

**Results of a Symposium Organized by the
Center for Studies in Higher Education
University of California - Berkeley**

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Berkeley Roundtable on the International Economy**

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Foreword: Research Focus

National systems of public higher education are in a state of flux. Throughout the world, a shift is occurring in the support and perception of the purpose of public research universities. Many national governments are attempting to bend their higher education systems to meet their perceived long-term socio-economic needs. At the same time, there are relatively new supranational influences on higher education markets and practices that will grow in influence over time, including the Bologna Agreement, the European Commission, the pending General Agreement on Trade and Services, and globalization associated with broadband communication and internationalization of corporations.

England has embarked on a large range of higher education reforms intended to expand access, bolster accountability measures, and revise funding, including the inclusion of post-graduation fees and new infusion of monies from the national government. Australia has experimented also with post-graduation fees and has adjusted to lower levels of government funding by embarking upon a major mission of expanding revenue through accommodation of students from other Asian countries.

The Bologna Agreement has led to structural reforms in Europe, particularly in Germany and Italy, and the development of matriculation agreements and a rising transnational flow of students. Japan is accomplishing major systematic change in the organization and funding of its public universities. China has announced an ambitious plan for the creation of twenty world-class research universities on par with MIT.

In the United States, reforms are focused largely on ways to cope with declining rates of public investment in public higher education, rising operating costs and maintaining access despite fee increases. There is also interest in incorporating new accountability schemes.

As visible as these changes are, little systematic analysis exists about how the sources of change and the reforms adopted or advanced in one country derive from or impact other countries, let alone how they might inform U.S. higher education. American higher education and American political culture have tended to be insular in their approaches to policy-making and ideas on reform. Changes in other countries have followed careful observation of what has made the United States successful, but the United States has not examined closely what has been done overseas in the context of the situations of individual countries.

While recognizing that there are many reform efforts that relate to the peculiar political cultures and needs of individual nations, it is our assertion that there is significant commonality in the challenges facing public universities internationally, including:

- The need to expand or maintain access and improve graduation rates
- Increasing expectations by governments and the public to serve the broad social needs of society
- Disinvestment by state governments and the need for new financial models
- Avenues for increasing efficiencies in teaching and university management
- Increased reliance on research universities as drivers of economic development
- Growing emphasis on professionalism and scientific and technological prowess
- Relatively new global markets for academics and research excellence
- The rise of relatively new and for-profit competitors in much of the world
- Increased global collaborations with other universities and businesses in research and teaching programs

The U.S.'s development of highly productive public research universities and state systems of higher education has made it a world leader in research and education. Public universities remain a large social and economic force in the nation, but there are many signs that the international leadership of the U.S. in higher education is eroding.

Many nations have sought to adopt elements of the U.S. model on their own political and social terms. Their systems are maturing and they are making great progress (although still too slowly for many critics). New and productive centers of research are emerging in both developed and developing economies; international collaborations among universities are growing; and

many OECD countries now exceed the United States in higher education participation and degree attainment rates for young adults.

There is much that can be learned from a systematic and comparative analysis of how nations/states and research universities are approaching this new policy environment. Indeed, for the benefit of the United States, there may be some common or transferable approaches to issues such as mission, funding, and access; there are also national or regional political, cultural, and economic specific examples that must be considered for public universities to adapt and change successfully. Defining commonalities and differences is vital for investigating the viabilities of a broad range of policy options.

To frame the larger research agenda requires an intimate blending of knowledge of the situations of foreign research universities and those of public research universities in the United States. The first step was to bring together for a two-day symposium a group of scholars and practitioners, some with deep and varied knowledge of United States public research universities and others with specific knowledge of the university systems and recent changes in pertinent foreign countries. The purpose of the symposium was to share comparative information and analysis, to discuss major issues facing national and supranational systems of higher education and the role of research universities, and to identify the most promising avenues for further investigation.

The symposium was focused on a group consisting largely of economically developed countries and regions that are important exemplars or locales for consideration of reform or alternative systems from those of the U. S. Considerations were structured around four major policy areas, including:

- Fees and Finance
- Access, Quality and Accountability
- Science and Technology
- Organization and Governance

Participants (a list of whom is in Appendix 1) provided working papers on assigned topics related to one or more of the four policy areas, or were asked to comment on the papers and the short presentations. Most of the working papers will be expanded and revised and provided as a separate CSHE-related publication. The following narrative provides a summary of the symposium proceedings, attempting to capture the gist of what was a varied and thought-provoking set of presentations and discussions. Comments attributed to individuals are paraphrased summaries of their presentations. A separate publication provides the papers produced by participants.

Symposium Organizers:

Dr. C. Judson King – University of California, Berkeley

Dr. John Aubrey Douglass – University of California, Berkeley

Dr. Irwin Feller – Pennsylvania State University

I. Introduction

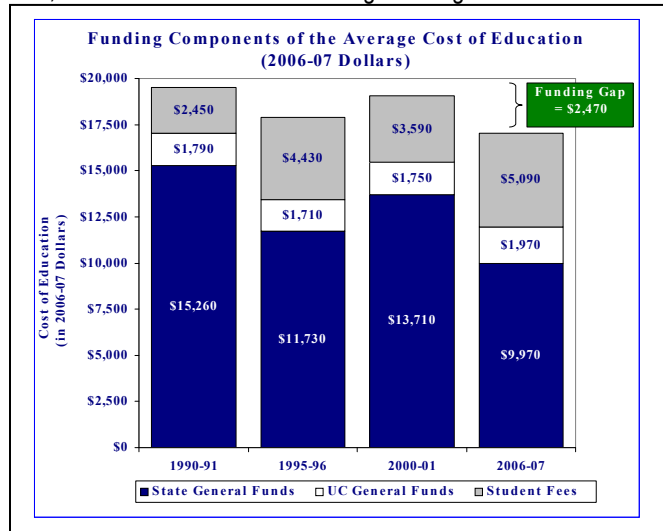
Participants in the symposium on the Crisis of the Publics were welcomed by Robert Birgeneau, Chancellor of the University of California, Berkeley. His introductory comments were followed by a brief presentation by C. Judson King, Director, Center for Studies in Higher Education, to provide a California context for describing the higher education environment as a crisis.

Chancellor Robert Birgeneau

Public education is increasingly threatened in the United States. The state support for many fine public institutions is shrinking, and other institutions have seen an increasing intrusion by the political system. California has been slightly more fortunate. There are challenges for the University of California system but funding during the past 30 years, when normalized for inflation, has been relatively constant until the economic downturn earlier this decade. Currently, we have a governor who is very supportive of higher education.

In California, the challenge is less that the state has disinvested than that the state has not kept up with the real cost of higher education. At the same time, universities like UC Berkeley are confronted with the success in raising funds and managing endowments of private counterparts whose incomes now dwarf the entire allocation from state government for public institutions. This makes it more difficult for the public institutions to continue the role as flagship universities that educate California citizens from across the entire economic spectrum. At UC Berkeley alone, more students from disadvantaged backgrounds are educated than at all of the Ivy League institutions put together – a mission that California’s public institutions continue to be committed to. It is ironic that to fulfill this public mission, public institutions see an increasing need to evolve a new model of supplementing state funding heavily through private support, partnering with industry, raising funds from public university graduates and investing in marketable innovations.

