Chapter 1

An Introduction to Mindful Innovation in Higher Education

As the newly hired Chair of Institutional Support and Effectiveness at Valley State College, Nathan's passion was described as "infectious" by his colleagues. When discussing one of his favorite topics, such as the untapped potential of predictive analytics in education, Nathan could stop abruptly in mid-sentence, pull out his tablet, and call up any number of statistical tables and graphs to solicit your spontaneous opinion. "Look at this—we used to know so little about the lives of our students. But now we have a consistent stream of data about their performance over the first six weeks of the semester. Isn't this amazing? And we're just at the tip of the iceberg here!" Staff who worked in Nathan's department said there "was a new excitement" and that ever since he arrived "change was possible." One staff member shared that "I was so used to thinking that my work had little meaning or impact. Now that Nathan has arrived, I feel there's real purpose to what I do."

The President of Valley State College was happy about the publicity Nathan generated: "It's an honor for us to have a real innovator on campus," he professed during one Board of Trustees meeting. "But I don't know how long we'll be lucky enough to keep him here. I just hope we'll start to see the impact of his initiatives before he gets snatched up by someone else with more money."

After one administrative meeting, the president huddled with a couple of Board members who were well-known entrepreneurs in the community. He glanced across the room at a small group of English professors who had

attended the meeting to voice their objections to changes in the college's medical plan. With a furtive gesture, he added:

> Like over there—we desperately need new ideas in the English department. I beg them to take on a bigger share of our online course offerings. I plead with them to meet with Nathan. He has fantastic tools they could use to make the first-year classes more effective and exciting to the students. They just won't do it, though. We're really missing an opportunity while Nathan is here.

The head of Valley State's English department was Charlotte, a well-regarded veteran who had taught at the college for over 25 years and served as section chair for nearly 15. The walls of her office had not seen sunlight in nearly as many years, as they were concealed by floor-to-ceiling bookshelves crammed with texts, folders, and monographs on Shelley, Byron, and other Romantic poets. Charlotte's desk was piled high with stacks of papers. They included retention data for all 86 sections of the college's first semester writing class; requisition forms for a new office chair; the contracts for Valley State's stable of 15 or so adjunct faculty members; and dozens of applications for a recent faculty job advertisement.

The framed certificate associated with a teaching award often served as a paperweight for an endless stream of student papers, the output of three classes Charlotte taught in the fall and spring sessions. Her duties as department head allowed for a relief of two classes each semester. From Monday through Thursday, Charlotte could usually be found in her office from 7:30 a.m. until 8 or 9 p.m. On Friday, she left "early"—at 4:30 p.m.—to spend weekends with her new granddaughter whose family lived 2 hours away by car.

In comparison to Nathan's bold vision for Valley State—which includes Chromebooks in every classroom and an online portal modeled after Khan Academy that will allow universal access to professors' lectures—Charlotte expresses a more modest goal for her department: "I would just like to provide a full position with health benefits to some of the adjuncts who have been working here for 10-plus years." She pulls out a sheet of paper from one of her desk drawers and invites a closer examination of its contents. "Look at this. It's an email from one of the writing instructors who has taught here longer than most of my full-timers. We have paid her

$2,500 a semester for each class she's taught for—I don't even remember how long—and she's apologizing to me that she can't teach here next year because she now has her middle school teaching credentials. We have let her down for years by not offering her a permanent position, and now she's worried about letting *me* down!"

Charlotte's eyes twinkle at the suggestion that online coursework, similar to that proposed by Nathan, might alleviate some of the staffing problems in her department. "Yes, I hear that all the time from the administration," she acknowledges. And then continues:

> They really want us to have larger sections—"innovate, scale"—I hear it all the time. But you have to understand, my understanding of teaching, and especially the scholarship associated with that, has been accumulated on the job. Real, substantive feedback is not easily scaled. Plus, there are new challenges every year because the students aren't the same. Real students pay real money to go here. Something like half of our students live in poverty. A lot of them don't have computers at home. I don't lecture anymore because I'm responding to students' needs, and neither do most of my colleagues.

Notably absent from Charlotte's desk is a computer. It is sequestered to a corner of the room where Charlotte can keep an eye on the stream of emails that accumulate in her Outlook folder. When they reach "critical mass," she slides her chair over and answers them as quickly as possible, eschewing formal salutations and grammatical conventions.

