8 THE FUTURE OF LEARNING

The Red House is exactly what its name suggests, but don’t let the humble frame edifice fool you. Inside, a revolution is brewing. “The Red House may just be the most valuable piece of real estate in higher education,” insists Dr. John (Jack) DeGioia, president of Georgetown University.

The epicenter of change at Georgetown and well beyond, The Red House is where students, faculty, and administrators gather to plot what comes next for higher education. No idea is too big, none is too small, and nothing that happens at The Red House stays at The Red House. When The Red House tries something that works, they let the world know so the rest of us can try it out and improve upon it. In partnership with Arizona State University, Georgetown hosts a leadership conference each year. In blogs, articles, and books, proponents of the new education network ideas, exchange success and failure stories, and plot what to tackle next.

I pause outside the gate, unsure whether I’m at the right place. Except for the color, this could be any ordinary dwelling. It’s perched at the edge of campus, where gown meets town, at a remove from
the austere Gothic spires of Healy Hall, the National Historic Monu-
ment that marks the main entrance to the nation’s oldest Catholic uni-
versity. “Come in!” a student beckons, opening the gate. He’s one of
two students living in The Red House this year, serving as a “stu-
dent leader.” Another eight student leaders are on the payroll and work
as peer mentors and connectors with students, faculty, community
members, and advisers. It’s a network model, with The Red House as
a central node, spreading outward from this core to events, lecture se-
ries, projects, programs, courses, studios, internships, initiatives, chal-
lenges, competitions, and myriad cocurricular activities connecting
ideas originating in this modest frame house with nearly every part of
campus, to the District of Columbia, and beyond to the larger world.

I feel the buzz the minute I step inside. Half a dozen students,
staff, and faculty invite me to have a seat at a large square table that
occupies much of the first floor. Everywhere around us are mind
maps, white boards covered with arrows and circles and boxes, and
multicolored sticky notes with words like iterate and remix and re-
bundle. Over the mantel, a large sign urges: Yes, a University Can
Reinvent Itself! Nearby, pinned to the wall, a T-shirt enjoins: Create
the Future.

Professor Randall (Randy) Bass, vice provost for education, pre-
sides over The Red House with the physical grace one associates
with an athletic coach. In a fashionably wrinkled white shirt open an
extra button and a neatly trimmed beard and silver earring, his man-
ner is friendly and laid-back. His job is to ask, “What if?” What if the
teaching and curricular structures of the university were not chained
to credit hours, semesters, academic calendars? What if a schedule
could be as flexible as the subject matter? What if students could
gain certification in part or all of a field of study based on compe-
tency, not test scores or coursework? What if some courses or majors
were blended with mentored, immersive learning experiences and
independent or collaborative projects, including internships? What
if in four years of school students could work on a BA and an MA at
the same time, through a combination of online learning, self-paced
learning, traditional coursework, and experiential learning?
Each and every “what if?” questions the status quo of the modern university. For every aspect of higher education, Bass wants us to ask whether it is useful, important, and supportive of students’ future choices—or simply a legacy of a university designed for social exigencies that have since changed. “What forms of higher education are possible now?” he asks rhetorically, then revises his question: “What forms of higher education are only possible now?” By demanding that we think in the “now,” he moves from an abstract vision of how things might be to an action plan.

Radical leadership of higher education change is not what one normally associates with a 225-year-old Jesuit institution known for training some of the most influential Beltway minds. President DeGioia is an unlikely hero of new ideas, exactly the opposite of the corporate tech honchos who proclaim the end of college and insist we need to give away our beloved alma maters to the highest bidders promising disruption. Disrupt for what purpose, to what end, for whose profit? Jack DeGioia is the consummate insider. With a BA and a PhD in philosophy from Georgetown, he spent his entire teaching career at Georgetown before moving into administration and becoming the university’s forty-eighth president. He is the first non-Jesuit to assume the office and is the longest-serving president in the university’s history.

A latter-day Charles Eliot, Jack DeGioia wants the university he loves to lead a much larger transformation of colleges and universities across the country. He directs, among other initiatives, the Forum for the Future of Higher Education. “We’re not striving to merely keep up with the changes that are happening around us,” President DeGioia insists. “We want to define that change, continue to lead, and make each new class of students the best they can be.”

“Rebundling” is an important concept at The Red House. The term takes on the “unbundling” movement that started in several think tanks and has been influential with state legislators justifying their cutbacks to public higher education. The American Enterprise Institute, for example, has distributed a white paper arguing that students should not be going to expensive colleges but, rather,
should acquire skills training from online colleges that don't come "bundled" with the "frills" of brick-and-mortar campuses. Educational technology, they argue, can turn your alma mater into a purveyor of online courses, created by centralized high-tech for-profit companies that offer certification and credentials removed from all the expensive, energy-draining "ideology" of college. To modernize, the unbundling argument goes, we should get rid of everything from the research mission to athletics, from the philosophy and anthropology departments to the PhD programs, from advisers to a general liberal arts education.

The Red House philosophy opposes unbundling at nearly every turn. The Red House "rebundles." Its goal is to keep what is great about a modern research university while shedding the inherited features and practices that make it difficult to prepare students for their futures. Research experiences are put at the very core of learning and teaching because a directed, guided research project—pursued alone or as part of a team—is the best way for students to learn how to define and explore a topic, sift through available data, determine what is or is not credible information (from misleading statistics to "fake news"), analyze it, and then reshape what currently exists into something original and informed that contributes to the current state of knowledge. In the contemporary world, research is a survival skill.