Many of the participants in this symposium face similar challenges and bring new ideas and experiences to the table. Some may be adaptable to the environment in the United States, while others may not. In the end, the goal is to share creative ideas as we work toward the common goal of affording students the opportunity to attend world-class institutions regardless of their economic circumstances.

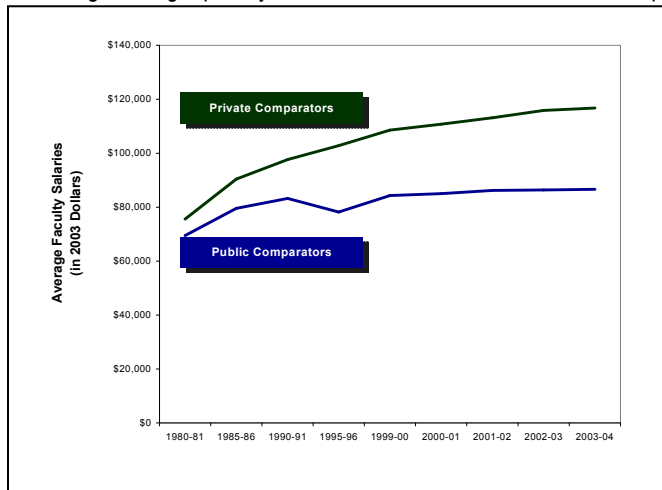


C. Judson King

The rationale for the symposium is the challenge for public universities in the United States and around the world to maintain their mission of access to higher education in a time of decreasing public funding. In California, funding has decreased as a share of all state spending from about 5 percent during the 1980s to about 3 percent today. Many other states actually have a worse story to tell. It is less a matter of higher education no longer being a priority than it is of other issues – health care, prisons, welfare – competing for limited resources.

To adjust for the diminished state funding, universities have begun to increase fees and reach out to other resources. As is shown in the figure for UC, this has changed the mix of funding sources, as well as left a funding gap in terms of covering the cost of education.

In addition, there has been a significant widening of the gap between salaries for public institution faculty and faculty at private institutions. For UC’s eight comparison institutions, four private and four public, the gap was 10 percent in the 1980s and now is closer to 35 percent. This makes it difficult to attract and retain the type of faculty that makes an institution a top-ranked university. UC’s salary



target is the average for all eight institutions, but that still leaves a significant gap with respect to the private institutions.

Because many of these same trends are going on around the world, this symposium has been organized to look at experiences, successes, failures and lessons learned. Presentations cover the issues by geography and by topic. The goal is to provide a foundation for future research that can guide policies as higher education moves into a new world of changing conditions.

II. OECD Perspective on Major International Issues Affecting Public Higher Education

The Organization for Economic Cooperation and Development has 30 member countries and links to 70 others. Through its statistical and analytical work, OECD promotes good governance in public service and corporate activity by identifying policies that work well.

Session Chair: David Breneman, University of Virginia

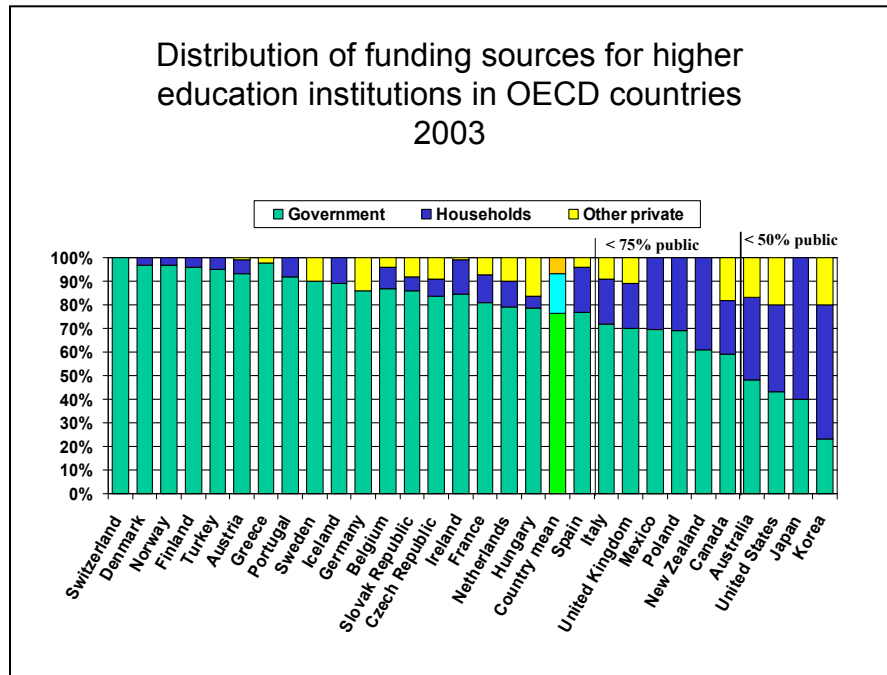
Speaker: Stephan Vincent-Lancrin, Directorate of Education, OECD

The perception of a crisis in public higher education is widespread, but it is perceived differently in different countries. This presentation provides an overview of the OECD countries in three areas: enrollment, funding and the transformation of public governance.

Enrollment

Enrollment is still predominantly in public institutions or government-dependent private institutions, except in Korea and Japan where more than 75 percent of enrollment is in independent private institutions. In the United States, 74 percent of higher education enrollment is in public institutions.

Between 1998 and 2004, there was a small shift away from enrollment in public institutions and toward greater enrollment in private institutions, with the average public enrollment decline for all OECD countries at 2.8 percent (although the Netherlands saw a much larger enrollment drop in public institutions of 32 percent). In contrast, public institution enrollment increased by 2.3 percent in the United States.



The enrollment balance between public and private research universities changed very little during the same time period. In most OECD countries, research universities are public or government-dependent institutions, except in Japan, the United States and Korea where more than 20 percent of enrollments in research programs are located in private universities (38 percent in the United States).

The enrollment picture, therefore, leads to the conclusion that if there is a crisis for public institutions, it is a very moderate one.

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Funding

The question of a crisis in funding depends very much on the perspective: government, student, or institution. From 1995 to 2003, there was an average increase in spending on higher education from all sources in all OECD countries of 46 percent (in the United States, the increase was 33 percent).

From the government perspective, expenditures on higher education as a share of total public expenditures have also increased, growing 3.1 percent on average for OECD countries and 4 percent in the United States. This small growth has come in the face of increasing pressures on government budgets for services.

From the institution perspective, the growth in funding has come during a time of rapid growth in enrollment resulting from countries emphasizing the importance of higher education. When the changes in expenditures from 1995 to 2003 are examined on a per-student basis, the average increase is only 6 percent (compared to 46 percent for overall spending).

For most OECD countries, the majority of funding for higher education continues to come from government. In only a handful of countries do higher education institutions receive less than 75 percent of their funding from the public. Italy, the United Kingdom, Mexico, Poland, New Zealand and Canada fall between 50 and 75 percent. Only in Australia, the United States, Japan and Korea does the proportion of government funding fall below 50 percent; for the United States, the figure is about 40 percent. From 1992 to 2003, the shift away from government funding was large for countries like New Zealand (40 percent), Australia, the United Kingdom and Canada. The mean for all countries was 9 percent less government funding; the United States saw a 7 percent drop.

