

Revolutions in Higher Education: how many dimensions of openness?



Empire State College, State University of New York

"All College" "Open Learning: Reflecting on the Past, Celebrating the Present, and Creating the Future"

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Revolutions in higher education: how many dimensions of openness?

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Abstract

Ernest Boyer was that unusual combination in higher education: an impeccably establishment figure who was also a consistent innovator. He joined SUNY in 1965 as winds of change began to blow open the doors to higher education, and as its Chancellor he created Empire State College (ESC) in 1971 so that people could take degree courses without attending classes. That same year, in Britain, the Open University (UKOU) inaugurated its distance learning system with a first cohort of 25,000 students.

Both ESC and the UKOU were revolutionary. ESC opened up the curriculum so that people could design their own programs, whereas the UKOU abolished all academic prerequisites for entry. These initiatives sparked a wave of innovation around the world, although the emergence of the blanket term 'open and distance learning' conflated two essentially different concepts and obscured the variety of ways in which higher education could become more open.

The Internet has further increased the dimensions of openness. The ideal of a global intellectual commons is becoming reality as the licensing of content as Open Educational Resources (OER) makes it possible for students and faculty to find and adapt quality learning materials on almost any subject. Social media are creating a movement toward open educational practices where assessment and credentialing can be collaborative endeavors.

Is what is possible always desirable? Drawing on his experience as an academic and university president in North America and Europe, as well as his leadership roles in international educational organizations (UNESCO and the Commonwealth of Learning) the author will distinguish between revolutions and fads.

What are the dimensions of openness that must be combined to provide sustainable and credible higher education in the 21st century?

Introduction

It is a great honor to give the Boyer Lecture and a double honor to deliver it as Empire State College, Ernest Boyer's creation, celebrates its fortieth anniversary. I congratulate the students and alumni, the academic and supporting staff, and the president and former presidents on all that Empire State College has achieved in those four decades.

Giving the Boyer Lecture has great personal meaning for me. I had been aware of Ernie Boyer as one of the great figures in US education since the early 1970s, knew of his role in the creation of Empire State College and followed with awe his progression from being Chancellor of SUNY to Commissioner of Education, to President of the Carnegie Foundation for the Advancement of Teaching. Not to mention his collection of 165 honorary degrees!

I was, therefore, deeply honored when I received a letter from him out of the blue in 1992, asking me to become a trustee of the Carnegie Foundation.

He explained that he had two reasons for inviting me. First, he felt that US higher education was not giving enough attention to open and distance learning (which I shall call ODL). He hoped that I might supply that lack, having recently come to the post of vice-chancellor of the UK Open University after 21 years experience in Canada, part of it in ODL. Second, by the 1990s the trustees of the Carnegie Foundation were all Americans, whereas earlier it had a broader North American focus. He thought that adding a Canadian-Brit would add some international leaven.

I served on the Carnegie Board through to Ernie's retirement and the Foundation's move from Princeton to Palo Alto under Lee Schulman. It showed enormous foresight, on the part of Andrew Carnegie and those who created the Foundation, that they gave its presidents such flexibility to adapt the work of the Foundation to each new era – if necessary relocating it.

My eight years as a trustee, from 1993 to 2001, were enormously stimulating and brought me into the company, twice a year, of some of the most prominent doers and thinkers in US higher education. I can best describe our role in Ernie's day as that of an editorial board. We were not, of course, expected to do anything as pedestrian as commenting on drafts of his writing. Rather our task was to be both retrospective and prospective.

Scholarship Reconsidered

His great work, *Scholarship Reconsidered*, had been published in 1990 and we reviewed the evidence of its impact regularly. Its influence extended beyond the US and, for example, new criteria for promotion to full professor at the UK Open University, which we implemented in the 1990s, required candidates to show excellence in any two of the three functions of teaching, research and service.

As trustees we would also receive oral reports of the work being done for Ernie by the Carnegie staff on issues such as professional education and doctoral degree. He looked to us too to alert him to potentially important issues for the future. It was enormously stimulating and satisfying work, carried out in the genteel surroundings of the magnificent house in Princeton that served as the base for the Foundation and suffused by the delightfully welcoming hospitality of Ernie and Kathryn Boyer.