US universities now contribute over 50 percent of the nation's total basic research across fields, from philosophy to astrophysics. Rather than disavow this core feature of the intellectual enterprise, one that has been at the heart of the university's purpose since Eliot's day, The Red House emphasizes research even more, making it a key part of student-centered learning. As a skill, research demands that you find a path where there is no road map; it is both an analytical process and a process of discovery. It requires rigor, tenacity, originality, and confidence.

Three other principles animate The Red House's quest for innovation. The first is that radical, successful change has to be embraced by those inside, not outside, the institution and those who
are most dedicated to the mission of preparing students, not those finding ways to profit from them. Second, technology alone cannot be a solution to education’s problems. You can spend a whole day at The Red House without hearing the word itself, even though it’s hard to think of any educational technology that Bass, whose previous position was heading one of the university’s technology programs, hasn’t pioneered, evaluated, and integrated into the fabric of Georgetown’s teaching and learning. He knows that technology is everywhere, like the air we breathe. The purpose of The Red House is to redesign higher education, which means using the best technology relevant to the goals at hand. And it means understanding fully its limitations and liabilities.

The third principle, and the one perhaps most contrary to expectation, is that elite universities like Georgetown must partner with institutions with different demographics and traditions. This isn’t noblesse oblige but a necessity if the goal is to educate students for life after graduation. Georgetown’s partnerships with Arizona State and LaGuardia Community College, two underfunded and yet progressive and innovative institutions, mean that everyone gains a different perspective on what is or isn’t possible and within what limits. The world beyond college is more complex and diverse than our elite forms of higher education can be. You simply miss vital parts of an education if you learn for four years amid students from elite backgrounds at an elite university trained by elite professors. The world you find in such a setting is not a simulacrum of the real one beyond campus. That is also true, in a different way, for students at a regional public university or a community college, who are often remote from sources of power and affluence. Partnerships work in all directions, enabling those from varied backgrounds and institutions to see horizons that they wouldn’t otherwise know were there.

One the central concerns of Randy Bass and his colleagues is automation. According to the World Economic Forum, 7.1 million more human jobs will be automated by 2020. What will that mean for the job market—and for the jobs humans will still be doing? One answer that The Red House proposes is that higher education move
away from its legacy definitions of what constitutes a “field” and what counts as mastery or excellence in a specialized, traditional discipline (say, English or biology). Instead, institutions should foster deep, integrated learning, synthesis, and analysis across the borders of disciplines, including by cultivating the difficult and increasingly necessary skill of collaborating with those whose expertise and cultural background may be radically different from one's own. These human skills are vital and necessary, especially in a world powered by robots, where possibilities for misunderstanding can multiply.

Take, for example, a recent focus at The Red House in a project called “Principles and Challenges of Childhood and Society.” To understand such a vast subject requires more than just taking a course in a particular department. It requires getting rid of the one-size-fits-all fixed idea of a course—3 credits, 15 weeks, 3 hour-long class sessions a week. It requires learning across the campus in just about every field, and then going beyond the campus’s borders. To understand the scary parts of childhood (hunger, school violence, educational insecurity, cyber-bullying, and developmental disabilities) as well as the rich possibilities (play, imagination, learning, and creativity), the “classroom” must expand to include every department and professional school, plus K–12 schools, policy think tanks, archives and data repositories, community organizations, video games, and playgrounds.

“Students regularly report being transformed by these learning contexts where they learn that both creativity and critical thinking are key to problem solving,” Prof Bass tells me. “They develop capacities for collaboration, empathy, resilience, working on unscripted problems and in conditions of uncertainty. They become comfortable with taking risks as a condition for innovation. Many report that these courses were among their only opportunities to truly own the problem they were working on, and to do so over a sustained period of time.”

The Red House’s rebundling is the antithesis of narrow, vocational skills training. So we have to ask: Does it outfit students for
vocation? Put bluntly: Do students who've been through The Red House get jobs?

Absolutely. Graduates have been remarkably successful not only at finding jobs but also at finding the particular jobs they dream of. They've gone on to a wide variety of careers in fields such as counseling, nutrition, policy, legal aid, nonprofit start-ups, and for-profit technology companies. They're working in government, education, and research labs. Some are continuing their education in professional programs—graduate school, medical school, law school, engineering school, or public health school programs. The Red House advising team knows, from talking with present and potential employers, that they are especially interested in their students' breadth and their risk-taking abilities.

How easy is it to remake the university to allow for this kind of expansive and relevant approach to pedagogy, one that traverses disciplinary divides among departments, institutes, undergraduate colleges, and professional schools? That's another question. For now, The Red House concentrates on inventing new courses, programs, and interdisciplinary pathways, while also working on the much slower process of changing the infrastructure of higher education. As Randy Bass jokes, if you want to take on big challenges, start with world peace. Then, once you have that accomplishment under your belt, you can tackle the truly intractable problems of academic and financial bureaucracies, like "how you transfer undergraduate tuition into the medical school cost centers."

For the last four years, The Red House has challenged students to be leaders in the new education revolution. Each year a small group of students, led by visiting architect and learning designer Ann Pendleton-Jullian, tackles "The University as a Design Problem," a course sponsored by the President's Office, and from which DeGioia himself actually hopes to learn. The course empowers students to rethink their role at the university and to propose
solutions to problems that they identify at Georgetown, solutions the university can implement.