Caveats on Generalizations

Several participants questioned OECD statistics and classifications for countries, including Australia, Japan and the United Kingdom.

One participant pointed out that national averages often mask huge variations within a system. In the United Kingdom, where OECD shows universities receiving 70 percent public funding, some of the polytechnic universities may receive 90 percent of their funding from government, while other institutions may receive only 20 to 30 percent.

Stephan Vincent-Lancrin noted that the statistics are captured uniformly across the countries. The averages provide a meaningful way to identify trends and compare countries.

The change in funding sources has come at the expense of households in many countries. Household contributions between 1992 and 2003 rose between 15 and 40 percent in New Zealand, the United Kingdom, Canada and Australia. The mean increase for all OECD countries was 5 percent, while the United States showed no change in the proportion paid by households.

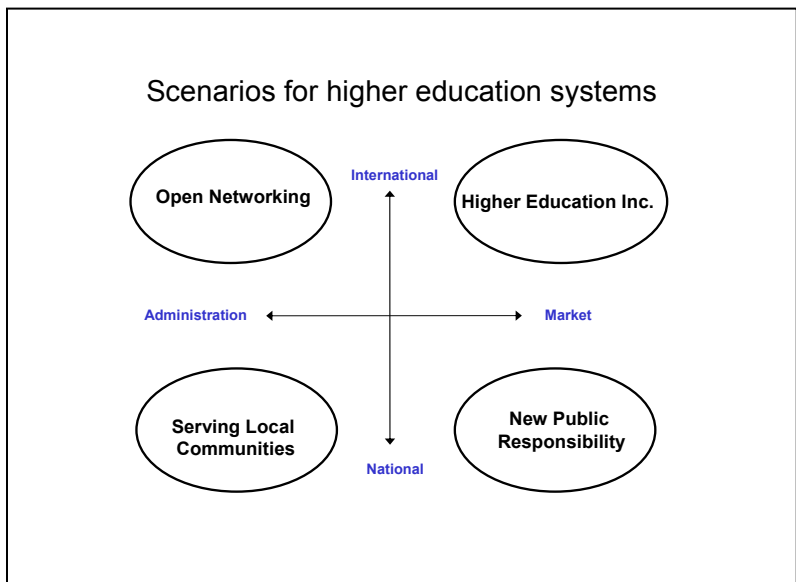
Overall, OECD students and their families contributed 17 percent of the direct expenditures for higher education in 2003. At the high end, students in Japan and Korea pay close to 60 percent of the cost. In the United States, the figure is 37 percent. Sweden and Switzerland both offer free higher education, and many other OECD countries keep the household contributions below 10 percent.

Transformation of Public Governance

Because of the strong emphasis on the knowledge economy, higher education has become a global area for competition. In many countries, public governance and policies are changing. There is a new emerging pattern of cost sharing between the government and households. Funding is allocated differently, with much more going directly to students in the form of aid or to the support of specific research projects, rather than to institutions. In many countries, higher education policy is much more driven by economics than it was before.

Different scenarios for higher education are evolving. One way of looking at trends is to consider developments along two axes:

national to international and administration-driven to market-driven. This results in four scenarios:



- **Open Networking.** The drivers are an ideal of open knowledge, technology and international cooperation. Features include intensive networking among institutions, scholars and students, as well as modularization of studies. The Bologna process and international academic partnerships are examples.

- **Serving Local Communities.** The drivers are a backlash against globalization and a more geo-strategic sensitivity in research. Features include a focus on national and local missions, public funding and control of the academic profession, and “big science” being relocated to the government sector.
- **New Public Responsibility.** The drivers are pressures on the public budget and diffusion of governance structures. Features include continued public funding but more autonomous institutions, controlled through incentives and accountability reporting. The results are a more demand-driven system, with mixed sources of funding and research funds often allocated through a competitive process.
- **Higher Education Inc.** This is typified by global competition for education and research services. Public funding goes to non-commercially viable disciplines only. There is segmentation of the education and research market, and vocational higher education is an important share of the market. There is international competition for students and an increase of cross-border funding of research.

Because of the proliferation of forward-looking societies, higher education is increasingly emphasized throughout the world. There is tension between the many drivers of higher education pulling in different directions, all of which add to the perception that higher education is in a state of change, if not crisis.

III. Environmental Scan of U.S. Public Higher Education – Issues and Trends

Irwin Feller focused his comments on the research role of public universities and the questions that are raised by recent trends. Robert Berdahl discussed perceptions about accessibility, affordability and accountability in a time of eroding trust in higher education.

Session Chair: Ahmed Bawa, University of Kwazulu-Natal

Speakers:

- **Irwin Feller, Penn State/AAAS**
- **Robert Berdahl, President, AAU**

Irwin Feller

The United States has a mixed system of public and private institutions engaging in research. It is a highly competitive system that serves to bring out the best. The universities compete not only for financial resources, but also in the marketplace of ideas, trying to attract the best researchers.

The crisis is not simply one of declining public investment in higher education, but of the potential impact that such a decline may have. A series of recent newspaper headlines provides some insight into the impact. One indicates that higher education support, measured in constant dollars per student, rebounded in 2006. This is encouraging since it indicates that public funding is cycling rather than being in a permanent downturn. The question is whether this means the decline seen since the 1980s has bottomed out.

Other headlines are less encouraging. One indicates that public universities are seeing a decline in the share of papers published compared to private institutions. This may well be a reflection of a general sense that the most talented faculty are migrating from low-ranked public institutions to higher-ranked public institutions – and then to private research institutions. Another article says that as state resources have lagged, more tuition dollars are being invested in construction of buildings. This is a reminder that there are hidden costs to doing research, not just in faculty salaries, but in infrastructure.

A final article encapsulates the nature of the crisis under discussion. The newspaper in Ames, Iowa, reports that universities there are losing large numbers of professors. Part of the reason is that resources for research are down \$7 million and faculty members are being wooed away to institutions with more promising budgets.

Not Only About Salaries

One participant asked if it isn't much more than just salary differentials that are driving migration of faculty.

Irwin Feller agreed, indicating that “salary” was simply a shorthand phrase to cover a wide variety of conditions, including facilities, infrastructure, equipment and more. He added that if faculty do not have a sense that they will be able to do meaningful work and that another institution provides the opportunity to thrive, then they are more open to leaving one institution for another.

These articles and other statistics paint a picture of lagging state support leading to increasing salary differentials between public and private institutions, which in turn encourage a migration of faculty. The end result is likely to be a widening gap between the research performance of public and private institutions.

The crisis has often been put in context of relative decline, with public institutions less able to conduct research and private institutions growing in that ability. The question from a public perspective is what is the impact on national competitiveness? If the difference is only one of relative capacity, then it would not be good public policy to justify a change in investment level simply because Rice and Princeton are rising and Penn State and Minnesota are declining. So the question needs to be explored and answered before the decline of investment in public research facilities can be addressed.

