disinvestment in public universities, a process that accelerated following the Great Recession of 2008. These trends exacerbated the mismatch between enrollment demand and the limited supply of places available in the nation's leading universities. As a result, many of the students who would most benefit from this most obvious avenue of upward mobilitythose typically categorized as socioeconomically disadvantaged or historically underrepresented-cannot gain admission to research-grade universities, even as deindustrialization and other structural features of the economy contribute to ever greater economic inequity.

Beyond the boutique strategy

The intent to enroll in college is nearly universal among the roughly 3.5 million American high school seniors who graduate each spring, observes Oren Cass, a senior fellow at the Manhattan Institute for Policy Research. But the trajectories of recent cohorts diverge starkly according to a predictable pattern. Cass estimates that one-fifth of the seniors will fail to receive a high school diploma; onefifth will pursue no further formal schooling; one-fifth will enroll in college but fail to graduate; one-fifth will complete some level of college but subsequently enter the workforce in a position that does not require a degree; and only one-fifth will eventually graduate and find suitable employment. Nearly half of all students who begin college never graduate, according to US Department of Education figures from 2015, and many of those acquire significant student loan debt in the process. Although roughly onethird of Americans hold a four-year degree, outcomes for graduates are often subpar and vary drastically according to institutional types. Completion of a bachelor's degreegraduation as opposed to enrollment and attendancemay demonstrably be the "single most important indicator of educational attainment," as Bowen and colleagues point out, yet all bachelor's degrees are not equivalent. As David Brooks of the New York Times remarked of American higher education, "We build a broken system and then ask people to try to fit into the system instead of tailoring a system around people's actual needs."

The tension between broad accessibility and academic excellence lies at the crux of a dilemma that confronts policy-makers and educators worldwide. The same nexus of socioeconomic, cultural, and demographic determinants that demands the emergence of the Fifth Wave in the United States has brought reform efforts in higher education to the forefront of policy discussions throughout the world. Such initiatives are almost always bifurcated along familiar lines—seeking primarily either to expand access to greater proportions of the citizenry, or else to advance research output and knowledge production. If the latter, then efforts generally emulate the structures and operations of the elite American research universities. In China and Russia, for example, state-sponsored quality assurance and academic excellence initiatives aim primarily at the formation of sets of globally competitive research universities designed to bolster innovation and economic development, which have been characterized as the Chinese and Russian Ivy Leagues. Université Paris-Saclay, under development in France since 2008, comprises a complex of 19 autonomous institutions intended to outperform other top clusters-most notably Stanford University and Silicon Valley in California, and Harvard University, the Massachusetts Institute of Technology, and the collective innovation ecosystem in Boston.

But as nations worldwide invest strategically to educate broader segments of their citizenry for the knowledge economy, America has outgrown its existing research-grade academic infrastructure. The mismatch between enrollment capacity and demand among highly selective research institutions amounts to what might be termed "boutique" or "artisanal" production strategies, reminiscent of the preindustrial era. In the transition to the Fifth Wave, institutional designers must transcend the limitations of universities that evolved to meet the needs of the nation during a time of unquestioned global economic and cultural dominance coupled to robust domestic social mobility. Research universities have expanded readily enough in terms of scope—the accumulation of functions leading to what the University of California president Clark Kerr characterized a half century ago as the "multiversity"-but paradoxically remain antagonistic both to reorganizing academic frameworks and adjusting scalability to cope with changing enrollment demand. Administrative frameworks, research, and teaching are still largely configured along disciplinary lines that resist innovation. Inasmuch as access to knowledge underpins the societal objectives of a pluralistic democracy, scalability and thus accessibility must be at the core of evolving institutional models.

Although Fourth Wave public research universities continue to make remarkable, even transformative, contributions to society, they appear unable to scale up in response to the demand for their services, and their responses to rapid changes in technology and demographics, as well as problems in the financing of higher education, continue to push costs and tuition skyward. Given their continued success in attracting the top tier of conventionally assessed students and faculty, not to mention research and endowment support, they have strong incentives to protect their institutional model and brand. They are best regarded as exactly what they are: the rarified elite, exemplars of a glorious past, still contributing to society in inestimably important ways but seemingly limited in their capacity to offer the necessary pathway for a successful national future.