In a tailored navy suit and an ivory scarf tossed over her shoulder with an insouciance that could make a Parisian green with envy, Professor Pendleton-Jullian certainly has the look of an architect. She challenges students to see insurmountable problems as susceptible to solution. She calls her pedagogical method “pragmatic imagination” and describes it with terminology and metaphors from the world of architecture, computer science, philosophy, music, dance, and astronomy. Here, in this room, she is mostly quiet. It’s the students’ turn to present their work. This is the Formal Critique (Crit) session of what the students lovingly call “Wicked Problems 101.” They have divided into three teams, each member contributing a unique set of skills and aptitudes to a problem they are defining, researching, and working to solve. The term “wicked problem” was coined in the 1970s by global planners to describe challenges so complex that any solution necessarily creates a subsequent wicked problem to be solved. Wicked problems include AIDS, hunger, the raging forest fire in the Alberta, Canada, tar sands, ISIS, the collapse of global political systems, world demographic disruptions, demagoguery, terrorism, racism. The mismatch of archaic education systems and the demands students face in their future is a wicked problem, too.

Prof Pendleton-Jullian is respectful of what is called “design thinking” but also points out its limits and where her approach deviates from it. Design thinking is a methodology best defined by two of its most popular teachers, Bill Burnett and Dave Evans at Stanford: “Designers don’t think their way forward. Designers build their way forward.” What they mean is that design thinkers proceed by setting a goal, prototyping a specific solution, testing that, and then improving on the feedback they receive. For even the most abstract and seemingly insoluble problems, they often draw blueprints and plot cause and effects. A practicing architect as well as a learning theorist, Pendleton-Jullian is somewhat skeptical of reducing complex processes to causalities and resists the distinction between
thinking and building. Sometimes the solutions you can build and prototype miss the deeper core values, ideas, prejudices, histories, cultural norms, and insights that may be invisible and impossible to build, but shape everything else and have a tremendous impact on the solution you attempt to implement. She challenges students to go deep, not simply to forge ahead.

There are too many of us to all fit into The Red House, so today's Crit has been moved to Healy Hall, the center of campus. The fifteen students are already there, setting up their white boards, flip boards, and PowerPoints, and talking with the videographers at the back of the room. Bass and Pendleton-Jullian welcome the judges: Dr. Donald Harward, president emeritus of Bates College and director of the nonprofit Bringing Theory to Practice project; Professor Anthony E. Cook, an eminent constitutional, business, and civil rights lawyer who teaches at Georgetown's Law School; and John Seely Brown, the legendary former chief scientist at Xerox Corporation and director of its Palo Alto Research Center, proponent of radical innovation, who calls himself "part scientist, part artist, part strategist—and 100 percent motorcycle enthusiast."

I'm the fourth of the invited judges. We've received no information in advance. There's no program. The students are in charge.

The seminar has been modeled on a classic architecture studio, with three different kinds of critique sessions during the term. The "Desk Critique" happened at the idea stage, where the students and the profs wrestled with shaping concepts. Next there was a "Pin Up," where all the teams presented their progress to one another. In a "Formal Critique," you bring in judges from outside who have not been privy to any of the discussions and who may not even know the problem.

The first group calls itself "Agency and Purpose." They are endeavoring to redesign higher education to address the flood of negativity directed at Millennials. A recent study has shown that Millennials have received more criticism than any other generation since World War II, including a 2014 best seller that writes off the generation as "excellent sheep." The author argues that those born after 1985 are a
different breed than past generations. Whether from obsession with their video games and iPhones, or rendered docile and other-directed by a regime of standardized, high-stakes testing, these Millennials are said by employers to be passive, picky, and overly sensitive.

The Agency and Purpose team has undertaken its own qualitative and quantitative research, including survey data, to track the life goals, values, and character of Georgetown students. Through various charts, they substantiate their claim that, when judged by rubrics and metrics applied equally across generations of Georgetown graduates, Millennials are more innovative and committed to change, not less, than previous generations, and they actually aren’t sheep-like at all. However, because the Agency and Purpose group’s goal is change, not critique, they move quickly from this perceptual correction to a plan. They argue that, if this is what the world believes, perhaps one way of revolutionizing Georgetown would be to counter the prejudice with a curriculum that distinguishes Georgetown as an institution that champions self-determination, risk taking, and independence. The team’s proposals to President DeGioia lend concreteness to these goals by suggesting how the work of The Red House might be developed into a full curriculum available to all students.

The second group, “Stress and Resilience,” also begins with a defensive comment about how they are not “excellent sheep.” Theirs is an ambitious program to enlarge the concept and methodology of “resilience” being bandied about in contemporary risk management literature in order to address the dropout rate for “high-stakes” (not “high-risk,” as they make clear) students at Georgetown and beyond. They are complicating the idea that resilience can be objectively measured as a differentiator of stakeholder and shareholder value. They propose an ingenious new conceptualization of risk modeling that factors in personal, individual, cultural, economic, and familial demographics. They statistically model nonparallel social factors, including prejudice. They complicate standard resiliency theory with the engineer’s knowledge of how stress actually operates on a mechanical level. Too much stress doesn’t make structures stronger. It
breaks them. If resiliency were a simple matter of being stronger as a result of stress, it would be easier to build on fault lines or in war zones. The Stress and Resilience group proposes a suite of new programs, courses, and collaborative peer study groups designed to address risk and support resilience. They argue that their institutional modeling has great implications far beyond Georgetown and higher education more broadly.

We judges are blown away by the depth, seriousness, and originality of the first two groups’ proposals. They will later pitch these directly to President DeGioia, who, unlike in previous years, can’t be here for this final Crit session.

It’s the third group, called “Ideals in Contradiction,” that surprises me the most. The group addresses perhaps the most shameful event in Georgetown’s history, one that has put the university in the national headlines all year. In 2015, it was revealed that in 1838 some of Georgetown College’s early leaders addressed a financial crisis by selling 272 of its slaves to a Maryland planter. They did so even knowing that families within this group of slaves would be split apart and many of the slaves would be sold again into the most heinous conditions in the Deep South. Many in 1838 condemned the action as anti-Christian, including the Vatican, and the university president was removed from office.