Charlotte flashes a smile and adds, "They probably think I'm a hopeless Luddite. Maybe they're right."

Innovation: Necessary Consequence or Overused Buzzword?

If Nathan and Charlotte appear to be polar opposites in terms of personality, interest in technology, and overall approaches to education, then good, because that is our intent. Many discussions about innovation in higher education have become polarized between those who agitate for rapid change and those who contend that a more measured response to education's contemporary problems is obligatory. For some, innovation is a necessary

consequence of a competitive, globalized environment where educational institutions are engaged in a zero-sum game for resources, faculty talent, and measurable indicators of success. For others, innovation is perceived as little more than a buzzword in danger of being rendered meaningless due to overuse and a lack of critical interrogation about its appropriate place in educational discourse.

Over several years of research across the United States, from Florida to California, we have encountered many individuals like Nathan and Charlotte. They are similarly passionate about improving educational outcomes, especially for traditionally marginalized populations. They often make personal and financial sacrifices because they deeply believe in the mission statements of their respective institutions. They find real inspiration in the work of their immediate colleagues. And, when problems surface within their departments or programs, they are equally creative in how they draw upon personal expertise to develop ingenious, even innovative, solutions. Despite these many similarities, we are distressed to discover—time and time again—that very little discussion and negotiation occurs between the varied proponents and critics of innovation. The potential for innovation within institutions is all too often shortchanged, as well, by a lack of engagement with several organizational factors that can either promote or inhibit an innovative idea.

We believe that individuals like Nathan are not just promoters of technological progress and innovation. They are also guided by a vision to improve education that can, at times, be perceived as "too entrepreneurial," yet is grounded in the realities of a contemporary neoliberal environment that prizes the blending of financial and societal gain. We also believe that individuals like Charlotte are as innovative as Nathan. Their commitment to fundamental academic values, such as academic freedom, tenure, and an obligation to serving the public good, is not antithetical to innovative progress; rather, individuals like Charlotte can stimulate innovative activity and create the conditions for mindful innovation that we will outline in this book.

How Innovation Is Currently Perceived in Higher Education

An authoritative explanation of innovation in higher education has proven elusive, mainly because individual disciplines conceptualize innovation in markedly dissimilar ways. This lack of consensus about innovation need

not be viewed as a weakness, however. One of the attractive qualities about "innovation" as a concept relates to its transferability and reconceptualization across different disciplinary areas, time periods, and cultures. Nevertheless, for innovation to have real meaning in higher education, it must have a well-defined conceptual field that acknowledges strengths, weaknesses, and challenges. Furthermore, a lexicon of interconnected terms should be defined in order for innovation to have meaning. For these reasons, in this book we will discuss how innovation relates to creativity, disruption, and entrepreneurship, among other associated terms.

Some contemporary books conflate the concept of innovation with technology, assuming that almost all technological progress will result in greater efficiency, better student outcomes, and data that can better inform policy (e.g., Lane, 2014; Wildavsky, Kelly, & Carey 2011). Others have followed the lead of Burton Clark (1998) in asserting that an entrepreneurial mindset must pervade the culture of the university if it is to thrive in the 21st century (e.g., Ferreira et al., 2018; Foss & Gibson, 2015; Gibb, Haskins, & Robertson, 2013; Hannon, 2013; Meissner, Erdil, & Chataway, 2018; Tiedemann, 2019). We assume a more measured stance that considers whether or not technology is well suited for specific educational environments, as well as the negative implications of premature disruption grounded in dubious philosophical justifications rather than empirical evidence. Additionally, we acknowledge that scholars need to consider the entrepreneurial impact of their work, but we also reaffirm the central importance of higher education's compact with society and underserved communities.

Business texts on innovation abound; accordingly, innovation in higher education has been defined, in no small part, by the writings of Harvard business professor and consultant Clayton Christensen. In particular, *The Innovative University: Changing the DNA of Higher Education from the Inside Out* by Christensen and Eyring (2011) has had an enduring influence on current thinking about innovation and higher education. Nonetheless, as we will discuss in detail throughout this book, Christensen's theory of disruption remains controversial, and his prediction that nearly half of all U.S. colleges and universities would be bankrupt or close to it has not materialized, even in the wake of the Covid-19 pandemic. Our text will not only offer insights into why disruption has been slow in higher education but also consider why different models of change may be preferable for many institutions.