It is hard for me to contemplate the world of higher education today without wondering what Dr. Boyer would have made of it. I re-read *Scholarship Reconsidered* in preparing this lecture. Like many great books it is actually quite short – a mere 84 pages of text – but through it he shows a tremendous grasp of the history of US higher education and the trends and tensions that have molded its evolution. He wrote in the late 1980s, when faculty hiring was beginning to pick up again after a rather barren period, but his optimism was tempered by concern that just as the missions of higher education were diversifying, both institutions and faculty were being forced into a narrower conception of their roles.

About institutions he wrote that: ‘we need a climate in which colleges and universities are less imitative, taking pride in their uniqueness. It’s time to end the suffocating practice in which colleges and universities measure themselves far too frequently by external status rather than by values determined by their own distinctive mission’.

About the faculty he wrote: ‘even as the mission of higher education was expanding, the standards used to measure academic prestige continued to be narrowed’ adding that ‘ironically, at the very time America’s higher education institutions were becoming more open and inclusive, the culture of the professoriate was becoming more hierarchical and restrictive’.

I shall use those quotations as a springboard for these remarks, which I have entitled *Revolutions in Higher Education: how many dimensions of openness?* My focus will be international, although with frequent reference to trends in the US because your situation here is so well documented. Higher education is in a turbulent period of change worldwide.

The effect of the economic recession has been like putting a photographic negative in a developing tank in a darkroom. Trends, tensions and paradoxes that were only latent a few years ago are becoming patent and I will examine some of them.

New Dynamics

My former UNESCO colleague Stamenka Uvalić-Trumbić, who heads their activities in higher education, is my guest here today. Two years ago she organised UNESCO’s world conference on *The New Dynamics of Higher Education and Research for Societal Change and Development*. We later decided to co-author a book on these new dynamics with a special focus on the developing world. Our hypothesis at the time was that developing countries would not and should not expand their higher education systems by copying the earlier trajectory of the rich world.

As those of you who have written books will know, authors always find many reasons to procrastinate – besides the fact that we both have full-time jobs! We are, of course, under no illusions that if we just wait a while calm will return to the turbulent seas. But what does give us pause is a sense that the development

trajectory of higher education in rich countries like the US is about to strike a major discontinuity and that all the world's universities may face more similar challenges than we first thought.

Let me begin by exploring an important discontinuity that we perceive. At its heart is the tension that Ernie Boyer's identified 20 years ago between openness and inclusivity on the one hand, and hierarchy and restrictiveness on the other.

Exhibit 1 is the [Communiqué of UNESCO's 2009 World Conference](#), which identified vastly increased demand, or massification, as the major trend. There will be a huge demand for teaching in rich and poor countries alike. Next door in Canada, for example, demand for university places is at a record high this year.

Exhibit 2 is Ben Wildavsky's very readable book *The Great Brain Race: How Global Universities are Reshaping the World*. Wildavsky is writing primarily about the 3% of the world's 17,000 higher education institutions that figure in contemporary global rankings. These [rankings, such as those from Shanghai's Jiao Tong University](#), are essentially about performance in research. In response to the question 'where is teaching in the international rankings?' Boston College's higher education scholar Philip Altbach replies, 'in a word – nowhere'.

Exhibit 3, cited by Wildavsky, is [Jamil Salmi's book, The Challenge of Establishing World Class Universities](#), which analyses what makes for a top university. Here again, the designation refers to only a tiny fraction of the world's universities, but some countries are lavishing funds on favored institutions in a probably futile attempt to get them into the list of the top 100 – or top 300 – research universities. Perhaps alarmed at the Gadarene rush that he has helped to provoke, Salmi is already sounding a warning note. He now writes of [Nine Common Errors in Building a World Class University](#) and cautions those focusing on boosting one or two institutions not to neglect 'full alignment with the national tertiary education strategy and to avoid distortions in resource allocation patterns within the sector'.

The upshot of all this, made very explicit in the recent dramatic funding cuts made by the Higher Education Funding Council for England [was at www.lfhe.ac.uk/governance/newsarchive/news_item2feb2010.html] and the State of Pennsylvania, to take just two examples, is to swing the balance of public investment in higher education significantly towards research and away from teaching.

In short, we can now apply Dr. Boyer's earlier remarks to the world in general. Even as the global mission of higher education should expand to be more open and inclusive, the standards used to measure prestige are narrowing.

eLearning and For-Profit Providers

Let us look at what is happening with openness and inclusivity. I shall refer first to two phenomena that dominate the discourse today but were not mentioned at all in *Scholarship Reconsidered* only twenty years ago. These are eLearning and for-profit provision.