The 2015 revelation exacerbated existing racial tensions on campus. The New York Times published a number of exposés, often with as much attention to the student protests as to the historical events that occasioned them. The Ideals in Contradiction team addresses both the past and present hypocrisy of a Jesuit institution that espouses social justice yet has owned and sold slaves in the past. The team frames its problem in these terms: “How can a competitive research-driven institution live up to its Jesuit social ideals? How can an institution own its past and move forward?”

At any prestigious university, and especially a private one dependent on tuition and donors to thrive, reputation is everything. It is highly unusual for a university to put its institutional credibility in the hands of students. One of the judges expresses surprise that
The Red House students would take up such a sensitive issue at the height of its volatility and notoriety.

"Why not?" Ann Pendleton-Jullian responds. "Our point is that a university is all of it—what is inside the classes, what you bring into the classes from outside, what you bring from the classes out into the world again. It's artificial to cordon the university from the world. Those barriers are what we're dismantling."

Another judge asks the students if they know the protestors. There are smiles all around and one of them politely answers, yes, of course they do—and then indicates that at least one of their team is regularly among them.

"The distinctions between research and activism, between objective and invested research are other concepts we're examining," Professor Pendleton-Jullian says. "No one is outside a wicked problem—even if you aren't protesting it, trying to solve it, you are part of the problem. If you don't think it's your problem too, then it's either not truly wicked or you are naive and not thinking deeply enough. If you aren't in the thick of the wicked problem, there is little hope that the solution you propose will be relevant or significant. That's key to designing an intervention into a wicked problem."

The students in Ideals in Contradiction once again reference the negative depiction of Millennials in the media. If you only read the news, you would believe the protestors were spoiled, privileged, and trivial in their complaints. If you have the opportunity to listen to the students themselves, you see how carefully they have drawn a connection between the slave past and the structural inequality in higher education in the present. Supposedly, professors are all liberals, yet if over 80 percent of full-time full professors are white and over 65 percent are male, some kind of inequality or bias is being perpetuated through the rankings, selection, curriculum, and pedagogy. The Georgetown student body, including those in graduate and professional school, is much more diverse than the faculty.

"There's a problem in the past and in the present. So, what should Georgetown do?" another judge presses. The group's list of solutions is impressive. The team has been engaged in proposing, organizing,
or analyzing the efficacy of initiatives throughout the semester. One question they ask is what a research university might be able to contribute positively in the present, given this deplorable incident in the past. Georgetown University can work with descendants to provide genealogical information as descendant family connections are discovered. Another committee of faculty, administrators, and students has voted to rename two buildings on campus that commemorated those responsible for the decision in Georgetown’s slaveholding past, a recommendation enacted by the university. The university is developing a new research center to study the enduring impact of racism and segregation and a new department of African American Studies. The students as a group sit on committees working on a range of cocurricular internships and community-based experiential learning partnerships. They are proposing a number of “reverse mentorships,” where students and faculty, who are usually isolated from community issues, listen and learn from the community. This continuum of changes and additions addresses the past and will have ethical and material impacts on the university’s future and help to restore and reaffirm some of its most deeply held values.

The Ideals in Contradiction team resists calling these actions reparations, but says they constitute a good start and can serve as a model for other universities. Almost all of the Ivies and most Southern universities have similar histories as well as the same persistent structural forms of inequality. “You take a problem this big, and it’s real and it isn’t just history, it’s now,” one student says. “The only way to go forward is by at least fully acknowledging the problem. That’s Square One. It’s not an end place. It’s only a start.”

Randy Bass’s “What ifs?” have been turned, in this room, into plans, proposals, and realistic solutions—temporary and partial to be sure, but nonetheless honest in their grappling with recognition, reconciliation, and a start toward reparation.

Like the students of mathematician Derek Bruff at Vanderbilt, these students have used agile design principles to arrive at solutions. Like anthropologist Michael Wesch’s class at Kansas State University, they have used immersive, experiential learning and some
game-based principles to understand problems from the inside. Like students of Sha Xin Wei at Arizona State University and Sara Hendren at Olin College, they have worked across disciplines, using both abstract thinking and design pragmatics to address significant, pressing real-world problems. Like those taking classes from Andrea Lunsford at Stanford and Juana Maria Rodriguez at Berkeley, they are using a variety of traditional and social media to ensure that their research has impact in the world. Like the students in a global MOOC on “The History and Future of Higher Education,” they have used technology strategically and wisely, integrating it into their research and their mission. And like Tressie Cottom McMillan’s students in Digital Sociology, they are tackling urgent and controversial issues with serious research, sound methods, foundational principles, and plans for future action.

The topics taken up by the students at The Red House don’t fit comfortably into conventional majors and minors. They don’t look like vocational skills training. Isn’t this a problem for the future of the students involved?

Apparently not. Whether turning their research project at The Red House into a for-profit or nonprofit company (as different graduates have done) or going to work for nongovernmental organizations or corporations from Peru to Silicon Valley, graduates leave confident in their abilities and employers have responded enthusiastically. There is no formula for what they do or where. There is no one-size-fits-all, no single “skill” that makes them “workforce ready,” but they are prepared for a full range of future occupations. These young people are succeeding now, and they will continue finding success if their job disappears out from under them, or if they simply wake up one morning and realize they have chosen the wrong career path and need to find something better suited to their needs, their desires, or their mission in life.

“Don’t you wish we could find a way for every student to experience something like The Red House as part of their college education?” I ask.

“Now that’s a wicked problem!” Ann Pendleton-Jullian laughs.
What would Charles Eliot be doing today if he were around to reform higher education for the post-Internet age? He well might be working to redesign elite American universities such as Georgetown. Or he might set his sights on emerging countries. That, after all, is what the United States was in 1869, when it was recovering from the Civil War and a series of catastrophic financial crises.