At this point, it may obvious we are not "innovation boosters," believing everything new is to be embraced and everything old is to be viewed as outdated. We are, in fact, very concerned about the promulgation of

facile rhetoric surrounding disruption and innovation that shortchanges a deeper understanding of the challenges higher education institutions face today. We are dismayed that an abundance of empirical literature about the organizational conditions which promote creativity and innovation has been overlooked in favor of simplistic, yet marketable, ideas about "disruption," "design," and "play" that are advanced by Silicon Valley scions with little interest or regard for the role universities can play in societal progress. We are further concerned that a tacit acceptance of neoliberal values and New Public Management (NPM) philosophies are shortchanging the role higher education can play in creating a more equitable society, developing innovations that can raise living standards, furthering scientific inquiry, and fostering democratic values.

Furthermore, some texts on innovation are not well grounded in the multidisciplinary literature necessary for a nuanced understanding of innovation. Rather, they are often "how to" cookbooks with limited appeal that frequently approach the topic from a single perspective (e.g., "online classes are the future") or offer top-down platitudes about the importance of strong leadership. Too much current literature on innovation lacks engagement with scholarly research that consistently demonstrates a positive relationship between innovation and the concepts of diversity, intrinsic motivation, autonomy, and creative conflict. A deeper understanding of how the concepts of time, efficiency, and trust impact innovation is needed. Additionally, we contend that four core pillars of academic life—academic freedom, tenure, shared governance, and institutional autonomy—are not impediments to innovation, nor are they a primary cause of higher education's financial woes, as some might claim (e.g., Vedder, 2019; Wetherbe, 2013). They are crucial protections for encouraging trial and error, fostering an organizational culture that respects expertise and welcomes critical perspectives, and stimulating creativity and innovation in the 21st-century university.

The primary goal of this book, then, is to offer a different vision for innovation in higher education. To wit, we begin by explaining why a deeper engagement with innovation is necessary; our argument is grounded in the notion that higher education occupies a central role as a catalyst for innovative ideas, products, and artistic and scientific development—and as a nurturer of human talent that can create and support innovation. We further suggest that higher education needs to remain central to discussions about innovation because a viewpoint that relegates innovation to the private sector is liable to reduce innovation to purely economic terms, exacerbate inequities for traditionally marginalized groups, and minimize the

contributions that innovations can make for all of society. Afterward, we define the concept of innovation for higher education through a review of pertinent literature from the disciplines of business, psychology, sociology, and education, as well as the emergent field of innovation studies. We have three additional goals for this book. First, we identify the conditions that enable college and university administrators, as well as faculty, to promote a culture of what we shall define as mindful innovation in their institutions. Second, we mitigate irrational exuberance about innovation and instead offer a clear-headed analysis of its strengths and weaknesses, as well as the challenges in creating a culture of mindful innovation. Third, we make a case for our framework of mindful innovation as a more substantive and more pertinent vision for higher education than the rhetoric surrounding disruption and the prescriptive concepts advanced by neoliberal actors in today's higher education environment.

Why *Mindful* Innovation?

Similar to our conceptualization of "innovation," our use of "mindful innovation" is deliberate and requires a precursory explanation. "Mindfulness" has been subject to ubiquitous commodification in recent years, from mindful eating (promoted by Weight Watchers) to "mindful mints" (which is a candy that purports to reduce stress) (Gelles, 2019). As a result, mindfulness has evolved considerably from Buddhist roots that encourage the use of meditation and conscious "moment-to-moment" experiences as a way to relieve stress and establish clarity of vision (Kabat-Zinn, 2003). And like innovation, the idea of anything being "mindful" is perilously close to existing as an ambiguous Zen-like buzzword prized more for its presumed positive connotations rather than any specific meaning that can helpfully foster individual or institutional progress.

The construct of mindfulness, however, has also been attentively studied by psychologists interested in measuring, often through clinical interventions, how participation in mindful activities (such as social support groups or meditation) impacts individual change (Baer, 2003; Brown & Ryan, 2003), as well as physical health and cognitive performance (Crane, 2017; Creswell, 2017; Tang, Hölzel, & Posner, 2015). Shapiro and colleagues (2006) have formulated a "model of mindfulness" that is helpful to envision how we see "mindfulness" merging with innovation. The three axioms associated with mindful activities are "intention," "attention," and "attitude" (2006).

