

Institutional Transformation in the Service of Well-Being: A Cross-Cultural Perspective

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WHAT INSTITUTION IN THE UNITED STATES FITS THE FOLLOWING PROFILE?

- There is heterogeneity among ownership models (private for profit, private not-for profit, governmentally owned) within this institution
- Within its not-for-profit sector, philanthropy is quite important.
- This institution is known, rightly, more for its adherence to tradition than its ability to be nimble.
- In one way or another, this institution touches the vast majority of our citizens.
- Operations are decentralized with significant autonomy at each facility.
- A group of highly compensated but quasi-independent employees are instrumental to success.
- For this particular group of workers, morale and engagement are problematic, more so than in past decades.
- There is a significant power and knowledge gradient between the institution providing service and recipients of service.
- Costs are increasing significantly faster than inflation.
- Despite escalating costs, organizations within this institution feel under-resourced to fulfill their missions.
- Public pressure for value (improved quality, lower cost) is increasing relentlessly.
- In the public arena, questions are being asked about whether the services provided are in fact the services desired or needed by recipients.
- Models are being suggested and in some cases piloted that may radically change the way member organizations conduct their business. Some of these models relate to the use of technology; others relate to mechanisms of payment.
- Access for the poor is problematic; the same can be said of access to service for the socioeconomically compromised

Of course, in a book devoted to higher education, the answer is clear: America's colleges and universities.

But the health care industry also meets each and every one of these qualifications. Across the campus from every college and university in America there is a hospital. Sometimes the hospital is actually on campus, indeed, academic medical centers inhabit both worlds. Always, however, they are no more than a few miles apart. As higher education

wrestles with the challenges listed above, it might prove interesting to look across campus and mine the world of health care in search of lessons to be learned.

This volume offers rich and varied perspectives on the concept of well-being. If we are to meaningfully bridge the institutional silos of academe and health care, it will be critical to establish the presence of some similar construct within the medical world.

There are four foci of activity ever-present in serious discussions of the future of health care, which, taken together, bring us very close to the notion of well-being as that term is used in this volume:

- **Quality and safety:** It often comes as a shock to lay audiences, but in fact American hospitals—for all the miracles of healing practiced on a daily basis—are relatively unsafe places. Mistakes are made. People suffer and die as a result of these mistakes. They happen on a daily basis. As the health care industry has faced this problem, transparency has become a watchword along with the need to reflect soberly on what we do, rather than simply wrap ourselves in the flag of good intentions. The compelling literature on this topic asks caregivers and the institutions in which they work to bring different attitudes and to attend in a different way to self-awareness, self-study, and relentless self-improvement.
- **Engagement:** With growing clarity, health care leaders appreciate that the culture of the medical environment has a profound effect on not only quality and safety, but also on the human experience of caregivers, patients, and families alike. Some of this attention degrades to a focus on marketing, but in the best of institutions, there is a real understanding that the essence of the healing relationship itself is mediated by the culture of the institutions in which medical care is offered and the attitude displayed by caregivers within these institutions.
- **Efforts to marry art and science:** The physician and author Abraham Verghese is leading a project at Stanford Medical School to re-immense young physicians in the art of the physical examination, a ritual that arguably seeks to re-position technology into a role where it supports rather than displaces the sacred encounter between healer and supplicant upon which medicine, at its very best, is based.¹
- **The empowerment of patients and families:** Increasingly, medicine is shedding its authoritarian doctor knows best power dynamics for a much more democratic collaboration between those who deliver care and those who receive it by including, involving, and empowering patients and their families to be true partners in the pursuit of health.

None of these currents within medicine translates *exactly* to well-being or its synonyms, such as flourishing, but taken together, they relate closely with their emphasis on breadth, humanism, more lofty and challenging goals, as well as attention to nuance beyond business as usual (doing surgery or providing education).

In both enterprises—higher education and healthcare—we need to distinguish between isolated islands of progressive activity on the one hand and comprehensive, institutional commitment to a restated mission on the other hand. It would be hard to find a campus that does not have *some* department, program, or class where well-being has not been an essential goal for many years. Similarly, every hospital is home to some area of practice that has long embraced collaborative inclusion of patients, deep engagement of providers, nuanced attention to marrying the art and science of medicine. The golden ring, as it were, is *institutional* adoption of such activities to the point that they are embedded not

only in formal mission and vision statements, but also in the performance expectations of leaders at every level and the metrics used to define success across the institution.

There may indeed be lessons to be learned from the world of medicine—not because health care has progressed to a degree warranting any awe, but because a constellation of internal and external forces has been relentlessly demanding substantial change for well over a decade. These forces are highly varied. They include self-generated commitment to mission (and the realization that the status quo falls short of truly fulfilling mission), demands from regulators, demands from payers, demands from employers, and competitive threats.

As a consequence of such pressures, hospitals are consolidating at an ever-increasing pace. An entire consulting industry has emerged, offering to help steer major changes. Efforts to date provide us with fertile ground for cross-cultural study.

If a rich array of experiments constitutes good news, the relatively slow progression of the field at large is discouraging. We can, however, say from experience that there are three tempting approaches to institutional transformation that are *not* likely to bring the desired and lasting results. Looking first at these methodologies, those committed to change in the world of higher education can at least be warned to avoid what have been, in health care, well-worn paths to disappointment.