Exhibit 4 is an important report on the *2011 Outlook for Online Learning and Distance Education* by my fellow Vancouverite [Professor Tony Bates](#).

Three key points from his report are relevant here. The first is the rapid growth of eLearning. Enrolment in fully online (distance) courses in the USA expanded by 21% between 2009 and 2010 compared to a 2% expansion in campus-based enrolments.

His second finding is that despite this growth institutional goals for eLearning are short on ambition. He argues, as do I, that the intelligent use of technology could help higher education to accommodate more students, improve learning outcomes, provide more flexible access and do all this at less cost. Instead, he found that costs are rising because investment in technology and staff is increasing without replacing other activities. There is no evidence of improved learning outcomes and a failure to meet best quality standards for eLearning in some institutions.

A third finding, which should worry public-sector higher education given the rapid growth of eLearning, is that in the US the for-profit sector has a much higher proportion of the total online market (32%) compared to its share of the overall higher education market (7%). Seven of the ten US institutions with the highest online enrolments are for-profits. For-profits are better placed to expand online because they do not have to worry about resistance from academic staff, nor about exploiting their earlier investment in campus facilities.

Bates notes that over 80% of US students are expected to be taking courses online in 2014, up from 44% in 2009. Clearly the providers that are already established in this mode of delivery, i.e. the for-profits, will have the advantage.

Indeed, the [UK Report *Collaborate to compete: Seizing the opportunity of online learning for UK higher education*](#), explicitly recommends that public higher education institutions should link up with for-profit companies in order not to get left behind in offering online learning.

Tony Bates concludes his report by alerting Canadian institutions to a growing market that is not well served by campus-based education. In his view Canadian public colleges and universities are not moving into online distance learning fast enough to meet the demand. "If public institutions do not step up to the plate, then the corporate for-profit sector will".

Will Higher Education Split?

This leads us an important question. Will higher education split over the coming years into a public sector focused on research and a for-profit sector doing most of the teaching? And if so, does it matter?

Some governments would like to see higher education divide itself into research universities and teaching institutions. Extrapolating the trends we have identified suggests that their wish may come true, with the added difference that most research will take place in publicly-supported institutions while most teaching will be done by for-profit enterprises.

Where does this leave us? [A disruptive technology](#), which online learning may prove to be, rarely favors existing providers. When photography went digital the electronics industry displaced the makers of film from the market.

Exhibit 5 is [Archibald and Feldman's book *Why does College Cost so Much?*](#) Their implicit conclusion is that traditional public universities will not or cannot use technology to be more efficient and cut costs. Sadly, as I just noted, Tony Bates' findings support them, for he finds that in public universities the adoption of eLearning is driving costs up rather than down, is not improving learning outcomes, and is often of poor quality.

However, I note one hopeful sign. No less an authority than William G. Bowen, who first articulated the economic basis for the 'cost disease' in higher education on which Archibald and Feldman base their argument, now says that he is rethinking his skepticism about the potential of new technologies to improve productivity in higher education.

What does this mean for institutions, like Empire State College, that are involved in open and distance learning? Clearly it leaves us with a heavy responsibility to address the needs of millions of new students around the world. To do so we must set low price points and high quality benchmarks in the provision of technology-mediated learning.

What are our assets in facing up to this responsibility and how do we have to change?

Our first asset is that we believe that technology can do the job. I mean that technology can help us to offer higher quality education to more people at lower cost.

The Iron Triangle

In some parts of the world I am best known for my iron triangle made up of the vectors of access, quality and cost.

The basic point is that with classroom education you have little scope to alter this triangle advantageously because extending one vector will make the others shorter. Pack more students into the class and quality suffers. I was at a conference with university presidents in Australia two weeks ago and they have clear evidence that quality has gone down as student/staff ratios have gone up.

However, technology is able to stretch this triangle so that you can achieve the revolution of wider access, higher quality and lower cost. Many institutions have done this, especially the open universities, so this is not news.

The challenge is that we have achieved this revolution with the traditional distance learning technologies of the industrial era. We are the daughters and sons of Adam Smith and we have put to good use his industrial production principles of division of labor, specialization, economies of scale and the use of machines and media.

