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Liberal Education in the Age of the Unthinkable

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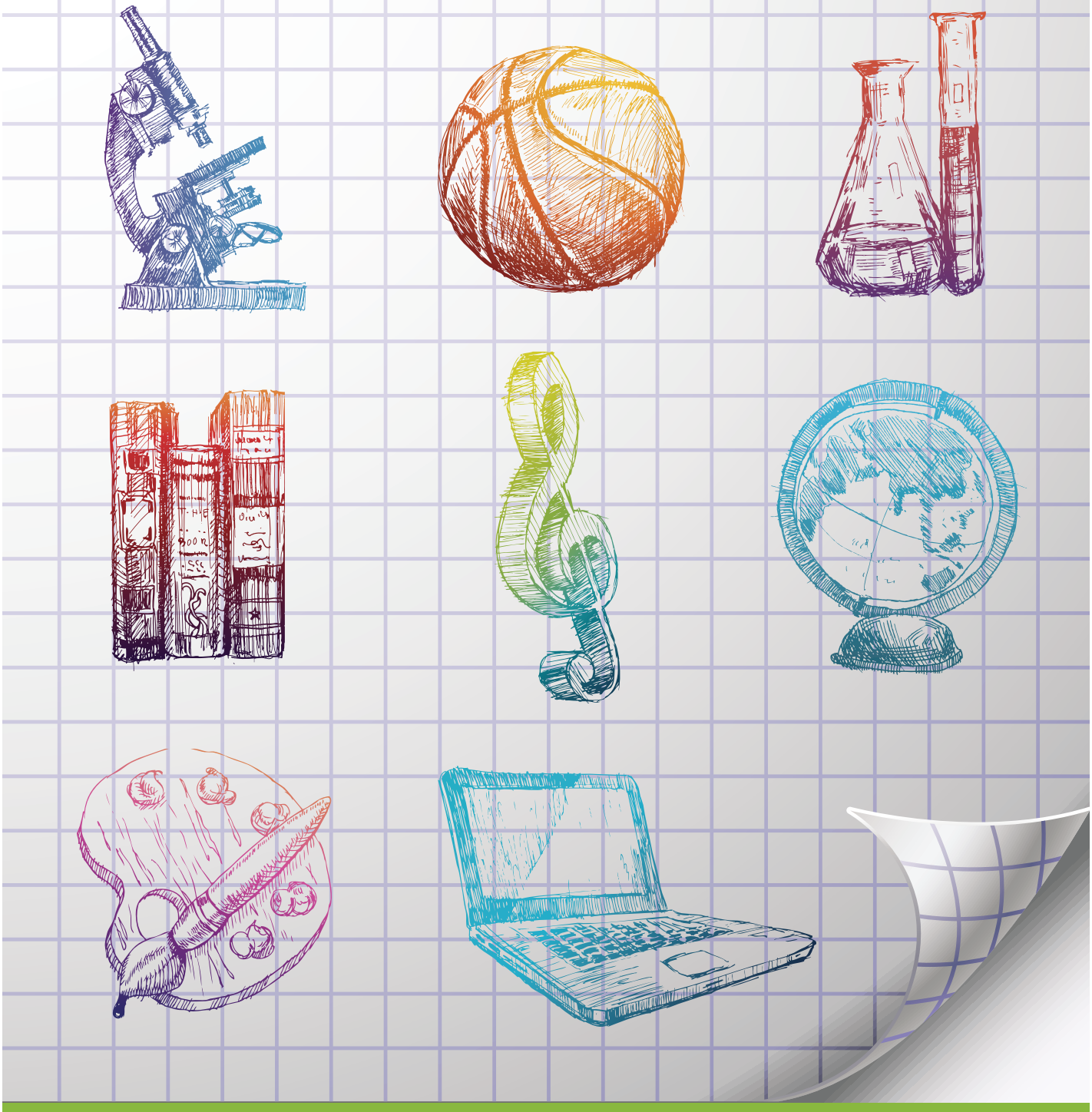
LIBERAL EDUCATION



in the Age of the Unthinkable

Larry D. Shinn served for 18 years as the president of Berea College until his retirement on July 1, 2012.

