Twenty-first David Dodds Henry Lecture: New Deal, Big Deal: Higher Education in a Conceptual Era by Stanley O. Ikenberry, Ph. D.

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DAVID DODDS HENRY

President, University of Illinois
1955-71

The David Dodds Henry Lectures in Higher Education are endowed by gifts to the University of Illinois Foundation in recognition of Dr. Henry's contributions to the administration of higher education, including his career as president of the University of Illinois from 1955 until 1971. The lectures are intended to focus upon the study of the organization, structure, or administration of higher education, as well as its practice. Selection of persons to present the lecture is the responsibility of the chancellors of the two campuses of the University. Presentation of the lectures is alternated among the Chicago, Springfield, and Urbana-Champaign campuses.

Contents

Welcome

Good afternoon everybody, welcome. Welcome to those who have come a distance and of course, to those on our own campus who are here today. This is the 21st Annual David Dodds Henry Lecture. These lectures were established by the Board of Trustees of the University of Illinois and by the University of Illinois Foundation in 1971 to honor President Emeritus David Dodds Henry, who served as the 12th Chief Executive Officer of the University of Illinois for 16 years until his retirement in 1971.

David Henry was born in the mining regions of Western Pennsylvania in 1905. An only child, he moved to Chicago in 1913 for a couple of years with his parents, living within walking distance of the then new Navy Pier. Returning to Pennsylvania, he attended Penn State University, earning his AB in 1926, his AM the following year, and his Ph.D. in English in 1931. In 1927, he became an instructor in the Department of English Extension, where he developed a passion for expanding educational opportunity, accepting a job soon after as a Dean at Battle Creek College. In 1933, he moved to Lansing to become the Assistant Superintendent for higher education for the State of Michigan. From there, he became the Chief Academic Officer and later President of Wayne University (it was then Wayne University in Detroit), where he served from 1935 until 1952, laying the foundation for its evolution from a Municipal Teacher's College into a state research university. After that he became Executive Vice Chancellor of New York University, then the largest private urban university in the country.

In 1955, David Henry became President of the University of Illinois. One of his chief mandates was to establish a permanent branch of the university in Chicago. Henry worked tirelessly to build public support for the new campus, helping to pass a critical bond issue in 1960, accepting the choice of

a downtown location for the new campus and shepherding the funding and building of the new Circle Campus. Under his leadership, enrollment increased over 340% from Navy Pier, making the Chicago Campus the largest university in the region. David Henry also oversaw the expansion of the U of I's Medical Center as its College of Medicine grew to become the largest in the nation. He encouraged the development of medical education throughout the state, helping to create three branch medical schools at Peoria, Rockford, and Urbana. His accomplishments at Urbana were equally impressive. The Assembly Hall, the Education Building, the Residence Halls, the Psychology Building, the Undergraduate Library, and the Krannert Center for the Performing Arts were all constructed during his tenure.

After retiring from Illinois's Presidency in 1971, David Henry joined the faculty as a distinguished professor of higher education at the University of Illinois at Urbana- Champaign. He retired in 1985, moving to Naples, Florida where he passed away in September, 1995. This lecture series then honors his contribution to the University of Illinois.

I would like to ask Toby Tate and Don Wink if they would come forward now and join us up here, and probably Stan Ikenberry as well (laughter). The session this afternoon will be moderated by Toby Tate. For those of you who don't know her, she is our Interim Provost and seated at the far left. It is now my pleasure to turn this podium over to Jim Stukel, our President, to introduce our speaker (applause).

Sylvia Manning

Chancellor

University of Illinois, Chicago

Preface

Well thank you very much. Before I introduce our guest, it's interesting to note that I had an opportunity to correspond with David Dodds Henry just before he died about our Great Cities initiative. The Great Cities concept was something that he had thought about when he came from Wayne State to the University of Illinois. But because of all the other things that were going on during his tenure, he never had the opportunity to really develop and implement that concept. So when it happened at this campus, he was very much interested and he would oftentimes drop me notes about how it was going. He had a great interest in an urban university connected to the environment and to the communities, in which it resided. So, it was just interesting how he was a visionary in terms of what an urban university ought to be like and what it should be doing.

When Stan Ikenberry left the University of Illinois for the American Council on Education, he left us all with a legacy of relationships formed over 16 years that he served as President. And of course, many of the people are here today who knew him. Charlie Slichter who you know very well, a long time physics professor at Urbana perhaps put it best when he said that Stan's greatest strength was that, and I quote this, "He is comfortable in his own skin." (Laughter) And that comfort I believe, made others around him also very, very comfortable. And I believe that that translated into success with both politicians and private donors, two of the university's most important constituencies.