Intention

As defined by Kabat-Zinn (1994), intention is "enlightenment and compassion for all beings" (375), and is an essential state for understanding "why [one] is practicing in the first place" (32). We similarly believe that a focus on innovation requires two essential considerations relating to intention: (1) a concern grounded in social justice for how an innovative product or process impacts different groups of people, especially those who are traditionally marginalized, and (2) a robust institutional awareness for why the development and/or implementation of an innovation is necessary. It is not enough to innovate for innovation's sake, or for the pursuit of financial reward. Innovations in higher education should be useful to a targeted population and fill an identifiable, specific need in order to have positive, appreciable impact on individuals and society.

Attention

Attention, in the context of mindfulness, pertains to the ways in which an individual consciously understands their own internal and external behaviors in a given moment. A couple of reliable arguments for innovation in today's higher education context is that "the world is moving at an increasingly rapid pace" or that "institutions need to keep pace with a globalized environment or else they will be left behind." While we appreciate the importance of decisive leadership—and the necessity of responding to global forces and external demands—we also believe that rapid administrative decision making without consultation from impacted actors within the organization undercuts a thorough consideration of three important dimensions of the innovation process. We will address these three dimensions—time, efficiency, and trust—in greater detail in our discussion of planning, developing, and implementing mindful innovation in Chapter 7. The main takeaway here is that no innovation stands a strong chance of adoption and diffusion unless the temporal and resource demands are well understood—and bonds of trust have formed through communication channels and consultation.

Attitude

Attitude concerns "the qualities one brings to the act of paying attention" (376). It is one thing to assess the impact of an innovation in a cold,

dispassionate fashion, relying on numerical data to ascertain the success (or failure) of an innovative process or product. However, we draw from empirical studies that demonstrate the collection and analysis of data must be multifaceted, relying also on qualitative feedback about how an innovation diffuses within a given group and has the potential to simultaneously merge with and alter aspects of the existing organizational culture.

As we will discuss in greater detail later, we base our understanding of mindfulness on these principles. Building from this base of understanding, we define mindful innovation through six central tenets: (1) societal impact; (2) the necessity of failure; (3) creativity through diversity; (4) respect for autonomy and expertise; (5) the consideration of time, efficiency, and trust; and (6) the incentivization of intrinsic motivation and progress over scare tactics and disruption.

In longer form, we contend that a mindful approach to innovation has the following tenets:

1. A focus on the *societal impact*, as well as the entrepreneurial potential, of any potential innovation, especially for traditionally marginalized groups.

2. A welcoming environment for experimentation that critically examines *failure* as a part of the innovation process.

3. The promotion of *creativity through diversity* by bringing together groups that represent a broad and diverse spectrum of experiences, backgrounds, and content areas.

4. A safeguarding of individual *autonomy* and respect for *expertise* through venerable institutional and personal protections, such as academic freedom, shared governance, tenure, and institutional independence.

5. A thorough and rigorous consideration of the dimensions of *time*, *efficiency*, and *trust*—and their impact on the adoption, development, and implementation of any innovation.

6. Incentives that simulate the *intrinsic motivation* of individuals and organizations invested in innovative *progress* rather than the promulgation of scare tactics that warn of impending disruption.

Outline of Chapters

With these tenets introduced, our book is organized in the following manner:

In Chapter 2, we appeal for a multifaceted conceptualization of innovation to do justice to higher education's unique status as an instrument for workforce development, community engagement, and cultural and scientific progress. To stimulate our discussion, we expand on the reasons why a more comprehensive understanding of innovation is necessary for contemporary higher education. First, knowledge-intensive industries and services have become vital to economic development in the 21st century (Manyika et al., 2013). Second, the astonishing development of technological and computerized systems threatens to undercut job sectors relating to transportation, logistics, support, production, construction, and service (Frey & Osborne, 2017).

Due to both of these factors, higher education needs to play a central role in developing creative and social intelligence skills in both younger and returning older students so that they might have viable talents for future labor markets. Therefore, many national higher education sectors across the globe, particularly in developing countries, may engage in deliberate massification strategies that reflect these changing workforce demands. At the very least, a period of dynamic change concerning enrollment patterns is likely on the horizon. These strategies will be challenging to develop and implement, however, as the Covid-19 pandemic has engendered substantial uncertainty about the future of colleges and universities around the world. In addition, government funding for higher education in many nations is being cut, especially in Europe and North America, even while educational quality remains a priority and institutional change seems inevitable.