Another concept to explore is the consequences of trying and failing. Universities that continue to seek to be competitive in research have to invest upfront in faculty and infrastructure. If there are too many researchers chasing too few dollars, over time not everyone will succeed. So what are the consequences for universities that fail repeatedly? Do they change their mission of research? Or do they continue to invest resources and compete for research grants?

What are the consequences for individual states that invest less in higher education and see a resulting migration of faculty and students away from their institutions? Do they decide to invest more? Similarly, how do individual universities respond to the fact that they cannot all be what they want to be: in the top five or top ten research universities in the country?

Earmarks and Investing in Research

Several participants addressed the question of what level of investment in research can society afford, and others discussed the impact of “earmarks” in the United States (funding that is granted directly in the legislative process rather than through peer-reviewed competition).

Investment: How much research do we need as a society and what can we afford? And what is the link between research and economic growth? Can a state afford to leave research to other states and focus on the quality of undergraduate teaching instead? There is no research that answers these questions definitively. But for many politicians, it is cheaper and easier to allocate funds for “sexy” purposes (such as high-tech initiatives) than to focus on the fundamental problems of higher education.

Earmarks: Often when schools cannot win research funding competitively, they turn to local politicians to win resources through congressional earmarks. One participant argued that receiving an earmark allows a university to develop the capacity to compete more effectively for peer-reviewed grants. One problem is that earmarks are gradually undermining the peer-review system of awarding research grants based on merit. On the other hand, earmarks allow more widespread development of research facilities and improved access for non-traditional students.

The greatest concern about the crisis in public education is not that universities will gain or lose position, or that nationally there will be a 5 to 10 percent shift in relative rankings. The greatest risk is that public universities will continue to strive and many will fail. The cost of that failure will fall on students (through increased tuition) and create pressure to change the allocation mechanism for federal funding away from peer review and toward a more political process.

Robert Berdahl

There are two views in the nation’s capitol that are pertinent to the discussion of a crisis in higher education. (In the public mind, the distinction between public and private is somewhat blurred, so it is not possible to treat them entirely separately). One is reflected in *Rising above the Gathering Storm*, a report by the National Academies that calls for the doubling of investment in research, which is viewed as the foundation for the country’s competitiveness and the health of its economy. In that context, the U.S.’s research universities are viewed as the best in the world.

The other view is contained in the Spellings Commission report, which sees universities as too expensive, poorly managed, not accessible and not accountable. One may disagree with the analysis in the Spellings report, but clearly it has touched a nerve with the American people, who are feeling squeezed out of quality institutions and overburdened with high tuition. To a large degree, the report and the reaction to it reflects an erosion of trust in higher education institutions.

The issues that are being focused on – accessibility, affordability and accountability – are all interrelated:

- **Accessibility:** The good news is that Americans more than ever believe that a college education is essential. As late as 1993, a significant number believed that too many people were going to college. But today 87 percent believe that a college education is essential to sustain a reasonable standard of living. They are correct: In 1975, there was only a 15 percent gap in income between high school graduates and college graduates; today it is 63 percent.

At the same time, the middle class has begun to recognize that those with degrees from high-quality universities will fare better. This recognition is coming at precisely the moment when it is increasingly difficult to access high-quality public institutions. Today, UC Berkeley admits 24 percent of applicants, down from 50 percent in the late 1980s. At the same time, admission decisions are shifting to a much-less-transparent, holistic process that no longer relies strictly on grades and test scores. Because it is difficult to explain how decisions are made and where the admission line is drawn, public confidence in the fairness of the system is being undermined. In fact, it is widely recognized that students with more money have better access to high-quality schools.

- **Affordability:** Because of tuition increases, which have outstripped health cost inflation in the United States, there is widespread concern about affordability. Financial aid has largely shifted to loans. Today's graduate with a bachelor's degree leaves the university with an average of \$20,000 in loans. Universities are having difficulty explaining the rising costs to the public because this is one of the few areas where competition is driving up costs, unlike the production of a commodity where competition drives costs down. Universities compete for the best faculty, the best students and the best research projects – all of which lead to increased costs. In fact, one way for a university to rise in the *U.S. News & World Report* rankings of colleges is to spend more money per student.
- **Accountability:** There is a growing sense that universities are not accountable which stem from access and affordability issues. There are two manifestations of this perspective. One is financial: universities are seen as poorly managed. The chair of the Spellings Commission has said that universities could do twice the job with half the money if they used different and better management practices. To address management concerns, the Spellings report calls for an accreditation system that reviews budgetary and financial practices, which would completely change the notion of accreditation. The second manifestation deals with learning outcomes and whether universities are accountable for what a student learns in the course of a four-year education. In this area, the report seeks new ways to measure education outcomes – a call that challenges the autonomy of institutions.

The conclusion that can be drawn is that the crisis higher education is facing is not merely a financial one. Because of issues that are related to trust and confidence, the crisis is about the public's attitude and whether they feel universities are open and fair in the ways that they believe higher education institutions ought to be.

IV. Environmental Scan of Higher Education in Europe – Approaches and Trends

Marijk van der Wende discussed the Bologna Process and the Lisbon Strategy as well as the continuing challenges facing both the United States and Europe. Mike Shattock described the impact that governance changes are having on universities in the United Kingdom. Wilhelm Krull talked about how the relationship between governments and universities in Europe is evolving, the effort in Germany to bolster competition among universities and federal funding of key institutions – a new policy in which he has played an influential role. Daniel Fallon commented on Germany's current initiatives.

Session Chair: John Aubrey Douglass, CSHE, UC Berkeley

Speakers:

- **Marijk van der Wende, IMHE OECD/CHEPS /Vrije Universiteit Amsterdam**
- **Michael Shattock, University of London**
- **Wilhelm Krull, Secretary General, Volkswagen Foundation**
- **Daniel Fallon, Carnegie Corporation**

Marijk van der Wende

It is difficult to talk about European higher education in a meaningful way because the tendency is to focus on the larger systems (the United Kingdom, France, Germany and the Nordic countries), which does not give a complete picture. Higher education in Europe is best thought about as a large set of processes that take place at different levels and in different fashions in different countries, with overlapping issues.

There are two important initiatives that are beginning to bring some coherence to European higher education. The Bologna Agreement (a declaration agreed to in 1999 by European Ministers of Education) sets a common agenda for higher education reform that has been agreed to voluntarily by 45 countries. It has been successful in terms of creating a focus on system-level issues, including degree structure, curriculum and the need for quality assessment. It has also been successful in creating more transparency. There is mounting interest from Latin America, Russia, China, Australia and even the United States.

K-12 Education Issue

In response to a question about what the United States can learn from Europe, one panelist said a key area of difference is the quality of lower education in Europe. Higher education institutions there benefit from a very effective school system that prepares pupils to a level that means universities, for the most part, do not have to engage in remedial education. In fact, he argued, a three-year degree program can be offered because students are better educated when they arrive at the university.

Another participant noted that the success and diversification of U.S. higher education stems from institutional autonomy. The paradox is, however, that the same embrace of autonomy plays out in the lower school system, where "local control" appears to be an inhibitor of high-quality education. In contrast, in Europe there is a greater degree of centralization in school curriculum.

The advantage that Europe enjoys in the quality of schools, however, may not remain unchanged. There is pressure for the current academic focus of lower-level schools to be modified to include more vocational disciplines and to move away from single-subject degrees. These and other changes may bring the European model of lower education closer to the problems seen in the United States.