Expecting pockets of success or exuberance to spontaneously spark comprehensive, radical, and organization-wide change is naive

RECIPES FOR DISAPPOINTMENT

The Fantasy of Bottom-up Emergence

Within most large and complex organizations there already exist positive outliers, departments or service areas that have seemingly spontaneously found ways to defy the norm and exemplify truly inspirational practice. Change agents often hope to catalyze spread from such internal centers of excellence. The same change agents look for internal champions or service areas undergoing upheaval for piloting initiatives in discontinuous change. Both ideas are to be applauded, but expecting pockets of success or exuberance to spontaneously spark comprehensive, radical, and organization-wide change is naive. Inertia, with its many institutional determinants, is simply too powerful a force to be so easily overturned.

Institution-wide Initiatives Designed to Import Best Practices (The Converse of Our First Example)

Numerous large health care organizations have experimented with all in attempts at transformation by importing programs that offer a vision of a straight path to a radically different future. Two of the most publicized efforts involve replicating Disney's approach to customer service² and Toyota's approach to lean manufacturing.³ These and other efforts rely upon importing and imposing proven methodologies through changed management practices that often include the indoctrination of thousands of employees and hundreds of management staff.

Successes, unfortunately, are rare and occur only when commitment is sustained over years with relentless intent and major resource investment, as has been the case with the Virginia Mason organization in Seattle. In many instances, the "Iron Law," a term coined

by Peter Rossi in 1987, comes into play.⁴ Rossi suggests, provocatively, that when one measures efforts directed toward large-scale social change, the results can be predicted to be nil.⁵

*Assigning Responsibility for Institution-wide Change to Some Obvious Party
(An Early Adapter, Perhaps, or a Content Expert)*

It is not hard to find passionate advocates for the radical improvement of quality and safety on any hospital campus. Often these men and women have formal assignments within the departments variously titled “Quality,” “Quality and Safety,” “Risk Management,” “Quality Improvement.” Who better to task with the job of driving organization-wide change? But it does not work. Why? How could such a commonsensical idea fail and fail repeatedly? The answer lies in a set of mutually-reinforcing barriers:

- Rarely are resources allocated proportional to the desired end state and the magnitude of change necessary to reach that end state.
- While the designated change agents may passionately embrace the vision of a different reality, they rarely have sufficient breath of knowledge to fully grasp the change agenda necessary.
- Nor are they likely to have sufficient cross-departmental experience to understand the barriers to change that exist in other areas of the organization.
- Rarely is the designated change agent imbued with the formal authority to direct the rupture and recreation of established processes.
- Rarely does the designated change agent have enough soft influence or enough time/staff to garner soft influence in order to coax and cajole others into changing.
- The fact that responsibility for change has been delegated to one sub-division of the organization creates tacit permission for other divisions to abjure their own responsibility.

These common paths to failure might suggest that we are doomed to cycles of destruction and re-birth, hoping that whatever Phoenix rises from the ashes is better suited to a more complex future. There is, however, reason for greater optimism because it is possible to identify organizations that have, in fact, differentiated themselves.

By turning away from the previous list of tactics to avoid and looking closely at organizations whose performance is notably superior, we can begin to sketch a conceptual roadmap designed to guide intentional action.

ATTRIBUTES OF UNIQUELY SUCCESSFUL HEALTH CARE ORGANIZATIONS

Change is Embraced

Health care organizations that outperform their peers have made institutional commitments to being in the vanguard of change and innovation. This commitment is clearly expressed by the board, senior leadership, and executives at the departmental level. It involves partnerships with technology innovators (The Palo Alto Medical Foundation, the Ochsner Health System), commitment to redesigning models of care (The Everett Clinic), and investment in understanding the scholarship of change and change management (ThedaCare, Baylor Scott and White).

The Rationale for Change References Both Inspirational Ideals and Marketplace Imperatives

Within the stress and strain of today’s health care delivery system, starry-eyed idealism and exhortations to do better run a high risk of a flat reception. Similarly, fear-filled

admonitions that unless we change, we are lost have been overdone to the point that they sound like the apocryphal Chicken Little who was convinced that “the sky is falling.”

What is needed in order to motivate hard-working and beleaguered professionals is a more nuanced message combining a call to the higher purpose of medicine (or education) with a frank, unvarnished picture of the external forces demanding change in the status quo. Accomplishments that exemplify a combination of excellence, service, and innovation are called out for celebration, as across the institution, *everyone* is enjoined—and expected—to engage together in making a new future.

In fact, an inspirational message that re-focuses the entire organization on the higher purpose of medicine—so long as this message is conveyed in terms that do not pretend away real contemporary challenges—is a prerequisite for a truly engaged and deeply committed workforce. Might the same not be true of higher education?

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The Commitment to Superior Performance Includes a Redefinition of Quality and Service

The Cleveland Clinic, long one of the country’s leading health care brands and a worldwide destination for complex cardiac care, recently acknowledged that despite unimpeachable clinical results, it was not meeting the expectations of its patients in terms of their human experience as recipients of care. They acknowledged that they could do better and publicly committed to doing so. They invested resources, energy, and attention to turning this around, and by all objective measures, they have.⁶

Top-down and Bottom-up Approaches are Balanced and Synchronized

Institutional commitment articulated in the boardroom and by senior management finds expression in programmatic strategies within each department, in the recruitment of physicians, and in the allocation of funds for innovative programs. These programmatic strategies are supported by pilot initiatives. And successful pilot initiatives are aggressively transformed into the way we do things.