By Larry D. Shinn

Ours is an age of unexpected and rapid change that challenges our traditional paradigm of liberal education in America. In his book *The Age of the Unthinkable*, Joshua Cooper Ramo argues that we now live "in a revolutionary age of surprise and innovation," in which our traditional problem-solving strategies in response to events like the fall of the Soviet Union in 1991 or the terrorist attack on the World Trade Center in 2001 simply will not work (2009, p. 11).

Speaking primarily about the global financial situation, Nassim Nicholas Taleb uses the metaphor of "black swans" for such unpredictable events. Taleb says, "Our world is dominated by the extreme, the unknown, and the very improbable… and the future will be increasingly less predictable" (2007, p. xxviii).

Ramo's and Taleb's thoughtfully crafted arguments affirm what we in higher education have known for some time—namely, that we must educate ourselves and our students for consequential decision-making in a world of *complex problems* (such as climate change, poverty, and interreligious conflicts) and *rapid change* (such as the collapse of world financial markets in 2008-09 or the rapid and revolutionary rise of information and communication technologies).

Those of us who work in all sectors of higher education—from community and liberal arts colleges to undergraduate programs in public and research universities—often assert that a "liberal education" is precisely the kind of undergraduate education that is needed for both living and working in our challenging 21st-century world. But what kind of liberal education?

"Liberal education" or "liberal learning," as used in this essay, is consonant with the Association of American Colleges and Universities' (AAC&U's) notion of the "practical liberal arts": well-rounded and integrated learning in the arts, humanities, social sciences, natural sciences, and professional studies that can be applied to contemporary problems. AAC&U's *LEAP Vision for Learning* says, "Liberal education [is] an approach to college learning that seeks to empower individuals and prepare them to deal with complexity, diversity, and change" (2011, p. 3).

In this essay I argue that innovative and integrated student learning and flexible and interdisciplinary institutional structures and curricula must emerge if we are to deliver on the promises of a liberal education that can help our graduates address the "black swans" in this age of the unthinkable.

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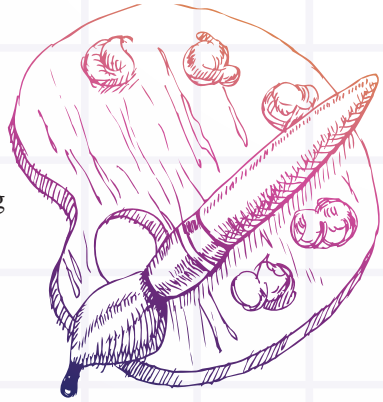


Black Swans in Higher Education

Colleges and universities worldwide have encountered at least two paradigm-shifting black swans in the past decade. The first is the *resetting of the world's financial markets* during the past four years. Jeffery Immelt, the CEO of General Electric, has concluded that "this economic crisis doesn't represent a cycle. It represents a reset. It's an emotional, raw social, economic reset. People who understand that will prosper. Those who don't will be left behind" (Florida, 2010, p. 5).

All of us in higher education are working to adapt to this pervasive and enduring financial black swan. As college tuition has risen at nearly triple the rate of median family incomes in the past 25 years and average student loan burdens for four years of college have come to total more than $25,000 per graduate, students and their parents are questioning the cost/value proposition of higher education.

Meanwhile, higher education in general and independent/private liberal arts colleges in particular are under a financial stress that threatens the very survival of all but the elite and market-savvy few. It is clear that our current educational/financial models are not sustainable. It is indeed a time of "raw social, economic," and—I would argue—educational reset.

The second black swan for higher education is the precipitous and multifaceted challenge presented by *the digital/Internet revolution and the resulting free-knowledge age*. Consider the enormous impact on our work, learning, and private lives that have come from only four digital inventions developed since 1994, when this past fall's traditional-age freshmen were born: a publicly available Internet (mid-1990s), Google (1996), Wikipedia (2001), and Facebook (2006).

The Internet has 1.67 billion users today—nearly 30 percent of the earth's population. Google has 65 percent of the Internet's search business, operates one million servers worldwide, and performs over one billion searches daily. Judged by a recent panel of university librarians to be as accurate and authoritative as peer-edited printed encyclopedias, Wikipedia contains 16 million articles (including 3.9 million in English) written by hundreds of thousands of contributors in over 270 languages, all in the last ten years.

And, finally, Facebook—launched publicly in 2006—had 850 million global users by early 2012 and a market value above $100 billion. Some researchers estimate that college students in America now spend approximately two hours a day on this "new" site.