But we now have a new generation of digital technology, which even an intellect like Adam Smith might have difficulty defining in a snappy way, although the concepts of networks, connectedness, collaboration and community capture elements of it.

The crucial question is can we combine production and digital technologies in distance learning in ways that are scalable? The disappointing picture found by Tony Bates suggests that few people have yet done so. The economies of scale associated with production technology have gone out of the window as people have leapt on the bandwagon of eLearning.

I shall leave that question hanging for a moment and remind you that many of us here are in the business of open and distance learning. You are now looking forward to the future of Empire State College as ‘New York’s Open University’ at the same time as China has renamed its massive China Central Radio and Television University system as the Open University of China. Openness is clearly in vogue again. What can digital technology do for openness?

Dimensions of Openness

Let me approach this question with a brief historical review of the dimensions of openness.

One hundred and fifty years ago the University of London launched its External Studies Programme on the principle at it did not matter how people acquired knowledge provided they could demonstrate mastery of it in examinations. In the century and a half of its existence five London External graduates have won Nobel prizes, so no one can call it a Mickey Mouse programme. Over the years more and more teaching was offered to help people prepare for the examinations, either by third parties or by London itself, but today the original ‘examination-only’ concept suddenly looks very modern, for reasons that I will come to in a moment.

A century after London University the UK Open University, which has embedded the term ‘open’ in the vocabulary of higher education, set out to be open in two ways. First, it abolished all academic pre-requisites for admission. Second, it operated at a distance.

Its evolving mission is to open to people, open to places, open to methods, and open to ideas. Openness to methods was clearly required by the decision to carry out distance teaching at scale, and openness to ideas reflected a desire to use its scale and intellectual muscle to re-think the orthodoxy in some disciplines.

Nevertheless, the Open University curriculum is closed in the sense that the programs and courses were defined and developed by the University – students can take them or leave them although they have great flexibility to mix and match.

However, at the same time as the UKOU opened 40 years ago, the State University of New York, under Ernie Boyer’s leadership, set up Empire State College with the aim of opening up the curriculum by allowing students to invent their own courses of study according to their interests and needs. Your slogan ‘my degree, my way’ captures this perfectly.

These dimensions of openness: open admissions; distance learning at scale, and open curricula remained the principal expressions of openness for the next thirty years.

The first two dimensions were widely copied and there are now millions of students in open universities around the world. In 1996, in my book of that name I identified 11 mega-universities each enrolling over 100,000 distance learners. That number has now multiplied considerably and at least three of the mega-universities, those in China, India and Pakistan, now have over a million students each.

You will know how many institutions are imitating Empire State College's approach to opening up the curriculum. I suspect it is far fewer. However, as I shall argue in a moment, that approach will become very important in the next wave of openness in higher education.

The possibilities of opening up universities on several more dimensions became clear a decade ago when the Internet burst into the public consciousness in the dotcom frenzy at the turn of the millennium. The good news was that the dotcom frenzy alerted universities to new opportunities – the bad was that some got carried away into ill-fated ventures.

This is nicely documented in Taylor Walsh's book *Unlocking the Gates*, in which she records how universities such as Columbia, Chicago, the London School of Economics, Oxford, Yale and Stanford thought they could make serious money by offering non-credit courses online. In the event they lost serious money before ventures like Fathom and AllLearn were ignominiously shuttered.

Other universities learned the lesson and in the next wave of eExperimentation, led by MIT, universities put materials associated with their credit courses on the web for free. Here, of course, the subtitle to her book is somewhat misleading. These universities are not 'opening up access to their courses'.

MIT, for example, lets people look at some of the materials used in their courses, and millions do, but they explicitly do not offer interaction with MIT faculty, still less the possibility of obtaining an MIT credential. In this respect a cynic might regard such operations as patronizing gestures that let a few intellectual crumbs fall from the master's table to show the plebs what they are missing.

The materials on MIT's and similar websites are called Open Educational Resources, or OER, although MIT's are not fully open because they carry a restriction on commercial use. If I were to create a for-profit distance-teaching college based on the use of this courseware I could expect to hear from MIT's lawyers.

But elsewhere in higher education open educational resources are becoming truly open and are a game-changer. A growing corpus of OER, which we can now use and adapt to our own needs with confidence, is available on the web. This is already changing institutional behavior.