While it is not uncommon to find significant tension between physicians and the organizations in which they practice (cf. university faculties, perhaps), uniquely successful health care enterprises have worked hard to forge common commitments between the board, management, and the physician workforce.

Screening Providers for Values, Attitude, and Capacity to Advance Overarching Agendas

In their efforts to recruit young physicians, department chairs of leading health care institutions are committed to focus on the values and attitudes essential to provide coordinated, comprehensive, patient-centered care. They have willingly relinquished the prerogative to recruit with only departmental needs or technical brilliance as criteria. This focus on the ability of new recruits to meet organizational goals rather than simply to meet personal ambitions or departmental goals, while still relatively unusual, is a common denominator of America’s great group practices.

Leadership development programs challenge young leaders to develop and pilot innovative programs that bring the organization's values and vision to light. These programs are presented to senior leadership for review, feedback, and funding.

Leadership Goals at the Departmental or Operating Level Reflect Institutional Priorities

America's leading health care organizations are committed to partnership between clinicians and operational executives, a model that may not have a natural point of resonance with colleges and universities. Within this spirit of partnership, however, we can describe a willingness to soften the line between professional (physician or professor) and administrative (health care executive or academic chancellors, deans, even departmental administrators) roles. At Baylor Scott and White in Texas, the goals of departments (clinical specialties) and operating units (facilities, etc.) are all linked clearly and explicitly to the organization's commitment to developing a transformative model of care.⁷ Departments are expected to collaborate across traditional silos and are rewarded for innovation in care delivery.

These organizations and others like them explicitly repudiate the false logic that attention to culture and softer goals inevitably compromises hard accomplishments.

AT EACH LEVEL OF THE ORGANIZATION

We can take these reproducible features of uniquely successful health care systems and re-cast them into a set of guidelines for each of the following organizational strata:

In the Boardroom

Until the recent past, the governing bodies of health care organizations were generally quite passive, focusing on cheerleading and philanthropic activity. Often deferential to both the status of physicians and the expertise of lay executives, the typical board twenty years ago had little to say about strategy, patient-centered care, or quality and safety.

That state of affairs has changed dramatically. In 2006, The Institute for Healthcare Improvement launched the "Boards on Board" initiative designed to educate and mobilize health care boards to demand discontinuous improvement in quality and safety. This initiative began to change the field, and researchers have since demonstrated a clear correlation between board-level attention and organizational performance.⁸

Today's progressive health care board takes a strong role in setting mission-focused strategy, linking both capital spending as well as executive evaluation and compensation to metrics of strategic success. These boards have changed their committee structure to focus not only on the financial health of the organization, but also on the degree to which the organization is aligned with its mission and the level of success that has been attained. Regulatory demands and attention certainly help to focus health care boards and offer a forceful direction that may not exist in higher education, but the best organizations have active boards as well as pointed policies driving patient-centered, integrated, and high quality service, well beyond what is required for regulatory compliance. These boards are leading, and insisting. They are respectful but no longer deferential.

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At the Executive Level

The senior leadership teams of exemplary health care organizations are demanding and focused on change. They appreciate that society cannot sustain current rates of health care inflation, inadequacies and unfairness in access to care, or preventable errors. They are impatient with arguments about how we have always done things and look to drive alignment both within as well as across traditional departments. Jim Leonard, the physician leader of the Carle Foundation, told the press in his home community that his greatest fear concerning the new medical school to be created by his organization and the U. of Illinois was that it would be too traditional, shying away from the opportunity to energize and re-envision what medical education can be.⁹

This activism inevitably abrades the traditional prerogatives of departmental leadership, asserting as it does that alignment toward common purpose and unifying goals is essential. No longer is excellence within some traditional silo sufficient. In order to successfully advance such an agenda, the call of a common mission and shared focus needs to be absolutely clear, along with a convincing description of the advantages to all concerned when synergies are exploited across departments, across schools, and across research, teaching, and service departments. Successful senior leaders hardly sacrifice all their autonomy, but they are selected based on their willingness to appreciate that excellence within traditional boundaries is indeed compatible with being part of a collective that achieves a different level of excellent by virtue of what it does *across* all of its subsidiary domains.

Departmental or Operating Unit Leadership

Departmental leaders are selected for their ability to advance multiple sets of organizational goals—goals framed in terms of local responsibility as well as goals framed in terms of overarching, institutional commitments. These days, particularly, they are selected and promoted with attention to their ability to manage complex change agendas and to resist the pull of zero sum arguments that they have to win the resource game at the expense of other departments in order to flourish. The complexity of institutional survival and the challenges of new reimbursement models are forcing institutions to find operating unit leaders who can work collaboratively with their colleagues. Long-maintained status hierarchies between specialists and primary care providers are melting away in this environment, as each group appreciates its dependence upon the other.

At the Clinician Level

Health care enterprises can only be as good as the clinical experts who actually provide care. While physicians get the lion's share of attention, they are hardly the only members of what is increasingly recognized as a team sport. However, they (physicians) enjoy the highest level of autonomy, are traditionally the most hierarchical, and are the most generously compensated.

Despite the fact that clinical care is increasingly recognized as a collaborative endeavor, medical training has retained a dogged focus on individual responsibility and individual prerogatives. Given that we expect physicians to be able to make life and death decisions, often with incomplete data and often in highly stressful situations, an emphasis on autonomy is perhaps understandable.