While the financial black swan of the Great Recession has made the current funding models of higher education unsustainable, the digital black swan challenges some fundamental assumptions about how we and our students create, preserve, certify, and disseminate knowledge. Together they require a

> 'Black Swan logic makes *what you don't know* more relevant than what you do know.'

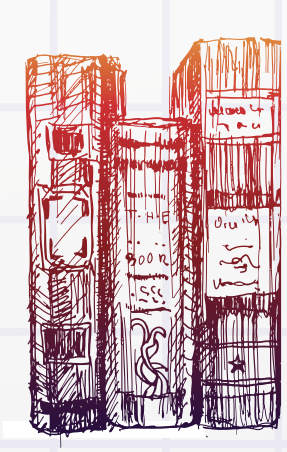
formidable paradigm shift for higher education, especially on the part of those who seek to provide an effective liberal education that prepares our graduates to address complex problems and rapid change with informed, holistic, and multidisciplinary approaches.

Liberal Education in America Today

Myriad books and essays over the past two decades have argued that higher education in America is not achieving its own stated educational aims. From *Our Underachieving Colleges* (2006), Derek Bok's sober and sometimes understated study on why students are not learning more, to Arum and Roksa's *Academically Adrift* (2011) [Editor's note: See Roksa and Arum's article on *Academically Adrift* in the March/April 2011 issue of *Change* and the results of their follow-up study in their article in this issue], respected voices from within the academy are saying that too often, we are not producing the liberal learning that we think we are. Employers also say they are not getting enough college graduates who can speak and write effectively, think critically, approach complex problems from multiple perspectives, and work collaboratively.

Even for students who take arts and sciences courses and show better gains on critical thinking and language skills in the Arum and Roksa study, the focus on disciplinary majors too often undermines their multidisciplinary and integrative problem-solving abilities. A related concern is the report's finding that their classwork is not engaging students and that they study only 12–13 hours per week, on average, compared to students in 1961, who reported studying 25 hours per week.

Although this disappointing performance and increasing student disengagement may have some causes that are out of our control in the academy, we need to ask ourselves what kind of curriculum and learning environment would better engage the students we teach. Given the financial and digital black swans we confront and the less-than-optimal success we are having in engaging and providing a liberal education for many of the students on our campuses, what are some strategies we can adopt to better prepare our students for this age of the unthinkable?



Strategies for Living and Learning in the Age of the Unthinkable

The New Liberal Education

First of all, if our students are to be liberally educated, those of us who are teachers and leaders in colleges and universities in America should adopt a new paradigm of flexible, innovative, and adaptive liberal education that, in addition to disciplinary depth, provides a multidisciplinary, holistic, and integrative approach to the complex local and global challenges we all face.

Ramo reminds us that, in times of dramatic and rapid change, we humans typically resort to traditional modes of thinking and reacting. For academicians, this means that we tend to rely on our disciplinary and departmental ways of thinking and reaching conclusions about the world. But as Taleb says bluntly, "Black Swan logic makes *what you don't know* more relevant than what you do know." Disciplinary thinking promotes what he would consider an "excessive focus on what we do know" (2007, p. xix).

Moreover, academic specialization encourages us "to learn the precise, not the general" (p. xxii). Even our best-educated students reflect this tendency toward silo learning. Heather Wilson, a Rhodes Scholar and now a selection committee member, said in a 2011 *Washington Post* essay,

> Even from America's great liberal arts colleges, transcripts reflect an undergraduate specialization that would have been unthinkably narrow just a generation ago. As a result, high-achieving students seem less able to grapple with issues that require them to think across disciplines or reflect on difficult questions about what matters and why.

Of course, we must have in-depth study in disciplinary and content areas. However, even in combination with general studies, current departmental and disciplinary structures and curricula that provide that depth are not educating as many college graduates as we must who are well prepared for the complex problem solving that confronts them in today's world.

The call for integrative and cross-disciplinary teaching and learning is not new. In a 1997 essay, "Innovation in the Liberal Arts and Sciences," Douglas Bennett said,

> It is reasonable to suppose that the next major transformation of the curriculum will be conditioned by a significant restructuring of knowledge. Perhaps the emergence of interdisciplinary and multidisciplinary study has this potential, but only if it becomes more thoroughgoing—a change that would redefine the structure of knowledge, not just make links within an existing disciplinary structure. (p. 145)

A contemporary call for integrated, broad-based and problem-centered learning is articulated succinctly by AAC&U's Carol Geary Schneider: "Integrative learning is the new frontier for twenty-first century education" (2010, p. 2).