In Chapter 3, we first explore whether or not higher education is in "deep crisis," as Peter Drucker once famously remarked, by reviewing three signs of what we call a "fractured system": (1) explosive levels of student debt; (2) concern about the public perception of higher education; and (3) demographic and institutional instabilities in the sector. We then undertake a selective review of how one might employ innovation theories to make sense of these problems. Central to this discussion is Joseph Schumpeter's classic writings on innovation in the 1920s and 1930s. Contrary to many modern thinkers, Schumpeter (1942/2003) emphasized the importance of time and the luxury of hindsight when distinguishing between a new product or process and a truly innovative one. His insights are also notable for their consideration of the potentially negative aspects of innovation, along with

his famous admonition that innovation could unleash a "process of creative destruction" (p. 83) by creating markets for new technologies (like oil and steel) that could transfigure entire economic sectors and cause social upheaval. A consideration of Schumpeter's writings sheds light on today's discourse on innovation, with its emphasis on the necessity for continuous innovation to maintain a competitive advantage in a hypercompetitive marketplace.

We then compare these early 20th-century writings with contemporary theorists, such as Clayton Christensen (1997), who have often embraced Schumpeter's rhetoric when considering the interplay between innovation and institutional survival. The influence of Christensen's "theory of disruptive innovation" for higher education is highlighted, given its frequent citation by administrators and policymakers interested in arguing for change and reform in today's colleges and universities. As theorized by Christensen, a disruptive innovation initially serves the bottom of a given market and has four distinguishing characteristics from its competitors: (1) simplicity, (2) affordability, (3) convenience, and (4) the ability to provide a product or service to nonconsumers who lack an alternative. For these reasons, for-profit colleges and universities, as well as Massive Open Online Courses (MOOCs), have been proposed as forces that would disrupt higher education, improve efficiency, and expand opportunity, if they were given enough time and resources. Although we acknowledge the power of Christensen's theory, particularly from rhetorical and visionary perspectives, we express deep concerns about the ideological imprint of disruptive innovation on higher education, as well as the lack of empirical evidence for its theoretical claims. Hence, we conclude that while the crises facing higher education are valid and require substantive change, they do not necessarily rise to the level where "disruption" to the entire sector is necessary or wise. Instead, we propose that other models of innovation based on a more careful deliberation of existing problems, a marshalling of the tremendous intellectual and creative resources of colleges and universities, and a focus on solutions that help marginalized individuals as much as they help elite actors—as modeled by "responsible innovation" in Europe—should be embraced.

Chapter 4 critically considers the manner in which higher education's problems, as outlined in Chapter 3, have been analyzed. Drawing on empirical data and research, we take issue with the claim that tenure is the source of multiple problems in higher education—from the rising cost of tuition to the stagnation of new pedagogical approaches. We demonstrate that the discourse concerning tenure has distracted observers of higher education from noticing three developments that have been, at least in part, influenced by

neoliberal philosophies and the administrative principles behind New Public Management: (1) the growth in administrative size and salaries; (2) the outsourcing of important institutional activities; and (3) a lack of appreciation for the benefits that job protections provide to innovative inquiry. We then point out two cultural outcomes related to NPM's attack on tenure. First, an institutional culture conductive to creative and innovative exploration is harmed, not helped, by the erosion of tenure. Second, education is reduced to a commodity that is traded on the market, rather than as a public good that is intended to benefit individuals and society through shared access. Therefore, while we acknowledge the importance of efficiency and effectiveness as important dimensions for any organization to consider, we contend that they can assume outsized importance in an environment attempting to implement the strategies of NPM while fostering an innovative culture. We conclude the chapter with an admonition that the flaws of neoliberalism prevent us from effectively cultivating an innovative environment and, in turn, resolving the many pressing and immediate problems that higher education faces.