This traditional value, however, is not great preparation for understanding the concept of interdependence or for collaborative practice. And collaboration is an essential dimension of effective clinical work, particularly in institutions aspiring to the sophistication, safety, and interpersonal sensitivity that stands as our proxy for well-being. Not only is there a *clinical* team operating in every care delivery environment, there also is the need to collaborate with patients and their families, to operate with fiscal restraint, and to understand one's needs and wishes within an organization context often marked by resource constraints.

The best organizations are intentionally focused on learning how to learn how to exploit what technology offers without allowing it to dehumanize medicine

Here the best organizations work relentlessly to look beyond technical mastery and beyond dogged commitment to autonomy prerogatives, selecting clinicians instead for attitude and interpersonal skills. These organizations pay close attention to onboarding and organizational acculturation and have very clear behavioral standards. They look for and cultivate an

appreciation that interdependence is a fact of life in modern health care and that autonomy should only remain an ascendant value when it is exercised for professional reasons to benefit patients, not when it is exercised for guild reasons, that is, for the caregivers' convenience, ego, or aggrandizement.

At the Service Delivery Level

Far from the boardroom, health care is delivered at the bedside, in the clinic, in patients' homes, and in classrooms devoted to education and prevention. Here, in the best of organizations, we see the ways in which values and institutional priorities have survived the risks of dilution inherent in a complex organization. Here is where carefully chosen caregivers present the face of organizational values to their patients.

Connectivity is the issue: connectivity between senior leaders and hands-on caregivers, between the boardroom and the bedside. Technology is both an enabler, as it makes data available, and a threat, as machines threatens to come between care provider and patient. The best organizations are intentionally focused on learning how to learn how to exploit what technology offers without allowing it to dehumanize medicine. A commitment to teamwork and the willingness to include the patient in that team furthers a mutually sustaining connection between the givers and receivers of care. In the best organizations, these issues receive relentless attention.

CREATING AN INTEGRATED FRAMEWORK: THE HYPOTHETICAL CASE OF XYZ UNIVERSITY

Imagine a medium-sized, successful university whose dean feels passionately that well-being needs to be incorporated as a driving principle across her institution. Over the last few years, she has successfully connected several similarly inclined faculty members with BTtoP grant opportunities. One such pilot was an unqualified success; another was successful although it fell a bit short of expectations.

Why not reach out to a like-minded colleague—the Director of Student Health, who also oversees the Counseling Center, for instance—and ask this individual to spearhead the effort?

While this may seem like an obvious strategy, it risks embodying our third recipe for disappointment. Consider the obstacles:

- As important as the Student Health Center is, can its director be assumed to have the status, relational capital, formal authority, or moral authority to shape the behavior of dozens of academic chairs and hundreds of faculty members?
- As much as the members of the Health and Counseling Departments know about helping young adults with problems, can we trust that their theoretical knowledge or professional experience is richly informed by the teachings of positive psychology, the scholarship of well-being, and sophisticated theoretical frameworks for adult development? In all likelihood, their training has had more to do with various models of pathophysiology and psychopathology. Their orientation is likely to be toward relieving symptomatology rather than with fostering well-being because *someone* has to help sick or troubled students, and that responsibility will not vanish with an institutional commitment to well-being.

We could make similar arguments against any of a number of other likely candidates for leading change: a religion chair, a social work school, a multidisciplinary program for the humanities, etc.

So what might our dean do? Arguably, she needs to focus relentlessly, systematically, and with calculated intentionality on two foundational activities, which, over time, will create an environment primed for discontinuous change: “establishing a guiding coalition” and articulating the “burning platform” for change.¹⁰

The coalition she puts together needs to be chosen not simply for its enthusiasm, but also for breadth, reach, political capital, and moral authority. It needs to include individuals with proven business skills, some with the experience of having driven innovation in the past and some who have experience interacting with the university’s board. The idea here is not simply to collect the most committed voices but to collect voices that can craft unimpeachable arguments nuanced in such a way as to address local concerns and possess a gravitas that cannot be ignored.

It may take many months to solicit, engage, and convince the right people, and this group cannot simply be allowed to become another committee. To be successful it will have to marry personal passion, local knowledge, relentless focus, and a strategic approach to driving an action agenda.

Hand in glove with the process of recruiting coalition members comes the need to construct the case for change, a case that balances inspiration with an appreciation of the risk involved if attention to well-being remains marginal. These arguments will be necessary in order to recruit members of the guiding coalition and will form a scaffold for the further dissemination of the coalition’s recommendations. The relevant arguments will need to be translated into language that reflects the history, values, concerns, tensions, and priorities particular to XYZ University.

A successful guiding coalition will work to refine its proposals and enlarge its sphere of influence in transit to its first goal. That goal involves securing a formal mandate issued jointly from the governing body, president, and faculty senate to return with an action agenda. Inevitably, given the politics of any complex organization, such a mandate will come with constraints and will reflect a host of other implicit or explicit agendas. That cannot be avoided. However, even given political complexities, some level of

formal support from all three centers of political power within the institution will create a propitious environment for a real change agenda, one that can be driven simultaneously from the bottom up and the top down—change that can last.

CONCLUSIONS

We are left not with construction blueprints (excessively detailed and prescriptive, a set-up for the Iron Law) but with conceptual sketches drawn from health care, an enterprise similar enough that lessons may indeed translate.