In 2002, an American-educated Ghanaian, Patrick Awuah, returned home to Africa, determined to take the best of what he had learned as an undergraduate at Swarthmore College, in his MBA program at Berkeley, and from his position as an executive at Microsoft, all combined with the best ideas he could glean in Ghana. His ambition was to design his own university from scratch. He could have made far more money continuing to climb the corporate ladder at Microsoft, but he knew he had an opportunity to make a palpable impact in his own country.

“I wanted to create a university where everything about it was deeply rooted in values and mission—the mission of the transformation of Africa, the success of Africa,” he says. He created Ashesi University.

In Ghana, higher education tends to be for the elite, and both the polytechnics and the universities are strictly preprofessional in orientation. Awuah, drawing on his experiences in the United States, wanted to counter both tendencies by establishing a more egalitarian institution and one that combined a liberal arts school and a professional school. He wanted to draw upon the best features of the quite different American institutions he had gone to: a highly selective, private, progressive liberal arts college with Quaker roots and a business school of a massive public university. He sought to create a university that would both embody values and prepare Ghanaians for the future. He especially strived for an antidote to what he saw as cronyism and narrowness in higher education in his country, which he believed led directly to political corruption. At the same time, he engaged in many conversations with Ghanaians as well as with other intellectuals, entrepreneurs, and educators throughout Africa in order to transform what he had learned in the
United States into a unique university that would help Ghana realize its future potential.

He chose the name “Ashesi” to represent this unique hybrid of Africa and the West. It means “beginning” in Akan, one of the native languages of Ghana, and is inspired by a quote from Johann Wolfgang von Goethe: “If there is anything you can do, or dream you can do, begin it. Boldness has genius, power, and magic in it. Begin it now.” Unlike many universities in Ghana, Ashesi prides itself on its unique ethnic, economic, and gender diversity. It is the first school of engineering in Africa to admit equal numbers of women and men. Its goal is to teach students how to “learn and think analytically in different domains.” Ashesi’s logo is a hand-drawn stool representing the three pillars of the university: scholarship, leadership, and citizenship.

Like Charles Eliot before him, Awuah believes a better system of higher education can cure the crisis of leadership in his country. Eliot went to Europe in the 1860s to learn from the European research universities, in the hopes of revolutionizing the Puritan college in America. Awuah left his executive position at Microsoft to enroll in the MBA program at Berkeley specifically to learn what he needed to create a sustainable university in Africa. He explained his ambitions to his professors at Berkeley and was delighted at their eagerness and generosity in working to help him succeed. Drawing up the original plans for Ashesi University essentially became his two-year MBA project. “No matter what was assigned,” he says, “I always had another case running in my head. Everything I did, everything I learned, was useful to my mission to start a university in Ghana.”

The founding of Ashesi University in Africa helps us see what is possible here. Patrick Awuah’s appreciation of his education in the United States also comes with a clear-eyed sense of what is obsolete in America’s legacy institutions. The new education he envisions for Ghana need not be governed by these American traditions. Like The Red House, his university rebundles the university, choosing what works best for Ghana and reshaping it in better ways. For example, instead of the final capstone experience common at American universities, Ashesi students take on a special project and attempt to de-
sign a solution in their first year, just when they enter the university. They might study autism and launch an autism awareness campaign. Or they might pose solutions for a bumper pineapple crop rotting in farmers’ fields amid starvation elsewhere. “They try to solve a problem and make it work early,” President Awuah says. “That way, they can see, from all the courses that come later, what they could have done better. They actually see how their college education is useful to solving the problems.” This inverts the legacy American model of required, low-status general education or introductory courses that students dispense with as quickly as possible on the way to their major. At Ashesi, students’ independent, research-based projects, with their ideas that succeed and hypotheses that fail, set the foundation upon which they subsequently build all of their learning.

Ashesi turns upside down the usual American pyramid structure of higher education that goes from the broad general education base to narrower, more specialized courses leading to independent studies and capstone projects. Beginning with the research project requires realigning other key facets of the traditional university: curriculum, disciplines, and the very notions of specialization and expertise. By starting with an intensive, significant research project with real-world impact, students inevitably see that, without attending to social, religious, economic, and cultural conditions, they are able to accomplish little. Through this experience, they learn that implementing their vision requires more than engineering and technology solutions. Subsequent general education courses take on the intensity of boot camps, imparting crucial survival skills for those trying to understand the best ways to implement their vision and providing invaluable workforce training too. Students read historical and philosophical texts to understand more about different points of view, including some that make them reconsider their early and enthusiastic, but still inchoate, opinions. In a year-long course called “Texts and Meaning,” students read difficult literature and learn the skills of interpretation and critical analysis, and then apply those methods to everything else they read—the day’s newspapers, pharmaceutical advertisements, terms of service
agreements. “With each course they take, they see how education is helping them to think better, to be better citizens and parents and educators. They see that theory and philosophy exist in textbooks—and in problems in the world. You need theory and philosophy to find better solutions.”

President Awuah believes that to train leaders of a nation of 27 million people that has been plagued by corruption, you need sustained, ethical entrepreneurship. At Ashesi, students learn about the history of European colonialism and exploitation in Ghana and come to understand that the ingrained culture of what we in the West consider corruption was, for many centuries, the only way for an ambitious Ghanaian to ascend the ranks in colonial society. Awuah insists that no study of ethics today can proceed without a grounding in a rich West African precolonial heritage that goes back at least to the eleventh-century Kingdom of Ashanti.