But the success of the Bologna Process has yet to be seen when it comes to actual convergence of curriculum, outcomes and structure. The implementation of the agreement has been diverse across countries, with a significant difference between the theory embraced and the reality of reform. Enhanced mobility for European students, employability and the international competitiveness of European higher education is not yet at the level envisioned in the Bologna Process.

In three critical ways, the Lisbon Strategy (an agreement reached in 2000 to modernize higher education as a means to improve economic growth and create high-quality jobs by 2010) is much more important to the higher education reform effort. First, there is more steering power in the Lisbon Strategy than in the Bologna Process. The European Commission plays a strong role, working top down through national governments, at the same time that reforms are taking place in line with the bottom-up approach of the Bologna Process. Since the higher education sector has strong ownership of the Bologna reforms, the Lisbon Strategy is trying to build on and absorb the Bologna Process.

Second, the Lisbon Strategy is broader, setting an agenda for the modernization of higher education, governance, performance, diversification and funding. As a whole, Lisbon is based on more awareness of global competition, addressing issues like the “brain drain” to the United States and the need to fuel economic growth through innovation.

Third, the Lisbon Strategy is stronger because government budgets are involved. Major targets have been set for investing in research (3 percent of all spending) and investing in higher education (2 percent). Those goals have not yet been achieved; research is only at 1.9 percent and higher education spending is only at 1.1 percent. An additional 150 billion euros would have to be spent on higher education annually to reach the target. However, progress has been made. The budgets for research and development have doubled in size. And the European Research Council, which will have more than 1 billion euros annually, has been created.

So success is still in the future for both Bologna and Lisbon. Currently, countries are lagging behind targets, the brain drain to the United States has not been reversed, and the level of those with higher education degrees in the labor force is still under 30 percent. In addition, too few universities are competitive in global rankings and Europe is not gaining in either scientific prizes or patents.

What could Europe learn from the United States? To promote excellence, Europe needs to shift away from an overly egalitarian approach and one basic model to a more differentiated approach with a diversity of admissions. The question for Europe is at what level the system would be conceived: national, regional, European. How will Europe handle convergence and diversity at the same time – and how will differences in culture, language, interests, etc., be balanced? Underlying all of these issues are competing views on what the role of the university is in the economy and society in general.

What could the United States learn from Europe? Simply stated – but not so simple to do – is the need to work across borders. Students need the competencies to work across national, cultural and linguistic borders, and to accommodate diversity. Europe has not achieved everything that needs to be achieved in that regard and Europe has many remaining challenges. The next generation will need to understand in detail how to work across borders.

Michael Shattock

As the United Kingdom has moved from private to public governance of the university system, the situation has changed from one where a group of academics in the University Grants Committee acted as a quasi ministry for higher education to a situation where a real minister of education, the secretary of state and the prime minister all take a close interest in higher education. It is not the purpose of these comments necessarily to deplore the change. The United Kingdom has seen the same trends as other countries – increasing massification, a new appreciation of the economic importance of higher education – so it is reasonable that higher education should move out of the shadows and become a central focus for public policymakers.

However, there have been consequences for the university system in the new approach. It has become clear that government policies for running universities are not dictated by a full understanding of the issues, but are externally driven by reforms that are

Overall performance on the Lisbon Objectives of the nine largest EU economies, compared to the EU15 average

Rank	Country	Overall Score 2006 Q3	Change in Ranking since then	Rank one year ago	Score one year ago
1	Sweden	1.37	←	1	1.26
2	Belgium	1.09	↑↑	8	0.72
3	Netherlands	1.02	↓	2	0.95
4	United Kingdom	0.98	↑	4	0.85
5	Spain	0.98	↓	3	0.87
6	Germany	0.91	↑↑	9	0.65
7	EU15	0.90	←	7	0.73
8	Austria	0.83	↓↓	5	0.83
9	France	0.80	↓↓	6	0.78
10	Italy	0.43	←	10	0.33

needed to modernize all public services. This means there is a concentration on top-down performance management as defined by Government, market incentives and other approaches that define the Government's approach to the modernization of public service in Britain.

This philosophy has driven the reform of the higher education system erratically and has led to a one-size-fits-all set of solutions. Although these comments could be viewed as a case for British exceptionalism, the papers from our European colleagues note many similar trends. Jeroen Huisman talks in his paper about the one-size-fits-all approach in relation to changes in the governance of European institutions. Marijk van der Wende references Bologna as a bottom-up and Lisbon as a top-down reform, but both represent supranational policies for universities rather than policies that individual universities generate themselves. Christine Musselin writes about universities evolving not into independent private legal entities like UK universities but into a form of devolved organizations that operate within the detailed steering provided by national, state and supranational bodies.

The question for the United Kingdom is whether the new public management approach threatens the autonomy of what have been private entities that receive public money. Are we at risk of losing precisely those characteristics that allow institutions to become top-ranked among universities? Katherine Lyall provides a paper that notes private universities in the United States retain a nimbleness and ability to make quick decisions that leads to institutional differentiation and excellence. In Europe and the United Kingdom, what we may be pursuing is a concept of limited organizational autonomy, which reinforces the power of the state over higher education – and which may stifle the institutional initiative necessary to become competitive with U.S. institutions.

Marijk van der Wende's paper describes the Manchester merger, which brings together two institutions in the hope that greater size will make a world-class research university. But the merger of two less-than-world-class universities is most likely simply to equal a very large, less-than-world-class university. In the case of Oxford, where the British Funding Council has attempted to impose a one-size-fits-all governance structure, the problem is that one of the United Kingdom's genuinely world-class institutions is being tampered with solely to ensure conformity.

This is not to make the argument that there is no role for the state in higher education governance. But the danger is that the balance between the state and the institution is moving too far toward the state, with the potential for the state to suffocate the very kind of institution and boost to the economy that it is seeking. In the United States, universities have been able to manage their own futures – and those that have managed their own futures well have tended to climb upwards in the higher education rankings. When institutions can't manage their own futures and government tries to do it for them, there is a danger of stifling innovation. The goal must be to marry state involvement with institutional drive.

Wilhelm Krull

This presentation provides an overview of the current strengths and weaknesses of higher education in Europe today, how relationships between government and universities are evolving, and how the focus is shifting from governance and management issues to issues of teaching and research.

Europe Today

The picture for higher education is not as bleak as is often indicated by the general statistics that show Europe lagging behind. For example, Europe has not reached the 3 percent spending target for research, but countries like Sweden and Finland are well beyond the target and many states within Germany are above 4 percent. So the heterogeneous picture is quite different.

In many ways Europe is competing well globally. Europe is producing more doctorates than the United States (85,000 vs. 44,000 per year), European researchers have more published papers to their credit than their counterparts in the United States, and are doing well on patents, led by countries like Germany, Sweden and the Netherlands. When one looks at the overall picture in Europe, billions of euros have been spent on regional development under the framework program. However, when the spending is evaluated, the differential between top-notch institutions and regional universities has not been narrowed, but instead has widened. The additional investment has not allowed the regional institutions to catch up.