This comparison suggests the need for a program of concerted work on multiple fronts simultaneously. It is, of course, enormously difficult to sustain coordinated efforts across time in the presence of near infinite distractions. It may, however, be far easier than dealing with the consequences of inaction.

And if these lessons from the world of health care are at all useful to those in the world of higher education, think what else might be sparked by serious efforts to share interdisciplinary experience, perspective, and expertise.

NOTES

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Reinventing Higher Education for the 21st Century

Peter Leyden

THE MOMENT HAS COME FOR HIGHER EDUCATION TO REINVENT ITSELF AND HELP CREATE A 21ST-CENTURY CIVILIZATION

I come to this conversation about the future of higher education as an outsider but a very sympathetic one. I've spent the last 20 years rooted in Silicon Valley and the San Francisco Bay Area and have followed the front lip of the digital revolution as it disrupted whole industries and fields. I originally came to San Francisco to work at the early *Wired* magazine, which played an instrumental role in explaining the coming effect of new digital technologies and the internet to broader audiences. *Wired* also played a key role in reinventing how media worked on the nascent World Wide Web. Since the *Wired* days in the 1990s, I have moved through a variety of startups and entrepreneurial ventures and have built a wide network of people who track or are building the next generation of technologies and adapting systems around them. My current company, Reinvent, routinely brings together diverse groups of these kinds of innovators over the new medium of interactive video to work on how to fundamentally reinvent various industries and fields. During the last couple years, I have worked with Georgetown University on two such projects and have been applying what I have learned over the years in Silicon Valley to how to reinvent higher education for the 21st century.

The time truly has come to reinvent higher education. Certainly internal pressures (such as cost increases) are building for a change that those inside the academy can and do frequently lay out. But as an outsider, I see the outside changes that are mounting to the point at which higher education has no choice but to adapt. It is impossible for higher education not to go through a fundamental change when the planet is going through a historical world shift simultaneously on several fronts. People in 50, or 100, or 500 years will look back on the first half of the 21st century as the historic moment when three unprecedented shifts with centuries-long repercussions occurred. First, the world went fully digital. The computerization of everything and the interconnection of everything through the internet will be seen as giving human beings what amounts to a step-change in capabilities. It can be said without much exaggeration that everything can be reorganized for the better (faster, cheaper, more efficient, more productive) around these new technologies. Second, the world went fully global. Previous centuries had at best international systems, but now almost all systems are truly global and working on a planetary scale. Third, the world went fully sustainable—or if not, people may not be around in 500 years to comment. Climate change is such a mind-boggling challenge that it defies comparison with all

previous historical challenges. The level of transformation the world must go through in the next 50 years to meet this challenge is, as they say in California, epic.

In this context of profound, historic, world change, how could systems of higher education not change in fundamental ways too? In the short-term, you can see vigorous resistance. Some of this is the typical conservative response of any entrenched institution that faces the unknown. Some of it is because many in academia mistake the early versions of new technologies that have been layered on to higher education as the be-alls and end-alls. Massive open online courses (MOOCs) caused a stir and then were dismissed as not very effective rather than being seen as early the prototypes of what is to come. The more thoughtful concerns are about how to preserve the aspects of higher education that have to do with developing the whole person or fostering well-being, the theme of this book. The application of the early digital technologies to higher education tended to be cruder and lost the nuance of complex interaction traditionally associated with immersive liberal arts education. The early technologies were about creating efficiencies and scale in order to drive down costs, or they were best applied to teaching more technical skills in the fields of science, technology, engineering, and mathematics (STEM).

HIGHER EDUCATION'S STRATEGIC ADVANTAGES

The march of technology, however, never stops, and many new technologies are maturing that will fit more efficiently with a wider range of higher education applications, particularly those that pertain to the liberal arts and humanities. I have long been a champion of interactive group video, and my company Reinvent has been a pioneer in the field. Only 10 years ago in 2005, YouTube was founded and popularized one-way broadcast video over the internet. This occurred because high bandwidth connections reached the point at which enough businesses and homes in the United States and the Western world were able to move large video files over the internet. We then started to see the inexorable rise of one-on-one interactive video, most notably on Skype. Just several years ago, around

2012, many of the technology giants began investing heavily in interactive group video, which brought together as many as ten people in the same, live, video conversation. Apple expanded its FaceTime, Google created Google Hangouts, and Microsoft bought Skype and expanded the number of individuals who could participate at one time. We also saw an explosion of startups working on these new group video platforms and adapting them initially for business. It's always useful to follow the money

in Silicon Valley to get an insight into what's next. This time is no exception. And you can begin to track the data metrics too. In 2005, almost no traffic on the backbone of the Internet carried video. By 2010, half of all traffic on the internet involved huge video files. By 2018 video is projected represent close to 90 percent of all internet traffic. Much of this traffic will be television and movies via Netflix and the like, but much will be interactive video exchanges across America and the world.

The reason this matters for higher education, and particularly for the liberal arts sector of higher education, is that so much of the value of higher education up until now has been transferred through face-to-face, small group interactions in physical locations on college and university campuses. So much of the higher value work of higher education has been

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done in a room with one to ten people going deeply into complex conversations that rely heavily on the subtlety of communication through facial expressions and body language and on working on common documents. A one-on-one tutorial, a graduate seminar, or even a faculty committee meeting—everything gets done that way. Now increasingly, those same kinds of interactions can be done reliably, efficiently, and productively over group video. And it's getting better and better each year.