For example, colleagues at the Asia eUniversity in Malaysia say that once they have agreed on course curriculum outlines they do not need to develop any original learning materials because they can find good quality material on the web for all the topics they require and adapt it to their precise needs.

Other distance teaching universities, such as Athabasca University, will not approve development of a course until proposing department has shown that it has done a thorough search for relevant open material that can be used as a starting point.

But some want to go much further. Paul Stacey, of Canada's BC Campus, recently outlined the concept of 'The University Open'. He points out that the combination of open source software, open access

publishing, open educational resources, and the general trend to open government creates the potential for a new paradigm in higher education.

Similar ideas often occur in several places at once and in Europe we have seen the development, under the leadership Germany's Ulf-Daniel Ehlers and the UK's Grainne Conole, of the notion of open educational practices built around the use of open educational resources.

I must confess that until recently I had tended to dismiss Open Educational Practices movement as flaky for two reasons. First, I have always remembered the injunction of Lord Walter Perry, the founding vice-chancellor of the UKOU, that if you innovate in too many ways at once you will scare off students. Second, I believe that radical innovations in higher education must be accompanied by particularly robust frameworks of accreditation and credentialing in order to attract a broad public. 150 years ago the External Programme had solid foundations in the University of London and 40 years ago Empire State College had all the gravitas of SUNY behind it, whereas the UKOU had a Royal Charter just like the older UK universities.

The Open Educational Resource University

However, recent developments have made me more supportive of this movement. I refer particularly to a meeting that was convened in New Zealand last month by Wayne Mackintosh of the Open Education Resource Foundation in order to operationalize what they called the *Open Educational Resource University*, a concept developed from Paul Stacey's *The University Open*.

The idea, and this slide comes from Jim Taylor of the University of Southern Queensland who is one of the thinkers in the movement and an academic leader with a very credible track record of innovation, is to have students find their content as OERs, get tutoring from a global network of volunteers, be assessed, for a fee, by a participating institution and earn a credible credential. Such a system would reduce the cost of higher education dramatically and clearly has echoes of the University of London External system that I mentioned earlier.

As regards the first step in this ladder, here is no question but that open educational resources are being used. We know that already literally millions of students and informal learners are using the open educational resources put out by MIT, the UK Open University, and others to find better and clearer teaching than they are getting in the universities where they are registered. The 32 small states of the Commonwealth are working together within a network called the Virtual University for Small States of the Commonwealth to develop open educational resources that they can all adapt and use.

The interest is considerable. The UKOU's OpenLearn site has 11 million users and hundreds of courses can be downloaded as interactive eBooks. Furthermore, with 300,000 downloads per week the UKOU alone accounts for 10% of all downloads from iTunesU. And we must not forget the worldwide viewing audience of millions for OU/BBC TV programs.

Martin Bean, the Australian-American who moved from Microsoft HQ to become vice-chancellor of the UK Open University last year, argues that the task of universities today is to provide paths or steps from this informal cloud of learning towards formal study for those who wish to take them. Good paths will

provide continuity of technology because many millions of people around the world first encounter the Open University through iTunes, its TV broadcasts or the resources on its OpenLearn website. The thousands who then elect to enroll as students will find themselves studying in similar digital environments.

Implications for Empire State College

So where does all this take us; how does it challenge Empire State College? I suggest that the institutions best equipped to make a success of the Open Education Resource University are institutions in the public sector that already operate successfully in parts of this space and award reputable credentials.

In support of the notion, obvious perhaps, that institutions already practiced in operating these processes will do them better, I quote former Princeton President Harold Shapiro who expressed the inadvisability of conventional universities launching into new distance learning ventures in these words: ‘But you have to ask yourself, where do we have the talent? You can’t just turn around tomorrow and say ‘maybe we should start doing something different’ – you have to accumulate the talent first’.

I would add that you must also have the right mindset. It would be difficult for a university that has put scarcity at the centre of its business model suddenly to embrace openness.

No doubt you get my drift. Two institutions that both opened their doors forty years ago and operate successfully in this space are the UK Open University and Empire State College. As Taylor Walsh notes in her book the UKOU’s “courses were born digital and always intended for online delivery”.