One outcome is that the framework initiative has been instrumental in building links across Europe because funding went to proposals that collaborated across borders. Nonetheless, it is necessary to analyze why the huge level of investment did not result in the kind of breakthroughs that were hoped for in basic research. Some suspect it has to do with neglecting the important ingredients that make an institution a creative place.

Government/University Relationship

In most countries across Europe, new governance structures were put in place during the 1990s. These were installed to ensure that there was increased accountability by each institution. It was a cumbersome learning process because the university leadership and ministry people needed to develop a new contractual relationship. There had been so much mistrust in the

system before that it strangled any autonomous decision-making. Now what exists is called operational, organizational autonomy, but the reality is that it is not the university that sets priorities. Public universities have hundreds of regulations that impact what they can do when it comes to hiring, pay scales, admitting students and more.

Despite the many difficulties of the 1990s and the numerous controversies about governance structures, few universities that have gone through the process would want to go back. The increased self-regulation and enhanced transparency has opened up new opportunities for universities. There has been quite a shift in emphasis. For example, in Germany 40 private universities have been created and there are many newly developed strategic alliances between institutions and countries.

Shifting Focus

The governance and management issues that have been at the forefront are gradually being replaced with issues of teaching and research, as well as curriculum reform and ways to enhance creativity. In Europe, the focus will be on doing more things to promote individual excellence and make the whole system of research funding more attractive to a young researcher. This includes offering research professorships, fellowships and funding for five- to ten-year periods rather than always operating under short-term grant making.

When people have to focus on preparing a proposal for the next grant instead of completing their lab work, the system is not stimulating major breakthroughs and creative work. In terms of encouraging the level of research that leads to Nobel prizes and other victories, Europe can still learn a lot from the United States.

Daniel Fallon

Daniel Fallon was asked to give a brief overview of Germany's current experiment with competitive grants to develop top-ranked institutions.

In the late 80s and early 90s, German higher education was suffering from loss of status, a brain drain to other countries, and the overall perception that it was difficult to get a good education in Germany. This was a significant blow to Germany, which was used to a position of leadership in the academic world.

Part of the problem was a lack of differentiation of mission for German universities. To illustrate, in 2000 California had two million higher education students, 8 percent enrolled in research institutions, 18 percent in comprehensive universities and 74 percent in community colleges. With the same size enrollment, Germany had 83 percent of students enrolled in research universities – an expense that no modern society can afford.

To begin the process of differentiation and to create a limited number of elite institutions, Germany created competitions for funding in three categories: graduate schools, excellence clusters and strategic universities. There are no rigid quotas, but it is anticipated that funding will go to about 30 graduate schools, 40 excellence clusters and 10 strategic institutions, depending on the quality of the proposals submitted.

The process is currently under way. The importance is not so much in the details as in the fact that Germans have brought higher education to the forefront of society for substantive discussion and consideration. There will be clear winners and losers, based on academic quality. And while it is not clear what will follow after the five-year funding commitments, the anticipation is that there will be continued support for the best programs.

V. Environmental Scan of Higher Education in the Pacific Region – Approaches and Trends

Philip Altbach described the rapid growth of higher education in both India and China. Wan-Hua Ma discussed the evolution of higher education in China and the challenges that are being faced. Rory Hume provided a very brief overview of other Asian higher education developments.

Philip Altbach

China and India are immensely important in the world of contemporary higher education. About one-third of the human race lives in these two countries, which are in the process of emerging

Session Chair: Otto C. C. Lin, Hong Kong University of Science and Technology and China Nansha Technology

Speakers:

- **Philip Altbach, Boston College**
- **Wan-Hua Ma, Peking University**

Commentary:

- **Rory Hume, University of California Office of the President**

as economic and higher education superpowers. In addition, both countries export to the United States and other countries products, students, visiting scholars and permanent residents. China has the world's largest higher education system in terms of enrollment, with India in third place behind the United States. India has half of the world's higher education institutions (about 600 universities and 14,000 undergraduate colleges), but that is largely because the country has so many small colleges.

In terms of developing a world-class higher education system, both countries have significant challenges. They need to build access at the bottom and deliver sustainable high quality at the top of their systems. China has made significant strides by investing huge amounts of money and focusing on the future of higher education. India is beginning to think about what steps it needs to take, but has not made progress to the degree that China has because of competing demands for resources. In both countries, there is great demand for access and immense public interest in higher education policy.

The basic problem in India is that there are too few top-level universities, with capacity only to admit perhaps 50,000 students each year. That is a drop in the bucket compared to the demand for enrollment and the major needs of the country. For example, the six Indian Institutes of Technology combined can accept only 2,000 or 3,000 of the 130,000 students who take the entrance exams every year. Although these institutes are prestigious and the only Indian institutions that appear in world rankings, they are not really research universities but are primarily teaching institutions. To meet the demand for higher education, private institutions are emerging at the bottom of the system but few have built quality, sustainable programs.

Because higher education is the responsibility of state governments in India, there is fragmentation of purpose throughout the country. None of these governments sees higher education as a major priority compared to the many other pressing problems in India. The Knowledge Commission, which proposed quadrupling the number of universities in India, was national in scope, but the responsibility for spending for the most part resides at the state level and there is little movement toward making that kind of investment.

Other problems that India faces include a policy of reserving seats in universities for certain classes and tribal groups, which undermines the merit approach to admissions; the politicization of higher education, with academic positions awarded based on regional, religious, caste and other non-merit factors; and students leaving the country to complete their graduate studies or leaving their field of education to take lucrative management positions in businesses.

In China, an effort has been made to build a number of world-class research institutions, with some degree of success; perhaps 10 are at that level. These are supported by the federal, regional and sometimes even city governments. China has also largely solved the problem of having too many small institutions by forcing those institutions to merge.

There is a huge gap between the top institutions and the rest of the system; most of the bottom institutions are very poor when measured by international standards. In addition, the overall centralized administrative structure subjects universities to many government restrictions about what can be researched and published.

In summary, both China and India have several issues in common:

- There is a propensity for the brightest students who study abroad not to return to their country – the so-called brain drain. About 75 to 80 percent of students who take advanced degrees in the United States do not return home.
- Both countries have significant levels of corruption within their systems – admitting students on non-merit criteria, plagiarism and cheating on exams.
- Both countries have growing private sector institutions that are unregulated and problematical. They are needed to absorb demand for higher education but how to regulate them is an issue that needs to be addressed.
- Both countries have to deal with the internationalization of other countries' institutions, with many universities seeking to establish branches in India and China. Quality control and appropriate regulations are an issue.

Wan-Hua Ma

Higher education in China is quite different from that in the United States. In the U.S., institutions are closely tied to state governments, while in China the responsibility lies with the central government, especially for the 100 universities that are operated by the central government. Another difference: in the United States, public institutions are concerned about losing faculty to private institutions with more resources. In China, the concern is that the faculty move into the business and industry sector because that's where there is money to be made.

The Chinese system of higher education has evolved over the past one hundred years. A century ago, the Chinese adopted the German system with Peking University leading the way as the top research university. Then in 1949 when the Communists rose to power, higher education was switched to the Russian system, with many specialized universities and colleges. In 1978, it was determined that competing on the open market was going to require more generalized knowledge, so China switched from the Russian system to the American model.