Meanwhile, we are watching an inexorable buildout of the global wireless infrastructure that puts us on track to have pretty much everyone in the world connected to the internet within a decade. Already 75 percent of the people on the planet have mobile phones, and 40 percent are on the internet. We have watched how the buildout works over the last 15 years in the developed world, and we can count on this to take place next: all people, with some exceptions, will soon have mobile phones that can receive at least a voice signal. But once that thin, wireless connection is established, the network can be built out over time to allow basic internet connections to send email, and then soon after that, to make higher bandwidth connections (such as 4G and soon 5G) to move video. So within 10 years, all businesses and all those in higher education can expect everyone on the planet to be capable of connecting with anyone else on the planet over high bandwidth video and all other kinds of collaborative tools.

Seen through this lens, new technology will not necessarily undermine higher education but could super-empower it. The rarified physical environments of academia could open up to the world, and the world could come flowing back to enrich academia. The pace of interactions could greatly accelerate, the scale of reach could ramp up, and the costs could decrease. By no means would the need for physical campuses go away, but they could be greatly augmented to the benefit of all. The super-charging through the high-bandwidth interactive video infrastructure is just one clear way higher education could benefit from the innovative application of new technologies.

There are also many other ways. For example, we're only in the early stages of the Big Data revolution, and a dramatically increasing amount of human activity is now being monitored, captured, and then analyzed. No longer will professors rely primarily on an occasional intuitive insight and a final essay to judge what a student has learned or to understand his or her process for getting there. The professor will have many ways to watch that process and see the critical junctures at which intervention could provide the perfect learning moment. This is not the place to lay out a comprehensive list of new technologies that could positively affect the mission of higher education. My intent is just to point out that one of our three world historical shifts, the world going fully digital, should be understood as actually playing to the strengths of higher education.

The second, historic, world shift—the world going fully global—also plays to academia's strengths. In fact, there are few institutions better positioned to help the world make the transition to a much more highly interconnected, cross-cultural, integrated future. This is particularly true of those fields in the humanities that currently are more undervalued than other practical fields and are most associated with developing the well-being that is the theme of this book. A more interconnected global future needs those with expertise in languages, history, religion, philosophy, and the study of cultures of all sorts. We will more successfully knit the world together with a deeper appreciation and understanding of the humanities. The knowledge and skills that come from the broad range of the

humanities are by definition practical in this great human endeavor. They also happen to foster greater individual well-being and help to develop the whole person. But don't lose sight that they are practical too.

It's worth pointing out to American readers that the arrival of an increasingly global era will not diminish the value of American universities and colleges, but rather will increase this value, at least in the first half of this century. American higher education is still a magnet for foreign students and will be for a long time. The more transparent nature of all media and the opening up of these great interactive video conduits will make it easier for people from around the world to take advantage of the gold standard of higher education. That may well change over the decades as the globalization process flattens the historical advantages accrued in the United States and Europe. In the second half of this century, the best students may well migrate to China or another regional powerhouse, but not for now.

The third meta-shift—the move to a fully sustainable world—is an even more perfect fit for higher education. In fact, probably no institution is better positioned to help drive that comprehensive transformation for several reasons. No other institution brings together such a comprehensive range of different disciplines. If ever there was a challenge that calls for a multi-disciplinary response, it is climate change. The creation of truly sustainable systems will touch on nearly every aspect of how humans live and work. The solutions will need to be built on expertise from almost all disciplines, and the ramifications of a shift to sustainability will reverberate through all fields. Academia is also one of the few institutions that maintains a long-term perspective on everything, and its roots go back centuries, even millennia. Unlike frenetic business, it is the one place in society that is optimized for more sober, long-term thinking. Most importantly, higher education is where the best and brightest of the next generations are prepared for their long careers. The real hope for solving the climate crisis and all the associated environmental problems will be the younger generations that are just coming of age in this new century, this new era.

PREPARING THE NEXT GENERATION FOR THE NEW WORLD

One of the main objectives of the entire higher education game is to help prepare young people for tomorrow's world. Tomorrow's world, the world of the 21st Century, the world in the next several decades—however you want to define it—will be radically different than the 20th century world that shaped and still defines higher education. Almost all the students in college today can expect to live to see the end of the 21st century. We are still in the beginning stages of our understanding of genetics, but our knowledge is on a path of exponential acceleration. The biotechnology industry today is roughly where the digital technology industry was 30 years ago—poised for gangbuster growth. Those in the Millennial Generation, generally considered those aged 18 to 35 today, can almost certainly expect to live 100 years due to scientific and technological advances. The generations after them possibly could live to 120 years, the point most scientists currently think of as the limit of human cellular structure. The bottom line is that we are now literally preparing students for the entire century. And as I have argued above, that century will have at least three unprecedented characteristics that will make how the world works radically different from how the world works today.

The coming all-digital world will have one development with a huge effect: artificial intelligence. Computers are already becoming so advanced that they are starting to be able to do knowledge work that for all previous eras was the exclusive domain of humans. We are seeing how low-level, white collar jobs related to office administration are being shifted to tireless smart machines. And higher-end, white collar jobs that involve legal work and medical analysis are now becoming vulnerable. There is a robust discussion in high tech circles about where the advance of artificial intelligence ends. Could computers become as intelligent as humans in the coming decades? Could they become more intelligent and move beyond human control? Set aside the more extreme speculation about future robot overlords. There is no doubt that the world is heading into a period in which new generations of thinking machines will create massive disruption in industries and fields that previously were immune to such disruption.