Another one however, which is not so obvious or highly visible is what brings Stan here today. He's the constituency that seeks meaning in higher education, beyond today's issues or tomorrow's crises. It assumes as did David Dodds Henry, who was memorialized in this lecture series, that the

administration of higher education is itself a worthy discipline and not just an afterthought in higher education. Dr. Henry was the University President for 16 years between 1955 and 1971 through some of the most exhilarating and yet, most difficult years for American colleges and universities. David Henry called higher education and again, I quote, "A specialty whose study is as exacting in knowledge as medicine; as central to effective operation as the law; and as sensitive to human relations as government." He was a visionary of course, when it came to such endeavors as you just heard, like creating the Chicago Circle Campus, leading the national effort for public television when it was called educational TV; and working with others who thought, big thoughts, to redefine graduate education in higher education.

The Henry Lecture is a fitting tribute to David Henry who left indelible marks on this university, as was noted just recently. It is interesting, to me at least, that in this millennial year at the turn of the 21st century that Stan Ikenberry would deliver the 21st David Dodds Henry Lecture. But this President has also left many indelible marks on this university. It was interesting that three university presidents are tied for the longest service to this university at 16 years each; Edmond James, 1904-1920; David Henry and Stan Ikenberry. How did you manage to stay all those years (laughter). Three U of I Presidents were master builders adding major new buildings to the University's physical holdings. Again, Edmond James, David Henry, and Stan Ikenberry. The two University of Illinois Presidents who held the top leadership positions in all five major national higher education associations were: David Henry and Stan Ikenberry.

But Stan's service to higher education did not end with this service to this university. For the last four years and with one more to go, he has been the President of the American Council on Education in Washington. As you

know, this organization is the umbrella organization for the Nation's Colleges and Universities with 1800 accredited, degree-granting institutions and nearly 200 national, regional higher education associations and organizations. He has given his time and energies to such issues as college costs, leading the "College is Possible" Campaign and helping to move student aid and tax policy through the US Congress. He also made many changes in ACE's communications and membership programs and reorganize ACE internal management.

Stan Ikenberry was born in Colorado, reared in West Virginia where his father was a college president. He earned a Bachelor's Degree from Shepherd College and a Master's and Doctoral Degree from Michigan State. Before he came to the University of Illinois, he was a Senior Vice President for Administration at Penn State, which interestingly enough, as a Chairman of Council of Ten in the Big Ten, he brought Penn State into the Big Ten Conference.

Finally, Stan is my friend. He's been a person that, I would not be here if it were not for his support. He's been a steadfast guardian of the values and virtues of higher education, which include academic integrity, unfettered discovery, deep scholarship, informed judgment, impartiality and a zest for learning new things. He has also, I should add, showed a tremendous good judgment by keeping Judy at his side (laughter), —you can judge a man by who he keeps at his side.

I'm very honored to be here today to present Stan Ikenberry. Please welcome to the 21st Henry Lecture, Dr. Stanley O. Ikenberry (applause).

Jim Stukel
President
University of Illinois

New Deal, Big Deal: Higher Education In a Conceptual Era

Stanley O. Ikenberry, Ph. D.
President Emeritus
University of Illinois

Thank you Jim; that was by far and away a much more generous introduction than I deserved. Still, I enjoyed every word.

It is wonderful to be back. It is meaningful too to recall my relationship with David Henry. David Henry had left the presidency eight years prior to my arrival in 1979, although he was still an active member of the faculty. He was a wise and gentle man. On more than one occasion I met with him; talked with him; sought his advice; and invariably learned from him.

David Henry was a builder, but also a strategic architect and a leader of the university during a time of incredible growth. Many universities grew uncontrollably and suffered as a result. David Henry's genius was that he enabled the university to grow thoughtfully and purposefully in size and quality. That legacy lives on to the benefit of the University of Illinois, the people of Illinois and our country, even to this day.

The University of Illinois at Chicago owes its very existence to David Henry. He fought for and founded the Chicago Circle Campus. When I arrived in 1979 the campus was a struggling 15-year-old adolescent. Then the campuses were two; the University of Illinois Medical Center and the Chicago Circle Campus, each about a mile apart. On my first day in office, I walked between the two, starting at the Medical Center Campus and walking to the Chicago Circle Campus, stopping along the way to pick up an ice cream

cone. The mission was to send an early message to the campus community that what at the moment were two campuses could be joined as one.

And that in fact, did happen. Now the University of Illinois is the largest, most comprehensive campus in the City of Chicago, standing alongside two wonderful peers at Northwestern University and the University of Chicago. It does so with strength that David Henry, even in his wildest dreams, would not have imagined.

Today, however, the stakes are even higher and it is this new world and the choices it brings, that I want to explore. Before looking to the future, however, it is useful to reflect on the past.

The whole history of American higher education has been one of change. In the 1860s, for example, with the agricultural and the industrial revolutions still in their infancy, higher education literally was transformed by the passage of the Morrill Act. A new national network of state and land grant campuses was born; Illinois was one, but new higher education institutions were born all across this country and together they redefined higher education in the United States. Science and technology became a stronger component in the curriculum. College became possible not just for a privileged few, but for the sons and daughters of farmers and factory workers and countless others.