In their recent book *A New Culture of Learning: Cultivating Imagination for a World of Constant Change,* Douglas Thomas and John Seely Brown give excellent examples of how using the ubiquitous and massive digital information network together with a bounded and structured college learning environment can engage students fully and enhance the prospects of liberal learning. Their conclusion: "It is the combination of the two, and the interplay between them, that makes the new culture of learning so powerful" (2011, p. 19). This book's provocative examples and experiments in teaching and learning give some sense of what adaptive and integrative learning looks like.

In sum, a new paradigm for liberal education can create in ourselves and our students the flexible, adaptive, resilient, and problem-solving mindset that is required to live and learn in the age of the unthinkable. Disciplinary depth must be wedded to multidisciplinary problem-solving abilities in such a new culture of integrated and problem-centered learning.

New Structures

The second point follows naturally from the first—namely, we *should develop flexible and adaptive institutional structures* that encourage multidisciplinary and integrated problem-centered learning to produce flexible, innovative, and resilient mindsets in our students.

Ramo warns us that "the most likely course for our future is the most dangerous: minor adjustments to current policies [and] incremental changes to our institutions" (2009, p. 10). For us in higher education, I believe this means that existing academic departmental structures should give way to more flexible, interdisciplinary collections of faculty, curricula, and programs of study.

Ernest T. Pascarella and Patrick T. Ternezini, in their book *How College Affects Students*, summarize over 2,500 academic studies of students' cognitive, attitudinal, and moral development; acquisition of communication skills; and disciplinary learning. They conclude,

> The holistic nature of learning suggests a clear need to rethink and restructure highly segmented departmental and program configurations and their associated curricular patterns. … The guideposts should be the *interconnections* that are at the core of student learning, not convenient faculty-centered divisions of labor, discrete organizational units, or budget development and resource allocation models driven by credit hours. (2005, p. 647)

However, such a structural realignment fundamentally challenges a more than century-old disciplinary/departmental paradigm in American higher education that provides the primary professional identity for most faculty and their student majors. And because our disciplinary identities are usually tied to departmental academic structures, it is hard to separate the two.

Nonetheless, such a wrenching academic restructuring was adopted in January 2011 by a 157-year-old liberal arts institution, Berea College. After much study and debate that focused on both Berea's liberal-learning goals and the budgetary and staff reductions necessitated by the financial black swan of 2008-09, the college's faculty and academic leadership voted to end its 27 academic departments and create six multidisciplinary divisions.

Berea College's Transformation

Since Berea College charges no tuition and funds nearly 80 percent of its educational budget from endowment income, the collapse of the world's financial markets was a "perfect storm" for its funding model. This was the equivalent of most small private colleges' losing a quarter of their annual tuition income.

So after consultation with the executive council of the faculty and with the executive committee of the board of trustees, I asked the dean, five faculty, and four key staff members to form a Scenario Planning Taskforce. Their charge was (a) to maintain Berea's educational mission of service to low-income students from Appalachia and beyond, (b) not to charge tuition, (c) to do this on 20 percent fewer dollars, and (d) to bring back in eight months three separate scenarios that would accomplish this difficult and complex financial and programmatic restructuring.

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Meanwhile, in the face of departmental requests to return vacant faculty positions, the Administrative Committee wondered how it could possibly commit 35- to 40-year tenure-track positions to academic departments that ranged in size from three to seven faculty members each, especially since elimination of selected faculty positions and departments was one option that it was considering. So the administrative leadership decided to impose a freeze on any hires until the taskforce reported.

To the surprise of both administration and faculty, when the scenario planning taskforce delivered its report, each of the three proposed scenarios had one common element: a recommendation to end Berea's 27 academic departments and to replace them with larger academic divisions. The reasoning was only partially financial; the case was made mainly on educational grounds.

The taskforce recommended "the development of academic units and other structures that support (a) excellence, flexibility, and innovation in Berea's faculty and curriculum, (b) opportunities for increased faculty oversight of the whole curriculum, and (c) flexibility and cost management in the faculty and academic units' budgets while continuing tenure." The three scenarios recommended between four and seven academic divisions that would incorporate most of Berea's 31 current majors while ending 27 academic departmental units.