Coming soon to a university near you

If the Fifth Wave model insists that broad accessibility and academic excellence are complementary and synergistic, this claim is no longer merely rhetorical or conjectural. During the past two decades, Arizona State University has undertaken a comprehensive reconceptualization that has produced an institution with sufficient scope and scale to offer broad student accessibility to an academic setting that offers world-class research focused on societal outcomes. The result can be likened to coupling within a single institution the research excellence of the University of California system with the accessibility offered by the California State University system, informed by the social embeddedness of the nation's land-grant universities.

Whereas ASU has sought to provide a prototype of the Fifth Wave university, potential institutional peers in transition to the Fifth Wave would include Purdue University, Penn State University, and the University System of Maryland. As well, the University Innovation Alliance, a coalition of 11 major public research universities, was established in September 2014 to advance goals consistent with the Fifth Wave model. The alliance endeavors to promote educational attainment, and especially to advance rates of graduation among historically underrepresented and socioeconomically disadvantaged students.

Educating students who graduate in the top 5% or 10% of their high school classes is business as usual at most leading colleges and universities. The Fifth Wave aims to educate to internationally competitive levels of achievement the top quarter or third of all 18- to 24-yearolds, and through universal learning frameworks to provide opportunities for lifelong learning to more than half the population of the United States. Frameworks for universal learning will permit individuals, regardless of their socioeconomic status or life situation, to gain the knowledge and skills to thrive and be empowered to freely shape their own intellectual development and creative and professional pursuits.

Fifth Wave universities thus seek to serve any learner from any socioeconomic background at any stage of work and learning through broad accessibility to worldclass knowledge production. Such radical access will be essential to respond to the needs of a workforce destabilized by increasing automation and the rise of the gig economy, and the frequent upskilling and reskilling that such changes require. Connecting the workforce to lifelong learning opportunities will moreover require the design of large-scale partnerships between universities and workplaces that build on the recognition that access to education is a social imperative to national success.

Any assessment of the present moment cannot overlook the rancor and polarization that have defined American politics, nor the animosity directed at academic culture. Accounts of disruption, dysfunction, and demise in American higher education abound. Skyrocketing tuition and student debt grab headlines while screeds decrying liberal bias in the academy reinforce skepticism toward what a growing number of critics frame as a dubious enterprise. Contempt for expertise and professional standards threatens to render democracy dysfunctional. One need not embrace a naïve or simplistic view of the idea of "truth" to recognize that reason itself has been under assault and science under siege. Both policy-makers and the general public are increasingly skeptical of the presumption that higher education serves the public interest. Hence any coordinated effort to expand a subset of public research universities to integrate accessibility and academic excellence places the burden of responsibility on institutions and stakeholders.

Absent the effort to realize new models for higher education, however, America will eventually have to confront the consequences of the inevitable decline of one of its most essential assets, and along with it, the nation's prosperity, well-being, and position of leadership on the world stage. As the political scientist Suzanne Mettler put the implications: "We are squandering one of our finest accomplishments and historic legacies, a system of higher education that was long characterized by excellence and wide accessibility to what seemed to be an ever wider and more diverse group of citizens." The emergence of the Fifth Wave, or something like it, will be necessary to reinvent this legacy and extend its accomplishments into the uncertain world that the nation's existing academic culture helped to create.

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Recommended reading

- William G. Bowen, Martin A. Kurzweil, and Eugene M. Tobin, *Equity and Excellence in American Higher Education* (Charlottesville, VA: University of Virginia Press, 2005).
- Craig Calhoun, "The University and the Public Good," *Thesis Eleven* 84 (February 2006): 7–43.
- Oren Cass, *The Once and Future Worker: A Vision for the Renewal of Work in America* (New York, NY: Encounter Books, 2018).
- Charles T. Clotfelter, *Unequal Colleges in the Age of Disparity* (Cambridge, MA: Harvard University Press, 2017).
- Michael M. Crow and William B. Dabars, *Designing the New American University* (Baltimore, MD: Johns Hopkins University Press, 2015).
- Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology* (Cambridge, MA: Belknap Press of Harvard University Press, 2008).
- Suzanne Mettler, *Degrees of Inequality: How the Politics of Higher Education Sabotaged the American Dream* (New York, NY: Basic Books, 2014).
- Christopher Newfield, *The Great Mistake: How We Wrecked Public Universities and How We Can Fix Them* (Baltimore, MD: Johns Hopkins University Press, 2016).