The second major transformational event in American higher education occurred at the end of World War II. With the passage of the GI Bill, the United States sowed the seeds for mass higher education on a scale no other nation had ever before attempted. World War II veterans moved to the campuses by tens of thousands.

This University's response was to open a branch on Navy Pier in Chicago. From that grew Circle and from Circle grew the UIC we know today. That saga played itself out in different ways in different states, but the results basically were the same. Post World War II was a tremendous period of growth.

Today, in the year 2000, we have over 15 million college students nationwide, ten times more than at the end of World War II, and 60 times more students than at the beginning of the last century. Beyond mere enrollment growth, however, higher education's research and public service roles exploded. The very mission and character of campuses changed. Our relationship to the society changed. This University's enrollment 20 years ago was not greatly different from today. If one looks at the university's research mission, on the other hand, expenditures grew from about $200 million in 1985 to well over $500 million today. The real expansion at the University of Illinois, if you will, came more through graduate education and research during that period, than through the enrollment growth per se.

Over the last century, American higher education was positioned to respond to the forces of the time. More or less, institutions had the right strategy and made the right choices. On the other hand, the building blocks tended to remain the same. Campuses, courses, classrooms and labs, adolescent students, faculty carrying multiple responsibilities of teaching and research and public service, libraries, quads, pep rallies, dorm food, administrative incompetence (laughter); all those building blocks, more or less, remained the same. The challenge was to build bigger and to build better, using the same set of blueprints.

Looking ahead, at least some of the building blocks at some institutions are likely to change. Wholly new institutional blueprints, with quite different

academic cultures and new and different teaching and learning processes, are likely to emerge. While it is likely higher education will change, what we don't know is how it will change, how quickly, and with what consequences. One way to think about the questions of how, how quickly and consequences is to look at the world in which institutions find themselves. The economic, technological and social forces facing campuses are similar to those that are operating in the business world, in the government, media and communications, politics, and elsewhere.

Indeed, the only curious outcome would be if higher education institutions were shielded from these forces amidst the larger whirlwind of change.

Two years ago Alan Greenspan spoke to the nation's higher education leaders and talked about a "conceptual economy." He spoke of forces that college and university presidents understood, the knowledge explosion, the technological revolution, and the global markets. He talked about a world in which the wealth of nations is defined less by natural resources and productive capacity and more by intellectual strength, literacy, creativity and the ingenuity of people. He noted that even as America's GNP had grown in recent years, its actual tonnage had declined.

I mention the new conceptual economy because I believe it has altered the relationship between higher education and society, causing each to be more dependent on the other. One consequence has been an acceleration in demand for higher education. I recently sat behind a two-way mirror and listened to members of a focus group talk about college. There was much they did not know about colleges and universities, but in almost every instance, from families of every income level and every background, parents understood the value of college and they were determined their sons and daughters would attend.

This year more than two-thirds of all high school graduates went on to college, up from 60% ten years ago. Enrollment demand, however, is being driven not only by high school graduates going on to college, but by individuals from all ages and walks of life. And, the intensified demand for learning is bringing with it new providers, many of them non-traditional, some are for-profit providers, and all offering new learning opportunities in new ways to new students.

This is the new world in which institutions and faculties will be making strategic choices in the years ahead. The consequences of the choices could be even more far reaching than those of the last century.

Given this backdrop, what are the issues? I will focus on only three. The first deals with access and how quickly and equitably it will open. The second relates to strategic choices among disciplines and directions. Here the outcomes hinge not just on how wise we are, but how lucky. The final issue has to do with the purpose of the university, and who will decide it.

As to access, the only possible choice is expansion. Such has been the history of the last hundred years and it will be no different in the 21st century. The conceptual economy has accelerated both the need and demand for learning. Forty years ago, only 20% of American workers needed at least some college to do their jobs. Today, estimates are that figure is closer to 60% and it will continue to grow.

The conceptual era craves individuals who are literate; who understand their own and other cultures; who are able to analyze data; able to communicate and work in teams. These intellectual and interpersonal skills tend to be associated with outcomes and competencies one develops in college.

Even today, large portions of the American public are not well served by higher education. Minority students, students from low-income families, adult students, part-time students, all remain under represented on America's college campuses. If the choice is to open access, we must begin first by opening it to those who are now denied.

The most formidable barrier to access to college is the uneven quality of America's elementary and secondary schools. Many of the nation's schools function well and equip students to aspire to and succeed in college; but many do not. Too often, failing schools are in the inner city, in low-income neighborhoods, and they often serve black and Hispanic and other minority students.