As one might guess, this recommendation was not initially greeted with pervasive faculty enthusiasm. But after a year of reading, discussion, and vigorous debate—and with more than three-quarters of the teaching faculty investing significant summer and weekend time on this project—70 percent of Berea's faculty voted in January 2011 to end the college's 27 academic departments and to create six academic divisions with four to six majors each.

Of course, we do not know exactly how our experiment in structural/curricular change will end. But we do know that we want the learning environment at Berea College to be more interdisciplinary and integrative in order to accomplish our liberal-learning objectives. Ending academic departments and creating academic divisions is only the first step to a more flexible and powerful curriculum and learning environment for Berea's students.

Arizona State University Designs the New American University

My perspective on liberal learning and the multidisciplinary structures that can support it is shaped by reflection on 42 years of teaching, scholarship, and leadership in three private liberal arts colleges and especially on our recent scenario planning at Berea College. But Arizona State University (ASU) has demonstrated that such a paradigm shift is also desirable and feasible in a 70,000 student, multicampus public university setting.

A long-time student of systems and institutional design, Michael M. Crow became the president of ASU in 2002. He quickly assembled a design team made up of leaders of the faculty and administration that, under his leadership, radically reorganized ASU as "an egalitarian institution committed to academic excellence, access, and maximum societal impact" (2010b, p. 36).

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ASU decided that access for students and service to its surrounding community in Phoenix required more economically efficient academic structures that would provide more multidisciplinary and problem-centered curricula and learning environments. As ASU's Provost, Elizabeth C. Capaldi, has said succinctly, "The discipline-based mode of organization is no longer the optimal way to support the work of contemporary faculty or accomplish the aims of graduate and undergraduate education, never mind to solve the problems facing the planet" (2009, p. 20). The president and provost both have argued that, even in large universities like ASU, interdisciplinary schools and curricula can create more innovative, problem-solving, and integrated student learning while enabling faculty to both teach and do research beyond their disciplinary specialties.

During the past decade, such an approach has led at ASU to the development of more than a dozen "transdisciplinary schools," such as the School of Human Evolution and Social Change; the School of Historical, Philosophical, and Religious Studies; and the School of Earth and Space (Crow, 2010b, p. 38). But perhaps the two best examples of ASU's radical restructuring of traditional curricula and faculties into more flexible and multidisciplinary units are the School of Sustainability and the New College of Interdisciplinary Arts and Sciences (CoIAS).

The website of the CoIAS says that "New College is focused on the complex and often unique ways, interdisciplinary ways, in which different fields of study interact and affect each other in real-world, real-life applications" (see http://newcollege.asu.edu/about). Students can complete majors in one of the three CoIAS units that mimic the traditional humanities, social sciences, and natural sciences divisions. However, the curricula in these three divisions are all populated with interdisciplinary courses that create "completely individualized" majors, including concentrations in applied areas such as the environment, business, criminal justice, education, and social issues. All of the majors in this college include a culminating internship experience.

Likewise, the Global Institute of Sustainability (GIoS) is intended to be "the hub of Arizona State University's

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sustainability initiatives" (see http://sustainability.asu.edu/about-the-institute.php). The goals of the GIoS are both academic and practical and include undergraduate and graduate degrees in its School of Sustainability. The GIoS also engages in applied research that creates "a university-wide commitment to sustainability operations [that] encompasses all units at all four campuses." At the School of Sustainability, undergraduate student majors combine scientific, economic, social, and humanistic approaches to complex environmental or social problems that persist in the surrounding urban community of Phoenix or in the world at large.

With reasoning similar to that of Pascarella and Ternezini, President Crow says that the "School of Sustainability… is educating a new generation of leaders through collaborative, transdisciplinary, and problem-oriented training that addresses environmental, economic and social challenges." ASU's commitment to radical academic restructuring intends to make undergraduate and graduate student learning more accessible and effective. It is such an integrated learning environment that has made ASU a "New American University" (2010a, p. 489).