In Chapters 5 through 7, we extend our previous writings on innovation published by the TIAA Institute and the *Higher Education Handbook of Theory and Research*[1] to develop, in this book, a new conceptual model of *Mindful Innovation in Higher Education*. We begin in Chapter 5 with a consideration of how "innovation," along with related concepts such as "creativity" and "entrepreneurship," remains underconceptualized and little understood, particularly with regards to higher education. Too often, in higher education and the business world, new ideas and/or processes are labeled as "innovative" before individuals have an opportunity to understand their full impact. As discussed in our narrative with Nathan and Charlotte, the relentless association of "innovation" with "positive development" has caused many within higher education to dismiss the concept as a hollow marketing term with little useful meaning. We will suggest, however, that both a nuanced understanding of innovation as a concept and critical engagement with the term are necessary if individuals and institutions are to consider it in a valuable manner.

We first draw from the humanities to cite several examples of how innovation has been viewed in cinema, literature, and music. We also draw on these examples to discuss how individual endeavor and creativity can result in innovative ideas. By considering how innovation is viewed when a profit motive is not at the forefront, we make important distinctions between

"creativity," "innovation," and "entrepreneurship" and formulate definitions that resonate with the complex missions of colleges and universities.

Creativity refers to inventiveness grounded in field-specific knowledge and expedited by motivation. Even though people assume novelty is equated with creativity, it is not a necessary condition to be creative. Instead, we demonstrate how novelty, assessed through the perspective of hindsight, is intricately related to innovation. Implementation is necessary for a product or process to undergo diffusion, an essential step in assessing an innovation's societal impact (Rogers, 2003). Thus, innovation pertains to the implementation of a creative product or process and its perceived novelty and impact within a given field once it has undergone diffusion and evaluation by a critical audience. While creativity is a necessary condition for innovative thinking, not all creative individuals or organizations have been innovative. Examples of potentially innovative ideas that were not fully implemented (or took decades to recognize) will help the reader understand the complex relationship between creativity and innovation, as well as the ways in which institutional definitions of "success" can impact diffusion.

Meanwhile, innovations, as described by Mars and Rios-Aguilar (2010), can serve as "catalysts for entrepreneurial activities" (454) that are focused on capital gain. Entrepreneurship is thus defined as a creative organizational activity and/or process reliant upon innovation but primarily motivated by the potential for this capital gain. We interrogate the relationship of creativity and entrepreneurship with innovation to demonstrate how they are interconnected on individual and organizational levels, as well as to demarcate differences.

Chapters 6 and 7 present the central ideas necessary to operationalize mindful innovation. In Chapter 6, we employ existing scholarship to identify four environmental factors—diversity, intrinsic motivation, autonomy, and creative conflict—that stimulate innovation in organizational cultures. Numerous studies indicate that organizations utilizing a diverse group of individuals are more innovative. Diversity is defined here by a variety of attributes, such as an individual's areas of expertise, multiplex and intersecting identities, and cultural knowledge. Studies show that a diverse leadership enables employees to propose novel concepts and understand the perspectives of a more diverse range of clients. Furthermore, leaders are more likely to expedite feedback channels, ensure that multiple voices are heard, and delegate authority. Each of these behaviors help both leadership and employees fulfill their innovative potential to a greater degree than they would in a less diverse environment.

Research by psychologists conclusively demonstrates that tapping into an individual's intrinsic motivation is a more effective avenue than extrinsic motivation to stimulate creative and innovative thinking. Unfortunately, it has become increasingly common for leaders, even in higher education, to use financial incentives (as a form of extrinsic motivation) to reward desired behavior and direct resources toward predetermined goals. Throughout this book, we cite documented examples of instances in which financial rewards, especially during the invention and implementation stages, have encouraged shortcuts that failed to produce truly novel, or innovative, thinking.

Related to incentives is the issue of autonomy. One trend that threatens to inhibit innovation in higher education is the increasing prevalence of evaluative processes excessively focused on externally derived measures of assessment (Amabile et al., 1996). To nurture an innovative climate in colleges and universities, we maintain that a certain degree of autonomy is necessary. This is especially important for highly motivated individuals who often choose a life in higher education so they might enjoy greater autonomy than they would have in other work sectors. Finally, we demonstrate how higher education has started to eschew constructive critique in favor of "collegiality." This trend has led to an attitude among administrators that anyone who opposes their worldview—and the policies that spring from it—is not a part of the "team" and needs to be pushed aside in order for progress and disruption to occur. We argue vehemently against this notion, asserting that "group-think" results in unfavorable conditions for the incubation of creativity and innovation. Instead, higher education needs to foster constructive critique so that diverse individuals, particularly those who might be marginalized, can voice their perspectives and expertise, and the institutional conditions for mindful innovation can ultimately be cultivated.