If America is to expand access and equality of opportunity in higher education, it must transform the quality of schooling in the early grades, particularly in the inner city. The impact of good teachers on student achievement, is far greater than any other variable, including family income, neighborhood, or class size. Over three years, two equally performing second graders can be separated by as much as 50 percentile points by the time they reach the fifth grade solely as a result of being taught by different teachers. One student winds up in the honor section, and the other in a remedial class.

If society is to make access to college more open and equitable, we must begin by improving the schools and by strengthening the education of teachers and school leaders. And, if universities care about access and equity, they must place these issues much higher on the agenda.

The other big barrier to access, however, is financial. The college going rate has increased for all Americans, but the gap in college going rates for

students from rich and poor families has not narrowed. Over the last two decades, tuition and fee increases have outpaced both inflation and growth in family income. And on top of that, federal student financial aid has not kept pace. In 1980, a student from a family at the lowest income quintile, who received a Pell Grant, needed roughly six percent of the average family income to fill the unmet college cost gap and attend the University of Illinois or other typical public university. But by 1998 that self-help requirement was over a third of the same family's average income.

In 2001, the Congress passed the largest increase in the Pell Grant maximum in the program's history, up $450 from its previous level of $3,300. Good news, but if American higher education is going to be serious about removing financial barriers for low-income students, the Pell Grant and all other forms of financial aid for low-income students must be increased much more. If there is to be equal opportunity and a level playing field, there is no option but to remove the financial barriers and the barrier of inadequate preparation for college.

Another set of choices colleges will make relate to strategic issues. And on the strategic front, I can't recall a time when the stakes have been as high. There are at least two strategically important issues that institutions will decide quite differently, and with sharply different consequences. The first has to do with choices among disciplines and directions. The very explosion of knowledge that created the conceptual era is redefining the boundaries of knowledge. This very hall in which we are assembled is a good example. When I came to the University of Illinois, molecular biology barely existed on either of our campuses. Today, 90% of the biologists use molecular techniques and more than half would call themselves molecular biologists.

Similarly, computing, if not in its infancy, was at least in early adolescence. Today, computing is inseparable from the digital and communications revolution and a crucial tool in every discipline.

Strategically, one could ask, what if Illinois had not had either the will or the capacity to invest in these rapidly exploding and critically important fields? What would that mean for the university today? Be it in bio-informatics, imaging technology, microelectronics—whatever the field—the importance of being at the cutting edge continues to grow.

What kind of universities will we have in the 21st century? The choices among disciplinary specialties, the balance between research and teaching, the decisions about corporate partners and alliances, the alignment the university research programs with the economic interests of the state or region - these begin to suggest just a few of the strategic choices that will shape universities in the 21st century.

For those on campus, be they faculty, administration, or trustees, making wise choices will be important. For a university to choose wisely "what to do" is crucial. But choosing "how" to do it can be a strategic decision as well, especially if it involves technology. The application of technology in teaching, as well as research is still in its infancy. A group of presidents from leading universities from across the country gathered on the campus of University of Chicago to discuss the impact of technology and at the end of the day-long discussion, a guest who had listened chided the presidents for "Cleaning the fish at the dock, while the perfect storm was on its way."

Art Levine, President of Teachers College at Columbia University, has talked about three strategic visions of the university: brick universities, click universities, and brick and click universities, a hybrid of the first two.

Most of the 3500 campuses across this country today are, in fact, brick universities with a lot of "clicking" going on. Still others have made a strategic choice to be brick and click universities, and still others are choosing to go "virtual," like for example, Jones University.

The most conservative response may be to incorporate new technology in the classroom. Most campuses have already done that and, assuming they stay the course, will become the "new brick" university. They will define the traditional university of the future.

Technology, however, presents universities with a broad range of consequential strategic choices: whether to be a "creator" of new teaching and learning systems, as well as a "consumer"; or whether to use technology to reach off campus and around the globe or to continue to use the campus as the primary site for learning; whether to form for-profit entities or rely on existing institutional structures and cultures. These dilemmas only scratch the surface of the technology choices universities are making and will continue to make.

The ultimate issue, of course, is who will choose? Who will decide the question of access? Who will make the strategic decisions? Who will shape the ultimate purposes of higher education in the new century? Will it be the faculty? Will it be the governing board? Will it be presidents and chancellors? Or on the other hand, will it be the "market". There is reason to fear it may be the market and I'd like to conclude by exploring that issue.

There is much to be said for market forces in American higher education. Campuses are competitive in a healthy sense. We are more responsive to the needs of society than any other higher education system in the world. Students have a choice. Corporations and governments have a choice. The

system tends to reward innovation and creativity. If one university falls asleep at the switch for even a brief moment, it's academic competitors will pass it by.

On the other hand, the mission and purpose of the university, its culture, and its reason for being far transcend the market. The notion of academic freedom, concepts of the undergraduate curriculum, academic standards and scholarly aspirations, our convictions about equity and equality of opportunity—all reach beyond the bottom line of the market.