Traditional Impediments

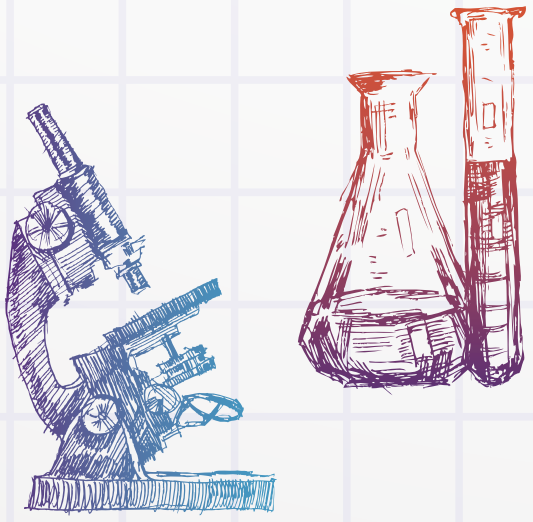
The real antagonist to liberal learning for the 21st century may well be the discipline-based liberal-arts traditions of the 19th and 20th centuries and the curricula that they have generated. The general studies requirements at Berea and ASU share the same flaw. At Berea College, there are five core courses each student must take, including two freshmen seminars and a senior capstone seminar. In addition, there are six "Perspectives"—the arts; the social sciences; Western history; religion; diversity in the African American's, Appalachian's, or women's experience; and international—that too often can be satisfied by narrowly focused disciplinary courses. The senior capstone course essentially bears the full weight of integrating a student's four-year exploration of these six different modes/areas of learning.

Outside the new interdisciplinary schools and colleges, most ASU students' general education requirements include courses in five core areas: "Literacy and Critical Inquiry," "Mathematical Studies," "Humanities, Fine Arts, and Design," "Social and Behavioral Sciences," and "Natural Sciences." What ASU calls "a classic liberal arts degree" assumes that taking these courses automatically provides students with the breadth and integration of diverse knowledge, methods, and fields of study that a liberal education intends and that ASU's transdisciplinary schools are designed to provide.

The missing link for students at Berea, ASU, and comparable institutions is a requirement for systematic and holistic reflection across all of their general studies courses that could help them integrate their learning. While reorganizing our faculties into problem-centered or interdisciplinary divisions and schools may be a necessary condition for overcoming the inertia of our nearly two-centuries-old discipline-based academic structures, it is not a sufficient one. Multidisciplinary and integrative liberal learning must become an expected educational outcome of every student's college years if the adaptive refocusing of liberal education is to be successful. And faculty must lead by example in their expectations for students' learning.

Conclusion

I began this essay by saying that our age of black swans fundamentally calls into question our traditional and cherished notions of what constitutes a sustainable and effective structure for liberal education in our colleges and universities. For some institutions, it may take a crisis to stimulate such a radical change. It was the financial black swan of 2008-09 that prompted Berea College to restructure itself for economic survival while continuing its unique mission: to serve only low-income students and provide full-tuition



scholarships to each of them. The unfolding result is a restructured institution that serves more students more economically than before the financial crisis.

While ASU's dramatic interdisciplinary redesign initially produced over $13.5 million in savings, mostly from reducing duplicative departmental and college administrative costs (Capaldi, 2009), the impetus for change was driven more by mission than by economics. That said, in a world of shrinking resources, academic restructuring provides one powerful tool for colleges and universities to become more financially sustainable.

But the greater benefit that has (and will) come from both Berea's and ASU's substantial academic restructuring resides in the new interdisciplinary divisions, colleges, and curricula that enhance those institutions' capacities to achieve their fundamental liberal learning goals—especially the integration of knowledge. It is increasingly clear that our current higher education models built on numerous and increasingly specialized disciplinary departments are neither economically sustainable nor as educationally effective as they need to be to provide the liberal learning our students require. If we seek to develop a new liberal education paradigm for the 21st-century that goes beyond disciplines—and even beyond the interdisciplinary—it follows that our colleges must dramatically alter how faculty are organized and rewarded and how curricula are organized and presented.

To reorganize faculty and curricula in new interdisciplinary units is not easy, and yet that is only the first step to a more powerful liberal-learning environment. The challenge that remains at both Berea and ASU is for faculty to develop new divisional identities to complement and enrich their long-held disciplinary ones. Only then will integrative and problem-centered liberal education reach its full potential.

It is exciting to see new interdisciplinary courses and programs emerge at Berea and ASU, but isolated courses will not accomplish the integrative learning of which the AAC&U and higher education scholars speak. It is not until the integration of ideas and courses across disciplinary majors and general studies courses occurs on the individual faculty and student level that 21st-century liberal learning will be available to all students, enabling them to prosper in the age of the unthinkable. C

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