How should individuals best prepare for that high-tech world? How should higher education reinvent itself to help those individuals better prepare? In 2015, Georgetown University initiated a project with my company Reinvent to explore some of these themes. We conducted a dozen, in-depth interviews with innovators inside and outside academia to start the project and to get their insights on what was needed. One of them was John Markoff, veteran technology and science reporter for *The New York Times* and author of the new book *Machines of Loving Grace: the Quest for Common Ground between Humans and Robots*.¹ Markoff made a strong case that autonomous artificial intelligence was not on the horizon anytime soon but that widespread disruption from the application of artificial intelligence and advanced robotics was imminent. Some of this, like the arrival of self-driving cars, will have a big effect on jobs such as taxi driver and truck driver. But the applications will rapidly move up the food chain. “I’ve been traveling the country having a debate with Jerry Kaplan, who wrote *Humans Need Not Apply*. We both have come to the conclusion that one of most valuable things to have in this economy is a liberal arts education,” Markoff said. “We’re seeing a world where people do different things every two to five years.”²

A liberal arts education also fosters the kind of adaptable mindset—the ability to think critically—that always will be needed in any context

There will be plenty of work for humans to do in the coming decades and throughout the century, but it will be work that humans are best suited to do, not machines. That’s one reason why Markoff argued that a versatile liberal arts education, including work in the humanities, will be useful, even practical. The STEM disciplines are actually a more amenable environment for the encroachment of smart machines. The study of the humanities and social sciences is the study of humans, the understanding of which may lie beyond the reach of artificial intelligence for the foreseeable future. A liberal arts education also fosters the kind of adaptable mindset—the ability to think critically—that always will be needed in any context. Dr. Vivienne Ming, a theoretical neuroscientist and technologist working in the field of artificial intelligence, put it this way: “The characteristics that will make people successful are the same things that today are predictors of a successful career, the same things that are predictive of success in children, the same things that have probably been driving human success throughout history. To put it as succinctly as possible, it’s about being a problem-solver.”³

The world for the foreseeable future is not going to run out of problems to solve. And it seems unlikely that machines will be able to acquire the capacity for creative problem solving in the foreseeable future. Tim Kobe, the founder and CEO of the strategic design firm Eight Inc., knows a few things about creative problem solving. Kobe personally worked with Steve Jobs every week for a dozen years, and his firm was responsible for the initial idea and launch of the Apple retail stores. He came to understand how Steve Job's brain worked, and he has since sought to find similar traits in all the positions he fills in his global firm. "Particularly today, there's an emphasis on STEM and the development of the more analytical way of thinking about things, but we haven't seen that in the most successful people," Kobe said. "In the most successful people, we've actually seen an incredible balance in the ability to move between right and left brain capabilities."⁴

From the individual's view, the shrinking world of our increasingly global future will bring its own challenges. A planet of seven billion people is charting towards a crest of at least nine billion, and the vast majority of them have a long way to go to achieve Western standards of living. A big part of the project of the next century will be the inexorable integration of all of the planet's people into a more workable whole. In such a context, people skills will go up in value. And the higher education experience devoted to the humanities and disciplines and focused on understanding or working with people will go up in value as well. Take the example of the study of literature, as explained by Edward Maloney, a professor of English and the Executive Director of The Center for New Designs in Learning and Scholarship at Georgetown: "The idea of getting inside someone else's head and seeing emotional connections and interactions between individuals, even as they're fictionalized, allows you to imagine what it means for you to have those kinds of interactions with someone in the world," Maloney said. "In some ways, it's a way of practicing your sense of empathy."⁵ Here's where higher education's timeless goal of fostering well-being in the individual (developing empathy and the like) will gain practicality in a more globalized world.

The meta-challenge of climate change this century should also shape how higher education prepares an individual. Many of the capabilities we have touched on above will be needed here: adaptability to increasingly strange weather patterns and disasters, constant problem solving to scale up new sustainable systems, and empathy for people in other parts of the world who are harder hit and migrating. Other softer skills and knowledge beyond those provided by the hard sciences and engineering will be needed. "You are never going to solve global warming if you don't understand the cultures in which global warming is happening and the cultures of resistance to changing it," said Helen Small, Professor of English Literature at Oxford University and author of *The Value of the Humanities*. "We know what science tells us is required to change the picture, and changing it will come down to changing cultures. And that's the ground in which you really do need humanistically-trained people, people who are equipped with the skills that humanities especially provide to go out there and make a case, and to argue it articulately with language as well as with figures."⁶

The main contribution that higher education can make to the long-term, decades-long battle to turn the tide on climate change will be instilling in coming generations a sense of common purpose, a fundamental belief in the common good. Here we touch on another of the overarching themes of this book: the realization of higher education's greater

purpose at the individual level will instill a sense of well-being at the societal level; it is building a bedrock commitment to the common good. It is hard to see how humans will be able to solve the monumental challenge posed by climate change without a level of sacrifice last seen in the great World War in the middle of the last century. This time we must muster such an effort without the fear of an enemy but with the attraction of a common goal. This time we need to be all on the same team working for a common purpose. The world will need help to get there.