So while American universities owe much of their strength and vitality to the market economy in which they function, I do worry about the market's escalating influence.

The most obvious example of an excess of market control may be in the return of intercollegiate athletics. Students can gain a great deal from participating in athletics and in many schools and in most sports the system works reasonably well. But in the areas of football and men's basketball and on the campuses of at least some universities, the market—in the form of television revenues, shoe contracts, Nike endorsements, soft drink concessions, skyboxes, and more—calls the shots. The distinction between professional and intercollegiate sports has been diminished.

The impact of the market reaches beyond athletics and touches academic issues as well. On some campuses, decisions regarding student admission and financial aid are made by enrollment managers, whose job it is to manage the market and optimize income. In the end, it is neither academic merit nor institutional mission, but the market that decides who is admitted.

In no area of the university is the force of the market more apparent than in medical education. As the national struggle to contain healthcare cost

grows, the competition among providers becomes more intense. Each medical specialty is viewed in terms of profit and loss. Today, the quality and character of medical education is being shaped more by the reality of the market than by any strongly held conviction of what constitutes the very best of medical education.

Market forces have an impact on university research programs as well. As the intellectual challenges get tougher, university laboratories and research programs become more complex and more expensive. For financial and other reasons, universities increasing look for research partners and seek to develop a strong interface with the commercial sector. And in this new world, faculty members sometimes live dual lives as professors—on the one hand—and chief executive officers of start-up companies on the other. A major pharmaceutical company negotiated a research agreement with an entire academic department.

So one might well ask: will these new relationships alter the culture of the campus and somehow threaten the fundamental precepts on which the university itself is founded? Will the free and open flow of information so central to an academic environment be compromised?

In an age in which knowledge is power and has economic value, the challenge facing faculty members, presidents, chancellors, governing boards and others is to manage these relationships wisely. The challenge is not just to harness the positive forces of the market while avoiding conflicts of interest and conflicts of commitment. Rather, the challenge is to safeguard the mission, purpose, and character of the university. We dare not give to the market those fundamental decisions that define the very essence of the university.

My dream for the conceptual economy is one in which the ties between the university and the society are closer and more intimate than ever before. Still it is the university and those within it who must make the choices and call the shots, not the market.

The dream must be one that says "yes" to greater access, especially for low-income students and families, for Black and Hispanic students, to adults, part-time learners, and others who are now not well-served.

And whether we are brick, or click, or brick and click, my dream for technology is that we embrace it and use it imaginatively, but that we define the essence of higher learning and use technology to achieve it, rather than narrow the aims of education to fit the limits of the technology we apply.

In 1828, a Yale Report asked the question, "Whether the needs of a changing society require either major or minor changes in higher education." The report concluded the wrong question had been asked. The right question, they said is, "What is the purpose of higher education?"

It is that precise question that looms large today. Those within the university and those who love it must lead the search for the right answer, one that squares with the realities and the opportunities of the new era in which we find our self.

Response By Charlotte Tate

Thank you Dr. Ikenberry, that was one of the most stimulating talks I've heard in a long time. It gives me a lot of food for thought. So thank you very, very much. Our respondent today, Dr. Donald Wink, is Professor and Acting Head of the Department of Chemistry. Don received his Ph.D. from Harvard and his area of research is chemical education, with an emphasis in undergraduate education. Don has established himself as a leader in teacher education at UIC and is emerging as a leader nationally. During his two years as Chair of UIC's Council for Excellence in Teaching and Learning, he implemented our popular teaching recognition program. He now chairs a multi-college task force to review teacher preparation in math and science. He is recognized by the UIC community as an outstanding teacher and has received many teaching awards including the prestigious award for excellence in teaching.

His interdisciplinary research has received funding from the National Science Foundation and he has authored or refereed 36 publications and six books. What's interesting, if you look at his vitae, is an amazing span. This man looks at the molecular structure of molecules with names that I don't think I can begin pronouncing...all the way through teacher education.

He has provided valuable and meaningful service to the community, including the National Science Foundation, the Chicago Public Schools, and the American Chemical Society. Please help me welcome Dr. Don Wink (applause).

Response By Don Wink

Professor of Chemistry at Chicago

Thank you Provost Tate for that introduction. I thank the organizers for the opportunity to be a respondent to such an impressive lecture by Professor Ikenberry. Let me apologize at the outset if I seem a bit uncertain about how to proceed. Part of this is because I've never been in the role of a respondent to such an august presentation. But part of it may also be the fact that, for most of my lectures in the large general chemistry classroom on the East Side, are given in general chemistry to a very different audience and true to good constructivist practice, I usually have lots of handouts for the audience, but it didn't seem to fit for today.

Nevertheless, I am going to think about my role as a teacher here from a position linked to that major activity of education on our campus. As such, I may have some insights, and I'll share a few of them with you, about how some of the issues that he identified play out in the experiences of researchers, teachers, and learners at the University of Illinois and with our partners in high schools and community colleges. Now I only have time for a few brief comments here. There's much, much more in his presentation that I apologize for not actually getting to.