Writing, critical thinking, cultural and religious history, and languages are part of Ashesi’s core vocational curriculum. Students major in computer science, business, management information systems, or engineering and take yearlong seminars on leadership, ethics, and collaboration. Required service learning is also woven into the training in entrepreneurship. We might call this “social entrepreneurship” in America, but Patrick Awuah insists that all entrepreneurship that is ethical is social entrepreneurship.

As at The Red House, Ashesi students are engaged participants in shaping the university itself. In 2008, they were handed the challenge of debating, drafting, and establishing an honor code for themselves and future Ashesi students, an idea inspired by the Quaker principles of Swarthmore. Ashesi became the first African university to create and implement an honor code. The students designed it themselves and insisted that being an Ashesi graduate meant that the code had to be part of their identity, not just in school but also for the rest of their lives. Since then, Ashesi has presented every first-year class the challenge of taking several months to draft and argue over their own honor code. Two-thirds of the class has to agree
in order for the university to accept the new code. "There were a few years when it wasn't clear that they would design and sign on to an honor code. They kept us wondering," Awuah laughs. "But in the end, they did. They all did."

In the dozen years since Ashesi University has opened its doors in Accra, it has been recognized as one of the finest universities in West Africa. Its graduates are highly sought after and are often offered multiple positions upon graduation. Nearly all have accepted desirable jobs, mostly in Africa, and with an emphasis on giving back to Ghana and the continent more broadly. As with The Red House students, Ashesi graduates are heavily sought after by their country's government, corporations, nonprofits, NGOs, schools, universities, and beyond. They graduate as programmers and engineers and, almost immediately, advance into leadership positions. They are becoming the faces of a new Ghana.

In September 2015, Patrick Awuah was named a MacArthur Fellow, honored with what is commonly known as a "Genius Award." With all the press from this coveted award, he has remained humble, noting that his new university in Africa was inspired by the best of two US universities. At the same time, he is grateful for the award because he believes that his brand-new university, created from scratch and designed to help students toward a better future, has something important to offer to its older American prototypes. He hopes that Ashesi might inspire a learning revolution in the United States, too. It's time. Having influenced the rest of the world with some of the finest institutions of higher learning, America now should take its own measure, think about where it needs to go next, and remake itself for its own future and that of the planet.

Patrick Awuah would be the first person to admit that his challenge is minor in comparison to the gigantic task of remaking all of higher education in the United States. Yet what he is accomplishing in Ghana—and what so many innovators are making happen in higher education throughout the United States—helps anyone, at any college or university, to imagine their own new possibilities.
What happens if we turn the American university inside out or upside down? How does infrastructure change affect intellectual change? What are the relationships among curriculum, assessment, technology, cocurricular activity, access, equity, entrepreneurship, and social justice? How do we think about each of these things, perhaps starting with one change and building upon it? If Ashesi University can remix the best elements of the American university for the particular urgencies of its time and place, so can any US college or university rethink and remix itself. Because the United States does not have one overarching and uniform national educational system, it is, in one sense, easier for an individual college or university to experiment with bold ideas, to see what makes the most sense and offers the best opportunities for its students, faculty, institution, and community. We can and should glean great ideas from everywhere, including Ghana.

In 1869, Charles Eliot wrote "The New Education" following his sojourn among the universities of Europe. He took what he learned, cherry-picking what worked best for a young, changing nation leading a vast, global industrial transformation. The modern American university he and his colleagues created has had a good run, and continues to offer abundant benefits. But a hundred and fifty years is a long time for all institutions, and especially ones dedicated to training a new generation for its future. It is time now for America's own Ashesi, a new beginning for higher education.

On every campus in the United States, people are trying, like Patrick Awuah and his colleagues in Ghana or at The Red House at Georgetown, to rethink higher education. To be sure, plenty of people in academe would rather preserve the status quo. However, I believe we are approaching a tipping point, with those dedicated to changing higher education gaining an increasingly prominent voice.

There are obstacles. The American Association of University Professors reports that now over half of the new positions in higher
education are filled by part-time workers; in the 1990s, the AAUP was alarmed when that number was 30 percent. Who exactly will lead the necessary transformations in higher education if there are no jobs for innovative, young professors?

There is also the problem of outside interference, of investors calling for change who do not necessarily have students’ best interests at heart. We’ve been burned too many times by the logic of modernizing higher education, which too often really means defunding. When “edupreneurs” look at higher education as a multibillion- or even multitrillion-dollar cash cow, “scholarship, leadership, and citizenship”—Ashe’s three goals—are not their objectives. And as we saw with MOOCs, if the endgame is profit for a few, not a better form of education for all, we don’t have a technological solution to an education problem but a technological problem that exacerbates an education problem.

In this book, I have looked beyond the shiniest examples of high-end, abundantly resourced innovation such as the Media Lab at MIT and the design school at Stanford. Most media look to these places for new ideas in higher education. These programs do cutting-edge work, without question, but can they really offer models for 99.5 percent of the 21 million students who do not go to MIT and Stanford? Selectivity limits rather than expands the solutions we can consider and the problems to be solved.

Recently, I was at a board of directors’ meeting for Mozilla, the foundation that supports the open-source Firefox browser used by some 500 million people worldwide. On the bedside table in my hotel room in Palo Alto, the epicenter of Stanford University and of Silicon Valley, was a crystal-clear, magnificently minimalist bottle of water. It was called “drink.” Its label proclaimed it to be a thousand times cleaner than tap, bottled, or filtered water: “The cleanest water in the world.” It cost twenty dollars.