BUILDING A 21ST-CENTURY CIVILIZATION

If you pull back the historical lens even farther than we have so far, what lies ahead of this century will amount to civilizational change. In 500 years, people will look back on the 21st century the way we do on The Enlightenment. They will see a vast array of changes across almost all fields that were so profoundly different than what came before that they will have to categorize what emerged as a new civilization. The defining features of that civilization will be grounded on our three big shifts and built on an all-digital, computerized foundation. This foundation will be understood as one global system operating on a planetary scale, completely attuned to the limits of the natural environment, and designed to operate sustainably within it. To us today, the three shifts look like nearly impossible challenges that we will never figure out. To people of the future, those shifts will look like inevitable developments that humans obviously had to go through and did.

The main contribution that higher education can make to the long-term, decades-long battle to turn the tide on climate change will be instilling in coming generations a sense of common purpose, a fundamental belief in the common good

The last time humans went through a full civilizational change of this magnitude was during the Age of The Enlightenment, which I define as spanning from the scientific revolution of the 17th century through the political upheavals of the 18th century. The sweet spot would be around 1650 to 1750, centered in Europe, and more specifically London and Paris. I expect many in the academic community might debate this proposition, including the temporal boundaries, but hear me out for the purposes of my main argument. It is worth looking back and thinking through the main developments of that era to better understand what lies ahead for us. One could argue that in the space of about 100 years, all the key pieces of modern Western civilization were put into place—constructs that not only the West, but also the whole world still work within today. In science, we invented the scientific method that was the first move towards modernity. In government, we shifted from rule by monarchs to representative democracies. In economics, we created financial capitalism based on stable currencies and reliable banking. In energy, we figured out how to tap into the power of fossil fuels, starting with coal and moving towards oil. In industry, we invented division of labor factory production as the building block for the industrial revolution. In culture, we moved increasingly from religious superstition towards humanism. You get the picture.

The role of universities at that time was absolutely central to what unfolded. Though universities existed before The Enlightenment, their numbers exploded across Europe during the 17th and 18th centuries. An estimated 80 percent of key figures in the scientific revolution were university trained, and half of them held posts in universities to do

their work. Isaac Newton was a professor at Cambridge University and was also Master of the Royal Mint—the man charged with figuring out how to create a reliable gold standard for England to jumpstart modern capitalism. Those within higher education at that time were integrally involved in the transformation of the society around them. And why wouldn't they be? Those privileged enough to work within the academy were among those best positioned to help society move through such a complex transition on such a comprehensive range of fronts.

The same holds true today. Those working within higher education are uniquely positioned to operate on the civilizational plane. Unlike those in business, they are not accountable to shareholders pressing for results in three-month quarters. Unlike politicians and government officials, they are not scrutinized at all times by citizens within two-year time horizons. They have the relative luxury to think long-term and to think outside the box without outside pressure, which is the only justification for the continuation of tenure from an outsider's perspective. They have the relative time and freedom in their research to dive deep and to make broad cross connections between disciplines. And they are charged with preparing the next generations to make an impact that stretches even farther into the future.

Today we are facing the same level of deep structural changes in how we work and live that Europeans faced during The Enlightenment. Our scientific understanding of the world is going through fundamental changes. Our core technologies are shifting under our feet. We are just beginning a massive transition to new sources of renewable energies. We have to rethink how we produce almost everything to fit a new sustainable paradigm that leaves much less waste. The way the economy works needs an overhaul in order to better serve everyone, all classes of people, and not only in the developed world but over the whole planet. Capitalism itself may need a fundamental reinvention to deal with its reckless growth and many externalities. And representative democracy itself may need to transition to some new form of democracy that can better serve society and get things done.

If ever there was a time to live up to the full realization of higher education's greater purpose, it is now. We need work on all those fronts by people who are not structurally beholden to outside interests and can act in the interests of the larger society. When we build the new digital, global, sustainable systems that will operate in the 21st century, we want those systems designed first and foremost for the well-being of all individuals and society at large. That should be the foundational starting point for designing any system with civilizational reach.

So higher education faces an incredible opportunity but also must face up to an onerous responsibility. Whichever route motivates you, take it. But for the sake of the broader society and for the welfare of future generations, get going soon. Snap out of the cautious internal bickering about whether or not to change. Drop the incrementalism of what amounts to irrelevant small talk. Step back, look around you, stake stock of what's really happening, and get on with the reinvention of your institutions as the fundamental prerequisite for helping reinvent our world. We've got a 21st-century civilization to build.

NOTES

1. John Markoff, *Machines of Loving Grace: the Quest for Common Ground between Humans and Robots* (New York: Ecco Publishing, 2015).
2. "How to Survive an Explosion of Artificial Intelligence and Increasingly Automated World," *Reinvent*, February 12, 2016, <http://reinvent.net/how-to-survive-an-explosion-of-artificial-intelligence-and-an-increasingly-automated-world/>. See Jerry Kaplan, *Humans Need Not Apply: A Guide to Wealth and Work in the Age of Artificial Intelligence* (New Haven, CT: Yale University Press, 2015).
3. Vivienne Ming and Peter Leyden, "The Skills Most Predictive of Positive Life Outcomes Are Also Most Robot-Proof," *Reinvent*, November 12, 2015, <http://reinvent.net/events/event/skills-most-predictive-of-positive-life-outcomes-also-most-robot-proof/>.
4. "How to Survive an Explosion," *Reinvent*.
5. "What Role Can the Humanities Play in Tackling Climate Change?," *Reinvent*, February 8, 2016, <http://reinvent.net/what-role-can-the-humanities-play-in-tackling-climate-change/>.
6. *Ibid.*