The title that President Ikenberry chose, "Old Questions, New Answers," invited me to reflect on two different issues. One of course is, "What the new answers will be?" But I was also left to think, as he invited us to do, "What were the old answers and what are their meaning to us today?" In all three areas of the talk—access, strategic challenges, and purpose—I think we need to remember that the old answers were never quite settled. He's right on target in pointing out that we can look forward to an unsettled

time. But, of course, we shouldn't think that a final settlement is what the goal is. Nevertheless, as we contemplate new blueprints, we may do well to look at the old blueprints he alludes to and recall what was designed and worked well, what is in place that might be jettisoned and what was never included in the old blueprints that we ought now to address.

In the area of access, I share Professor Ikenberry's significant concern about K-12 education. It is not just about access in terms of college readiness however, I think the problems goes to a change that has occurred in America over the last 30 years, I think, and what high schools and colleges are separately expected to do. Is it really true that college is the only place where an American can become intellectually strong, creative and ingenious? Unfortunately, I think that the answer today, as most people think of our educational system, is, "Yes, that's what college has to do." But it wasn't always that way in the past. Students became intellectually strong and creative and ingenious in high school. Something has gone wrong and many universities including, I am afraid, U of I have been party to it through our neglect of K-12 teacher preparation and our willingness to say that K-12 education is a problem out there, not ours. In fact, every K-12 teacher received a degree from an institution of higher education in this country.

So, in this area I think our old answer is problematic and our old blueprints incomplete. New extensions of the university are imperative. The new blueprints and answers must include, I think, larger and richer teacher preparation programs, including teacher courses that teach so that the students in those courses will later be able to teach that material themselves and also, ever stronger connections to high schools. In that way, we can begin to bridge the terribly large gulf between the intellectual spheres of high school and college. To do so will strengthen them and strengthen us,

as the rich content knowledge of the university and the strong pedagogical expertise of the schoolteachers mix together. What will come of this I am not exactly sure, but I think it'll be exciting.

I'm reminded of something a sophomore at Crane High School on the west side of Chicago, where I'm a liaison to some of their development efforts, said a few weeks ago. The student was anxious about what to put down on a paper about observing a chemical experiment, even though the teacher had said that the observations, whatever observations she chose to make, were fine. Finally a peer turned to the student and said reassuringly, "Hey, you can't go wrong, so whatever you're doing must be right." Increasing access is something that, by making contacts to teachers, is such a thing that we, too, just can't go wrong with.

In the area of strategic questions, I think the old answer of a brick campus must remain the key, at least as I see things going, because the challenges that brick campuses answered are answered very well at the U of I. These include the introduction of large number of students to academic discourse through general introductory courses like the ones I'm involved in.

A chemical education colleague of mine, Tom Holme, points out the general courses, large general courses, are one of the best things a university can do, because at a university you have so many students who need to obtain a general knowledge of a subject in order to go on into the very many different majors they're going to take. These majors, as interdisciplinary as they may be, are predicated on having a strong preparation in the disciplines we actually have. But what we don't do now—and what the brick campus has never done well—is something we could soon do well and that is to provide specialized general college instruction that would fit ideally, I think, in a brick and click campus. I know that saying specialized general

sounds like a bit of an oxymoron, so let me explain with an example from Holme's work that's inspiring some of my own.

He's in a research department with effective and large general chemistry classes. But, from that basis, he has been able to build effectively an online general chemistry course for Hazmat teams in fire departments, first in Milwaukee and now across the country. These students have a particular need for what they must learn in general chemistry, so much so that the big course just doesn't work, but a specialized general course will. Such a specialized general course can only come, I think, from programs that have effective brick general courses to build on. At U of I, I think we have that and that's something that we can do very well, as we reach across the State of Illinois to the UI Online Project, something I think, in particular, we can do in the area of teacher education.

A similar vision about strategic tension between disciplinary strength and interdisciplinary opportunities, I think, is also present in research. I think it would be a mistake to think that a major university can ever exist without a vibrant, well thought out program in general chemistry (laughter), but what else would I think, because that is the basis of so much other instruction. Twenty-five different majors require that course. But so too, as we strategize about research directions, I think it is essential to maintain strong course in traditional areas that give deep foundations to the campus' expansion into nontraditional areas that blur those divisions.

Finally, in the area of purpose, I recall a question that came up a few years ago, as faculty here at UIC and eventually from across the U of I, began to think about what online pedagogy would look like. The embarrassing realization came quickly. We didn't know what classroom based pedagogy should look like (laughter). John Regalbuto of UIC led this faculty seminar

and its formal report, "Teaching at an Internet Distance," was issued last December. That report contains a lot of thinking about tactics, but also about purpose and I recommend it to all of you. In participating in this process, I was given the chance to reflect on what we do on campus in purposeful ways.