I couldn’t help but think of the question posed to the students at Arizona State University: “What will life be like in Phoenix when there is no more water?” The answer to such a question is never going to be a sleek twenty-dollar bottle of “drink.”
Silicon Valley thinks it can revolutionize higher education, but it is not clear whether its solutions will actually address the urgent crises we face, either the creeping obsolescence of our institutions of higher education or the broader issues of a changing job market and economy. Silicon Valley has helped create—indeed, consists of—offshoring, automating (and non-taxpaying) global supercorporations and has done little to identify this development as a looming social catastrophe or to propose real solutions to it. Those solutions must address higher education reform, but they also must start within higher education. We who are dedicated to meaningful change and who know our institutions best—faculty, students, administrators, staff, parents, alums—need to be working together to design a new education for the treacherous world we live in now.

We need educators and administrators themselves committed to redesigning an ethical, democratic, pragmatic, forward-looking education, one that not only uses technology wisely and creatively but also understands its limits and its impacts and addresses its failings. We need individuals and institutions to work together to rejuvenate an antiquated system for our accelerating times and to ensure that the solutions we craft address the real problems rather than just generating new ones.

The lecture is broken, and so we must think of better ways to incorporate active learning into the classroom.

High-stakes end-of-semester summative, standardized testing is broken, and so we must design challenges that help students to build on what they know and learn from what they don’t, growing stronger from each test instead of feeling defeated by an exam score that cannot capture growth or change.

Cost is prohibitive, and so we must adopt new models of credit, such as the Australian graduated repayment model, and far better models of support, including renewed public faith in the importance of supporting higher education for the sake of all our futures—including, for the skeptics, on purely economic grounds.

The traditional professorial and apprentice models don’t teach students how to be experts, and so we must look to peer learning and
peer mentoring, rich cocurricular experiences, and research to put the student, not the professor or the institution, at the center.

The major in a traditional discipline no longer maps to the complex ways students encounter the world or the jobs and careers of the present and the future, and so we must champion relevant interdisciplinary projects, missions, programs, and goals, across departments and silos of knowledge and expertise.

The exclusivity of more and more of our universities increasingly buffers them from the world beyond, and so we must encourage more partnerships and resource sharing across elite and non-elite institutions, including community and regional colleges, HBCUs, and other minority-serving institutions.

Increasing numbers of students now attend community college, and so we must find better ways to support faculty and advisers there. We must improve systems of credit transfer and course alignment to ensure that students with associate’s degrees can go on easily and smoothly to earn bachelor’s degrees at four-year institutions.

The situation of adjunct and contingent labor threatens the future of the university, and so we must insist that full-time positions be replaced with full-time faculty.

All of this is doable. Different kinds and levels of intervention are necessary at different institutions, but there are beginnings everywhere. Any ambitious student, at any college or university, can right now find programs and professors who are already charting new frontiers of higher education. We need to champion those leaders, use them as models, and accelerate the change that—often against obstacles—they have launched.

Ultimately, all of these changes serve a larger goal: we must help students toward independent, productive, responsible lives. In the famous words of inventor R. Buckminster Fuller, “We are called to be architects of the future, not its victims.”

I’ve been fortunate to enjoy a long and varied career as a college professor. My first year out of graduate school, I worked three
jobs: teaching at night at a liberal arts college where my students, all a decade or two older than me, were professionals returning for a coveted bachelor's degree; teaching newly released prisoners at a community college; and teaching Great Books to Russian and American high-energy physicists, who refused to speak to one another, at Fermi National Accelerator Laboratory. I've taught nuns and priests studying for PhDs in a Franciscan monastery, and I've taught at universities in Japan, Spain, and England. I've taught at a massive public state university and in the Ivy League. I spent most of my career as a faculty member and administrator at Duke University, and now I help teach the next generation of college professors at the nation's largest public institution of graduate training, the Graduate Center at the City University of New York.

Over the course of nearly thirty years in the classroom, I've come to see that students' aspirations don't change all that much, not from place to place, or year to year. They are in college to help prepare for their future life's path, whatever that may be. I've also come to see how, every year, the way we structure and rank higher education is increasingly out of step with the demands of the world they have inherited, the world beyond graduation. So many of the features Charles Eliot and his peers helped design in the wake of the Panic of 1857 and the Civil War, amid the upheavals of industrialization, urbanization, and globalization, have become impediments to learning in our age.

In a moving seven-minute video, "I Am Going to College Because . . .," thirty students answer the simple question "Why are you in college?" The videographer posing these questions is a student in a leadership program I supervise at CUNY. After finishing her associate's degree, Estefany transferred to Baruch College, one of the most competitive colleges in the CUNY system, where she is completing her double major in business and multimedia design.

Like Estefany, a majority of the two-year and four-year CUNY college students she interviews were born outside the United States and are the first members of their family ever to go to college. During
the opening credits of the video, Frank Sinatra croons "New York, New York" and an American flag appears. Then small flags appear designating the birthplace of each speaker: China, Ecuador, Bangladesh, Mexico, South Korea, Dominican Republic, Indonesia, Puerto Rico, Pakistan, Colombia, Yemen, Myanmar, Peru. Some of the students seem to be traditional college age, others look to be in their thirties or forties.

Why do they go to college? "I go to college because . . . I want to do something I love; I want to help others; I seek equality and social justice; I care about people and want to serve others; I am a woman and want to see more women in STEM fields; I am the first person in my family to be able to write my own name and I want to write it proudly and for good; I want to be useful to myself and everyone else; I want to help children; I want to contribute to my community; I want to make my family proud; I want a more successful future."

The goals of achieving a better, engaged, responsible future are shared by many students, at every institution, at every level of society. Nathaniel, Harvard Class of 2015, is currently working at a nonprofit and applying to combined law and graduate school (JD-PhD) programs. I ask him the same question that Estefany asked her classmates: Why go to college? "Everyone spends a lifetime embedded in a world that they invariably shape by the fact of their existence," Nathaniel says. "We should be given the tools we need to shape it responsibly and to recognize the beauty surrounding us." He hopes, in his career, to contribute to that goal. "I'm interested in how we create political-economic institutions that are resilient to political shocks, how we can structure economic and political life so people are able to pursue their aims in life."