More recently, China’s focus has been on building soft national power, which means developing human resources. In the past, China relied on its natural resources for economic growth, but the next step in economic development is the creativity of the human mind. Based on this idea, in 1999 China began building universities through merging institutions.

Unleashing Creativity

Echoing concerns expressed about stimulating innovation in China, some participants spoke about the challenge of encouraging creativity that can lead to research breakthroughs.

In Japan, unleashing creativity is a focus. Students today are less interested in studying science and technology because more money can be made in politics and economics. One goal of reform efforts is to stimulate innovation by changing the way universities function. In the current system, only senior professors get funding for research. The challenge is to provide a chance for young people to be creative and successful within the university system. Existing universities, however, are resisting changes because presidents are chosen by faculty, who prefer the status quo.

In China, the brain drain is being addressed by building linkages with scholars who are not coming back. When the problem is examined, it becomes clear that if all students returned, there would not have the capacity to absorb them and there would be chaos. So China asks them to come back on a short-term basis to share what they have learned- but not to remain. In other cases, when promising students are identified, they are encouraged to go directly into a doctorate program in China rather than spending time in the undergraduate or master’s degree programs.

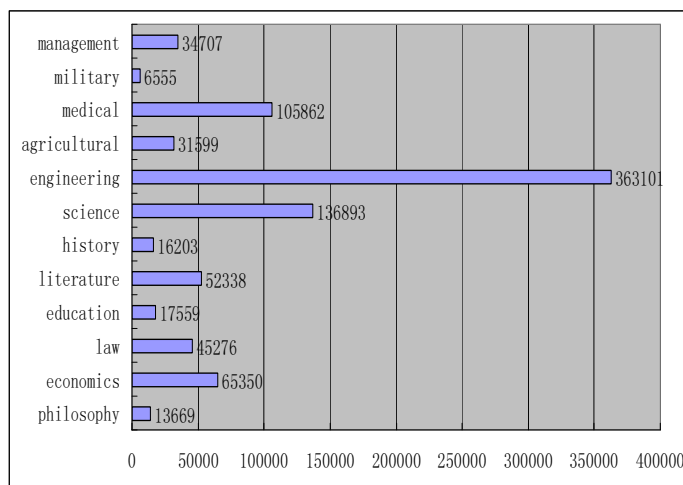
Another problem that is being addressed is the rigidity of curriculum and pedagogy. This rigidity means that students cannot be creative enough in their research to be successful. As a result, not many students are interested in basic research but instead prefer applied sciences, and that is a problem.

As China improves its higher education quality, more students will stay in the country. In fact, when China has been successful in building top-quality research universities, a reverse brain drain should begin to occur: Foreign students will come to China to study.

Rory Hume

I agree with Philip Altbach’s characterization of higher education in India, which appears not yet to have found a clear path to the development of major research universities, despite doing well in other ways in providing broad access to higher education. I also agree with Wan-Hua Ma’s description of developments in China, which is making impressive strides in the growth of research-intensive universities along American lines. I will make some brief comments on higher education in some other parts of the Asia Pacific region, at a quite superficial level.

Discipline distribution of master’s and Ph.D. degrees awarded between 1982-2003



Japan is a giant in many ways, and has a very strong university sector, but my impression is that the strong culture of respect for authority, which is good for many aspects of society and for social order, may limit creativity among its students and graduates.

Singapore is a fascinating case study in targeted investment in higher education. The Singapore Government appears to have paid close attention to other successful capitalist economies and is striving to make the country an educational hub for the region. They appear to believe strongly in how valuable investments in higher education can be for a local economy, and are marketing higher education aggressively and building intellectual diversity by bringing into Singapore universities or branches of universities from other countries.

Australia is another country worthy of study. It has been very effective in marketing bachelors and masters degree to students from outside of the country at full cost, but has done so at the risk of quality in some cases, and is struggling to maintain its overall strength in research.

Malaysia, Thailand and Vietnam are all active in seeking expertise from outside to help them build competitive and effective higher education systems. Korea and Taiwan also continue to be aggressive in maintaining focused strength in a few elite universities.

VI. Comparative Approaches to Financing of Public Higher Education

David Palfreyman identified key trends in financing that are shared by both the United Kingdom and the United States. Katharine Lyall described experiments that states are undertaking to address cutbacks in public funding. And David Breneman talked about the impact of fund-raising on how universities operate.

David Palfreyman

There are several big drivers of issues for higher education that one cannot get away from. These include the inability to tax people at levels higher than they are paying now, which reduces available resources for higher education. The demographic change, with aging baby boomers focused on health care spending instead of higher education, also impacts resources.

In the United Kingdom, massification of higher education is under way. Enrollment has almost doubled in size since the mid-1980s – and at the same time, investment in higher education has been just about halved. Politicians want more education without paying for it. The focus is on levying fees to replace lost funding and injecting private money into the higher education system.

The changes raise issues of social equity, affordability for the middle class, and political accountability. The role of the state becomes an issue: Is it an enabler, the controller, the initiator – or is its major role to provide consumer protection for students and parents? All of this should be familiar in the United States, where the Spellings Commission report has echoed many of the trends going on in the United Kingdom:

- The taxpayer retreats, providing less funding.
- The financial gap is addressed by raising fees, attempting cost containment and raising funds through entrepreneurial activities.
- There is a search for cheaper ways to provide higher education (in the United States, this includes community colleges, while in the UK “foundation degrees” and 2+2 programs are offered).
- Universities have to spend more money to comply with more regulations – all the while receiving less funding.
- The politics of higher education become tense as conflicting demands arise in issues such as access, affordability, quality, regulatory compliance, student/parental consumerism, commercialization, professional management, the growth of for-profit institutions, and more.

Session Chair: Sheldon Rothblatt, UC Berkeley

Speakers:

- **David Palfreyman, University of Oxford**
- **Katharine Lyall, University of Wisconsin**

Commentary:

- **David Breneman, University of Virginia**

Consequences for Second-Tier Schools

Panelist David Breneman raised the issue of how community colleges and other second-tier schools will survive in a higher education system that relies more and more on obtaining private funds. He argued that these institutions are in no position to “play the game.”

One participant agreed, noting that there is a growing gulf between elite public institutions and their second-tier counterparts that educate the vast majority of students in the country. A key concern should be the potential for backlash against the elite public institutions that may include taking funds away from the elites for redistribution to the second-tier schools. If and when that occurs, donations to the elites will diminish since donors are not interested in giving funds simply to replace public money cutbacks.

Another participant pointed out that teaching institutions (as opposed to research institutions) are the primary producers of social professions, such as teachers, nurses and social workers. If these institutions are forced to charge market rates because of falling public subsidies, fewer students will be able to enter these vital professions. These institutions are the least able to play the competitive fund-raising, marketization game that universities are now sliding into.

It is interesting to note that much of the discussion that surrounds higher education issues is similar to debate about health care delivery in the United States. Issues like equity vs. choice, affordability vs. accessibility, consumer control, and privatization to avoid the frustration of managing large systems – all arise in both higher education and health care.