Outside of the report, I borrowed a metaphor about our purpose and our talents that may be relevant to today's discussion. Simply put, in our classrooms and our research labs I think we have to remember that we create and talk about constellations. The stars, of course, don't care about what we call their groupings. But no astronomy student and no researcher can look at the night sky and not use those very names, as culturally imbedded as they may be. So too, what we have done well in academic culture is build constellations of knowledge in each of our disciplines.

The stars in this vision are the knowledge that we discover and in some sense, make and position in the skies ourselves. Our purpose, which we meet well, is not just to discover the facts, - that is, locate the stars - but to fit what we know into an existing firmament and then share it with others.

The market actually, I think, expects nothing less from higher education institutions and our students deserve nothing less also. But we've always answered the market with more than fitting in. What we also do well is research that considers the possibility of new namings, new groupings and new ways of characterizing knowledge. Sharing both the standard constellations and our new interpretations is, I think, the purpose of the research university. The market should be listened to, even courted to access the best and most important new information being developed today to identify some of the problems that knowledge can solve; yet keeping our eyes turned upward on our construction and interpretation of constellations

requires special talents, isolation, and other factors that cannot be compromised if we are to remain true to our purpose and our talents. This is an essential part of what the old answers have allowed us to do well. It must be celebrated and defended as never before.

Well thank you again for listening, for the opportunity to talk and for your attention (applause).

Charlotte Tate: Well, this part of the program has the audience participation. So we actually have time for a few questions or a few comments that you might want to make. So if there's anyone who'd like to, I believe . . . do we have microphones? We have a microphone in the back and a microphone up here. It would be most helpful, if you would like to make a comment or ask a question, if you'd use one of the mikes, because we are taping this session. Jim?

Jim: There are those who wonder about whether they'd like to be a president in 20 years in an environment in which knowledge doubles every 72 days. It'll be an environment in which, in order for people to hold their jobs, they'll have to participate in continuing education one day a week. It'll be an environment in which only a small fraction of individuals seeking higher education will be on campus. Our research universities, in the next couple of years, will have to make a choice as to whether or not they want to be in the marketplace to supply continuing education to the vast majority of higher education students who do not reside on campus.

My question to you, in that you have the luxury of not being the president right now (chuckle), is how would you go about thinking through how you'd make that choice, in terms of positioning the university, recognizing again, that higher education will be deregulated at some point in time. By this I mean that anybody on campus or off campus will have the opportunity to take courses from any major university in the country who offers online courses, which I know from my own experience, will be all the major universities. How do we think through what our role is?

Stan Ikenberry: No one can see clearly the outlines of the university of the future. Fortunately, we tend to make big strategic decisions incrementally.

We take a small step in the direction of our vision, see what happens and then take another step, and another, taking the opportunity to correct the strategic course as we go along. I suspect that will be this century's formula for change as well.

I do think that we are moving more and more in the direction of "just in time" learning. It is close to being a reality today and will become more so. There will be new institutions and organizations in the society that will respond to the need. Even now, the majority of the 15 million students who are enrolled in higher education are not the full-time 18 to 21-year-old, residential students that many of us tend to think of. As for the 18 to 21-year-old, full time student, it may be he or she will be attending a brick, or brick and click university, not much different from the University of Illinois. But for part time, older students, graduate students, professional students, particularly in the area of business, but in other areas also, students may move increasingly to an online environment.

The big question that confronts almost every university the size of the University of Illinois and others: How will we respond to that? Are we going to set up, as has Penn State, a virtual, global campus? The State of Illinois, under Sylvia Manning's leadership, created an Illinois Virtual University. A lot of experimentation is going on right now. Just as in e-commerce, some of these ventures will go someplace and the other half will fail, but we will learn from both.

Charlotte Tate: Don?

Don Wink: One of the things that comes up in these kinds of discussions is the sort of projections of where things will be in 20 years or so, for your grandchildren, for my children. I often take a moment in those cases to reflect in saying, "But who will be the people who do these things?" People

have certain interests. Human beings have certain interests and they're around today. They're my children; they're your grandchildren. The willingness to engage in lifelong learning in the sort of way that we projected it, I think has to be called into question. In other words, I'm asking how big a market there actually is there. Because individuals will do lifelong learning when they're told to, by their company, but they don't necessarily go out and take those courses on their own, for their own intellectual growth. They do other things for intellectual stimulation, some of which are not like what we do at higher education (laughter).