When I ask him what at Harvard most prepared him for the kind of life he hopes to lead, he singles out three things: his debate team, a "community of friends who are intellectually engaged and willing to challenge my beliefs," and writing a senior research thesis. "I love digging through archival material to craft something that is both art
and argument," he says. At Harvard, he earned a degree in Social Studies, a small, interdisciplinary concentration that allowed him to design his own major around a research agenda of his choosing. He loved it. When I ask him whether there is anything he would change about his education, he says there isn't a lot he would change, but he regrets that, because of the rigidity of the GPA on which his JD-PhD application partly depends, he wasn't able to take many courses in other fields, where he would have had to compete with students who were specialists in those fields. It's a valid critique. Why not allow students to explore more widely, perhaps taking some courses as Pass/Fail? It would hardly take a revolution at Eliot's university to make a simple structural change that would support the best students in their boldest choices.

At a recent family dinner, I had the pleasure of talking with six students, all either in college or just starting at graduate or medical school. Together they represent eight different colleges and universities: Dickinson, Drexel, Hampshire, University of Maryland, University of Pittsburgh, Rutgers, Skidmore, and the Philadelphia University of the Sciences. They were eager to talk about what college means to them and what they know has to change.

"The first thing I'd change is how much college costs," Claire says emphatically, "and maybe I'd have them guarantee me a job after college that pays $40,000 a year or more so I can pay off my loans." She quickly adds that she hopes to have a career that is satisfying and contributes to society, but that's a vague goal compared to the pressure she feels from mounting bills. Having taken a gap year before college to work as an au pair in Germany, she's seen the freedom, idealism, and sense of life mission of German students whose higher education is almost entirely free. "It's harder to have dreams when you're worrying about debt," she says. The other students agree. They all hold jobs, including Ethan, who works part-time at a local restaurant even during his notoriously challenging first semester of medical school.

When I ask what, other than the high cost, they would like to change about college, they are unanimous in wishing there was more
choice and flexibility. "There are so many courses I'd like to take in the humanities," Kaitlin, a mechanical-engineering major, laments, "but my program makes that almost impossible." As a workaround, she enrolled in a special program, the Maryland Scholars, that allows her to pick a track complementary to her major. She chose the arts track; she is living mostly with arts students, attending a host of cocurricular arts events, has built a website on which she charts and reviews her activities, and is able to stretch herself considerably beyond the more limited world she previously inhabited.

Every one of the science students expresses a similar wish for more courses in the humanities. At Pitt, Ethan took on extra courses each semester so he could finish his pre-med major early and spend senior year taking philosophy, comparative religion, ethics, and other humanities courses outside pre-med. Connie, who is studying to be a physician's assistant at the University of the Sciences, eloquently expresses the same urgent need. "I work in the medical field because I want to help people," Connie says. "But almost all my courses are about scientific 'subject matter' in the abstract. They barely mention how people's lives and cultures influence their health. I'd like more 'people matter.'"

Alyssa, a major in animation, film, and production design at Hampshire College, says she wishes "there were more opportunities to connect the theory I'm learning with actual practice in different kinds of jobs." Her goal is to be an "imagineer," an animator or designer in the entertainment industry. Like the other students, she's found a workaround through internships and online courses that she takes over the summer, filling in what she isn't able to fit into her regular curriculum.

"I wish college did a better job of helping us to prepare for life," Kaitlin adds. When I ask what she means by that, all of the students chime in. They'd love more support connecting the abstract academic subjects in their majors to everyday life. They want their science programs to connect more directly to the problems science is supposed to solve. They wish there was somewhere in college where you could address actual life issues.
"You can get an A in microeconomics and not know how to balance a checkbook. Or you can major in political science and be unprepared for the ways your neighbors voted in the last election," Claire says.

"It would be good if there were more support for surviving school," Youki says. Many of his classes have collaborative projects, but no one shows you how to collaborate successfully. Too often, one person ends up doing most of the work. "Or how to manage roommates," Alyssa chimes in. I laugh; of course effective collaboration and living with others are two of the hardest skills to learn at any point in one's life and work.

"Basically, we all want to take 'How to Be an Adult 101,'" Claire quips.

As beginning college students or adults returning to school, at various economic levels, and at vastly different institutions—from LaGuardia Community College to Harvard—students are all asking for the same thing: a new education designed to prepare them to lead a meaningful life in the years after college. Not a single one of them clamors for the kind of higher education revolution touted in the New York Times or the Wall Street Journal by higher education’s great “disrupters.” In an evening of energetic conversation, these supposedly revolutionary technological innovations in higher education don’t even come up—no MOOCs, no content management systems, no learning measured “keystroke by keystroke,” and definitely no “skills” education if that means vocational skills without context. They want a flexible, expansive curriculum that allows more opportunities for intellectual exploration and personal growth and that prepares them not just for jobs but for consequential careers and for what they all know will be a bumpy road ahead.

All of these possibilities exist, in ways big and small, at our institutions. Like the great and bold education revolutionaries of the late nineteenth century, we need to use the best models we have and build on those. We can’t just leave it for our most industrious students to find the most innovative programs and courses. We need to lead and support change. We need to revolutionize our universities,
vigorously support them as a public good, and redesign them so that they are also good for the public.

The new education must prepare our students to thrive in a world of flux, to be ready no matter what comes next. It must empower them to be leaders of innovation and to be able not only to adapt to a changing world but also to change the world. That is the core requirement of the new education.

All the rest is merely elective.