In Chapter 7, we focus on three dimensions—time, efficiency, and trust—that directly impact an organization's ability to plan, develop, and implement an innovation. Time is intricately correlated with the implementation process, and subject to a complex array of considerations unique to each innovative project. The predominantly negative, and occasionally positive, effects of efficiency on innovation are explored. Elements of an institution's social structure will be outlined with reference to concrete examples from our own research. Moreover, we argue that trust has to be engendered by an environment that allows for an open discussion of ideas, even when opinions diverge. As such, we shall argue that an innovative institution needs to carefully consider how to manage the temporal aspects of an innovative process, balance the demands for efficiency with the need

to adequately supply innovative institutions and researchers, and generate the conditions for trust so that resources are allocated appropriately and innovative inquiry can transpire.

Much of the decision making in higher education occurs at the institutional level. Therefore, we also expand on the three aforementioned dimensions of innovation to delineate how institutional decision makers can plan the adoption and implementation of a "foreign" innovation. From a mindful perspective, an innovation should be carefully considered in three ways: (1) its institutional fit, (2) its potential impact, and (3) its likely longevity. Without a comprehensive examination of these factors, our own experience with institutional adoption and implementation indicates that even the most promising of innovations are likely to have minimal impact due to the prevailing cultural norms of the organization.

Building on the historical, conceptual, and empirical discussions of innovation in the preceding chapters, Chapter 8 begins as a cautionary tale about the shortcomings of current rhetoric on innovation. American higher education came of age in the 20th century. If international rankings existed in the 19th century, no more than a handful of American colleges or universities would have been considered "world class." Today, more than half of the world's best institutions on every league table are located in the United States. Therefore, a conundrum exists. On the one hand, America's postsecondary institutions are viewed as moribund. Yet, on the other, they are thought of as the world's best. A propensity of Nobel Prize awards has gone to scientists who conduct research in the United States. The American professorate is more cited than faculty in any other country, and by every innovative measure—patents, intellectual property, start-ups, and the like—America's colleges and universities have been leading exemplars.

How is it possible that American higher education can be in dire need of innovation when, by virtually every available method of analysis, America's postsecondary institutions are doing better than any other institution or system? We answer these questions by arguing that four traditional, yet important, tenets of American higher education—academic freedom, tenure, shared governance, and institutional autonomy—remain indispensable for fostering a creative intellectual environment that can result in innovative progress.

Chapter 9 ties our arguments together and reaffirms our primary arguments about the need for mindful innovation in higher education. The 21st-century university is one that shall remain wedded to core concepts, such as academic freedom, while at the same time adapting to

environmental constraints and evolving to meet societal concerns. During a great period of U.S. higher education expansion in the late 19th and early 20th centuries, colleges and universities adapted and evolved; in doing so, they seized strategic opportunities that enabled innovative thinking while European institutions lagged behind. We shall review the conditions that afford similar opportunities to postsecondary institutions throughout the world in the 21st century.

We shall, however, offer three cautions. First, although the tenor of this book is not that of a doomsayer, we shall suggest that administrators and faculty unwilling to consider the parameters of environmental change are likely to put their institutions at long-term risk. We particularly focus here on colleges caught in the throes of enrollment declines and states unwilling to adequately fund higher education or regulate the for-profit industry. Both examples highlight the challenges of innovation from different perspectives.

The second caution relates to those individuals whom Rogers (2003), in his work on the diffusion of innovations, defines as "early adopters," such as those who have embraced virtual learning. We caution that unfounded exuberance runs the risk not only of failing to meet expectations but also of lessening the climate for innovation. As we will have discussed in earlier chapters, innovation is not a series of organizational revolutions, nor is it a structure that is in constant flux. Paradoxically, innovation is planned, and spaces for innovative thinking are strategically built into the organization.

Finally, we shall suggest that the university of the future will still likely be place-bound and populated by faculty who largely define their work as teaching students and conducting research. The culture in which they undertake these activities, however, will be dramatically different from that of today. The institutions that can socialize their participants to an innovative culture are likely to be the ones that will appear in the league tables of tomorrow and be hailed for their significant contributions not only to labor markets and entrepreneurial endeavors but also to greater social equity and scientific progress.