So that's one sort of contrary thing, but these are the choices that people actually make and I think we have to respect them and not assume that this trajectory will continue, will break through that, like some barrier that folks have. The other side of has to do with the individuals who are going to need lifelong learning. I would suggest that virtually every corporation above a certain size has training programs already in place. And as you read the adult education literature, as I've done in thinking about what to do with our own students, it was a revelation to realize that there are a lot of people who have thought for decades about how you teach a 40-year-old a new skill and they are within corporations. So to a certain extent, that is actually something that's been going on and yes, has been done well. Not necessarily with technology, but to meet a real purpose for lifelong learning. If the universities choose to compete with that, we're going to have to be very wise, as you suggested earlier, in terms of positioning ourselves to take that role out of the corporation and onto ourselves. But then, that thin barrier between the university and the for-profits begins to erode even further.

Charlotte Tate: We have time for one more question . . . in the back of the room.

Audience Member 1: I think one of the things that has been touched very briefly and I would like to get a little more elaboration on that is, the question of access. I think something was mentioned about the increase in the Pell Grant from 3500 to something, 3800 or so, but that doesn't really answer the basic question of access to the universities in general, especially when we're thinking about the trends of 20 years. I would like to hear more about what the great thinkers have about it.

Don Wink: (Laughter) we all know who that one's for.

Stan Ikenberry: I think one can dissect the access problem in two or three areas. Access for adults and part-time learners and place-bound learners will come through new institutions and through new technology. These individuals will continue lifelong learning, but in smaller modules they can access from their office or in their home. Indeed, such learning may be provided by the employer, not by a university.

One access problem on which I focused was the barrier of competence, in which inadequate elementary and secondary education does not equip the student to gain access to a place like the University of Illinois. Breaking that barrier requires reform at the elementary and secondary schools. It will come in time, but it is a long, painful process.

The other barrier frankly relates to desire and vision. Many individuals could and should go on to college, they have neither the vision nor desire. They have no idea how to begin the process. They have no notion of where to go to get help or advice as how to plan or prepare for college. That's a huge cultural problem but it's one that colleges are addressing through the Gear Up Program, the Trio Program, the College Is Possible Campaign and in other ways.

Still, the financial access barrier is substantial, although some is imagined. The public tends to vastly over-estimate the real price of college tuition and fees. For public universities, the public believes that our tuition and fees are roughly $10,000 annually, when, in fact, the number is closer to $4,000. Part of the answer is better communication, an essential part of the answer is to remove the real financial barriers. To do that we must have a student aid system that is aimed toward helping the neediest students. What we have now is a student aid system that is too often politically driven, increasingly aimed toward middle class and upper middle class students, with too little help reaching the most needy in our society. Those in leadership positions in higher education must be more aggressive in advocating policies and priorities for those who face not just inconvenience, but the impossibility of paying for college.

Don Wink: One of the things that I'll add on the access issue that I eluded to is, especially within inner city school districts, there is just not a sense that we will go to college. In the Tribune article you alluded to, if you look at the high schools, some of the high schools on the west side of Chicago, Crane among them, 25% of the students in that school take the ACT; 75% in some way have not identified preparation or an attempt to take a standardized test as part of what they have to do. Part of the reason is they don't know what colleges are like. They don't know what college people are like.

Besides issues of improving relationships with the community, improving our relationships a classroom at a time or a school at a time, I think, are going to be important in getting them to consider the possibilities. So there's a real mentoring role that's a part of the access issue that I think we can pay some attention to.

Charlotte Tate: There's a comment from the audience.

Audience Member 2: I'd like you to elaborate on the access question as it pertains to teacher preparation a little bit more, focusing on the role that the university leadership can play in teacher preparation. I'm very concerned because the baby boomers, not that I'm close, but the baby boomers will be retiring very shortly and this last year, the Board of Education of Chicago hired 800 teachers that we brought in from other countries. Just like Americans had a foreign car in every garage, although I agree with the cross-fertilization of minds and bringing people in for other reasons, I'm really concerned that we won't have a strong teaching pool. I think most of the questions and concerns you've mentioned can be solved by having great teachers in the classroom, including mentoring and access of opportunity.

Stan Ikenberry: Not all the problems of the schools will be faced by providing better-equipped teachers and school leaders. Much change will have to take place in the schools themselves, including more flexible, responsive environments, higher teachers' salaries, and other changes. But universities can do a great deal to improve the preparation of teachers and school leaders. We can give a higher priority to continuing education for teachers who are already in the system. Especially for teachers teaching math and science, many are not adequately qualified to teach the subjects to which they are assigned. For teachers in the low-income, inner city areas, those percentages rise still further. We have an opportunity to look for new and innovative approaches to in-service teacher education and for ways to make teaching a more attractive profession. Money isn't everything, but money is a reasonable place to start. We have a long way to, both in universities and school systems, to tackle this problem but we must begin.

Charlotte Tate: I'd like to thank all of you for coming, and we are prepared to welcome you to a wonderful reception where perhaps we can continue with these discussions. I know I for one have lots of questions in my head just from both of your interactions with the audience as well as with one another and I really do personally appreciate the time that you've taken to come and share that with us.

So I'll ask everyone in the audience to show your appreciation to these two men (applause).

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