Furthermore, the UKOU’s performance in national comparative assessments of teaching quality is impressive. The last time comparative assessments were published the Open University placed above Oxford, where I once studied. Moreover, in national surveys of student satisfaction conducted with a very large sample of students the Open University placed third out of a hundred institutions last year and came first in earlier years. I understand that Empire State College consistently ranks number one for student satisfaction in SUNY surveys.

Let me take you back to Martin Bean’s remark about leading learners step by step from the informal cloud of learning to formal study and juxtapose that with Jim Taylor’s representation of the steps in the Open Education Resource University.

We can be confident that the first step, namely access to open educational resource learning materials will be increasingly will be increasingly solid. The pool of OER is growing fast and the means of finding and retrieving them are getting better and better.

I have already suggested the solidity of the top step, credible credentials, depends on the involvement of existing, reputable institutions with longstanding accreditation that resonate with this approach. Empire State College and the UKOU are examples.

What about the three intermediate steps? For the first, student support, these two institutions have all the skills necessary. Both are skilled at managing extensive networks of tutors or mentors. Empire State College has unique skills for this task given that students will often not be working with material created

by the institution but resources they have discovered for themselves. Your own mentoring model is well suited to this.

Jim Taylor envisages the emergence of a body rather like *Médecins sans Frontières* or *Engineers without Borders*, which he calls Academic Volunteers International. That may work in some places, but having students buy support on a pay-as-you-go basis would make for a more sustainable model.

It is also important to recognize that social software is greatly enriching the possibilities for student support and interaction. For example the UKOU's OpenLearn website is not just a repository of OERs but a hive of activity involving many groups of learners. Digital technology is breathing new life into the notion of a community of scholars and social software gives students the opportunity to create academic communities that take us far beyond the rather behavioristic forms of online learning that give eLearning a bad name.

In suggesting the public universities may be better equipped to use social learning software I quote David Kirp, who wrote in *Shakespeare, Einstein and the Bottom Line*: 'Embedded in the very idea of the university... are values that the market does not honor: the belief in a community of scholars and not a confederacy of self-seekers; in the idea of openness not ownership; in the professor as pursuer of truth and not an entrepreneur'.

Some of this social learning activity involves various forms of informal assessment that can be most helpful in preparing students for the formal kind. When we come to step three, assessment, it seems to me that payment is essential but this is well travelled territory. It takes us back to the University of London model with the difference, again, that some assessments would be based on curricula developed by the student, which is an area of expertise of Empire State College. With credible assessment by reputable institutions the next step, the granting and transfer of credit, is straightforward and leads to the top step of credentials.

Implicit in my own vision for the Open Educational Resource University is that it is not an accredited institution, but rather an umbrella organization for a network of participating institutions with longstanding reputations and accreditation. There is a good analogy with the Virtual University for Small States of the Commonwealth, which is not a new institution but a collaborative network that allows 32 small countries jointly to create courses as open educational resources that each can then adapt and use to extend and strengthen the offerings of its own tertiary institutions.

No institution is likely to adopt the Open Educational Resource University model for its core operations in the foreseeable future since the revenues – as well, of course, as the costs – would be much lower than we are used to.

When the meeting on the Open Educational Resource University in New Zealand last month generated this headline in *The Australian*, Jim Taylor faced some questions from his president at the University of Southern Queensland when he got home! However, USQ has a long and strong track record in open, distance and blended learning and intends to test the waters by offering studies on this model initially as part of its community service function. That seems a sensible approach.

Experience here at Empire State College shows that today's students like to mix and match. Rather than go for an entirely open educational resource degree students are likely to combine this type of study with some regular online courses and even some attendance in class.

By analogy I make so bold as to suggest that for Empire State College to engage with the Open Educational Resource University might help to create a rapprochement between the two solitudes – to use a Canadian expression – of your face-to-face mentoring work and your Center for Distance Learning.

Conclusion

I conclude this lecture where I started, with Ernie Boyer and the scholarship of teaching. I have explored new dimensions of openness that create many possibilities for faculty and students to innovate in extending the scholarship of teaching. They also allow colleges and universities that are dedicated to the values of openness to pursue those values in new and distinctive ways. They may even allow public universities generally to recover some of the ground that they would otherwise lose to the for-profit sector.

I am sure that Ernie Boyer would have enjoyed commenting on these most interesting times in higher education and it has been a signal honor to give this lecture in his memory as Empire State College celebrates forty years of service and success.