Katharine Lyall

The context in the United States is very different from that in Europe in several ways. First, higher education is a private/public mix in the United States, with a much larger private higher education sector than many European nations have. Second, in the United States higher education is a creature of state, not federal, governments. That means there are 50 different entities dealing with 50 different systems. This gives the United States both problems and opportunities. There are 50 states experimenting with different ways of dealing with trends – but there is also no central or national policy for higher education that holds the state experiments together. And third, in the United States there is a long tradition of charging fees for higher education; in general, these fees are higher than has been typically true in Europe.

Balance of Private and Public Good

Several participants talked about the need to develop a new dialogue about the balance between private and public good. Today, universities often call attention to the income that flows from research and innovation, or on the economic gain the individual achieves by attending college. A discussion of the public good that higher education provides has been all but lost from the national conversation.

Katharine Lyall said that universities have “shot themselves in the foot” by focusing so much on private economic benefits. “We have forgotten to articulate the importance of public interest in higher education. Supply-and-demand analysis teaches us that if you have a public good that has un-priced benefits and rely solely on the market to produce, the system will under produce the number of educated individuals that society needs.” She added that studies have shown that the public benefits are not trivial in relationship to private benefits.

Others argued that there does not need to be renewed debate about the public purposes of higher education, which are well known and understood. Instead, what is needed is a renewed effort to get the message across to the public and policy makers.

The responses of U.S. universities to privatization and marketization of higher education have been interesting and diverse. The universities’ first response has been to increase private fund-raising and raise tuitions. This has created a number of new constituencies that universities have to deal with. It is no longer the case that a university president can just talk to the faculty senate and the state legislature. Now he or she must talk to a wide array of interests, including private donors, private-sector collaborators, and students (who now pay well over a third of the cost of their education). It is not surprising to find that the interests of these different constituencies are not necessarily aligned. Increasingly, one sees university leaders facing trade-offs and choices, that they are then criticized for making. Unfortunately, universities do not do a good job of explaining their choices in a way that the average citizen can grasp or appreciate.

Many of the state experiments seek to redefine the relationship between the state and the public university system. In effect, universities are saying, “If you expect us to manage with fewer dollars and still maintain public purposes, then we will have to manage our own business affairs and operations much more flexibly than is now the case.” Some of the experiments include:

- Virginia, where the University of Virginia now gets well under 10 percent of its budget from the state (there is the question of what it means to be a public university when the level of support is that low). Virginia has developed a series of six-year contracts between the state and universities that essentially create a chartered institution that has to deliver on expectations to keep receiving its public investment.
- Colorado, where the state has turned its system support into vouchers that are given to individuals. When state residents register, they receive a credit against the tuition they owe in the amount of the voucher.
- Performance funding, such as in South Carolina, where a pre-established formula sets expectations about what a university must do to receive funding or extra allocations.
- Cohort tuition, such as in Illinois. This guarantees a student that tuition will not increase during the four years they attend the university. This does not reduce the cost so much as it makes it predictable for individual students.
- Tuition waivers, such as at Stanford, Princeton and Harvard, where students whose family incomes are below a certain threshold pay no tuition.

As these experiments progress, they are likely to influence how the financing of higher education is handled in the United States in the future. In the meantime, universities should negotiate a better, clearer understanding of what higher education is expected to do in terms of political and social goals. Once those are agreed upon, then the rest is simply financial mechanics. But in lieu of

that clarity, American universities are scrambling to adapt to financial mechanics in an environment where it is no longer clear what the goals are.

David Breneman

A recent commitment from an individual to give the University of Virginia \$100 million for a freestanding school drives home the point about where priorities are today. This will be a new school of public policy for the university, with new expenses, new faculty, new administrators – so this donation provides no relief from the cutback in state funding. That is the dilemma of high-stakes fund-raising. Donors are not interested in giving universities funds to replace money cut by the state; they want to fund something new and sexy. These donors keep pushing universities into new activities. If the university is lucky, it’s a wash; if it is unlucky, it ends up costing money.

The Virginia charter legislation is still a work in progress. The university wanted to become a non-state agency and have the ability to set tuition. What was achieved was a variety of administrative and regulatory relief, but nothing on setting tuition. The final evaluation of how this plays out is still in development, and the situation is complicated by the fact that the governor and legislators who worked on the deal are now being replaced by others.

In general, many feel that financial aid is a dysfunctional mess, with forms that are difficult to fill out and programs that are hard to understand. At the same time, elite colleges are sitting on endowments that make them look more like investment banks than charitable organizations. Many seem far more interested in building their endowment than in supporting current students. Unfortunately, there is no venue in our system for state and federal governments and the institutions to sit down and talk things through, so change on the scale of Australia’s income-contingent loan plan is unlikely to occur.

VII. Comparative Approaches to Access and Marketing: Undergraduate Education and Degree Production

John Douglass described the stagnating higher education enrollment picture in the United States. Grant Harman discussed Australia’s experiments with different funding schemes and the impact on enrollment. Kerstin Eliasson addressed the Swedish experience with a system that imposes no fees on students.

Session Chair: Steven Brint, UC Riverside

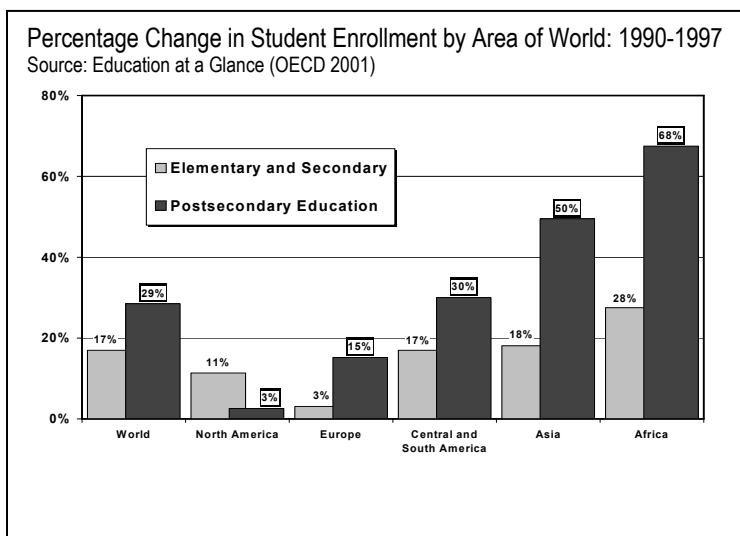
Speakers:

- **John Aubrey Douglass, CSHE, UC Berkeley**
- **Grant Harman, University of New England, Australia**
- **Kerstin Eliasson, former State Secretary, Sweden**

John Aubrey Douglass

In the United States, there is a pattern of stagnant access after a long period of growth. The US is losing, or has lost, its higher education advantage in part because competitors have replicated mass higher education and in many instances surpassed the US in access and graduation rates. The majority of OECD countries are moving toward what he calls a “structured opportunity market” driven largely by ministries or regional governments— largely tangentially by the institutions themselves. The reasons for this push internationally for higher rates of access and graduation from tertiary institutions transcend immediate or even long-term labor needs or simply fueling the much hyped postmodern and “knowledge based” economy. Increasingly the primary motivation is a desire to promote a culture of aspiration, which in turn influences socio-economic mobility and creates a more talented and entrepreneurial population, global competitiveness, and the hope for a more prosperous and equitable society.

The past model of many developed and developing economies relied on command type controls over supply and demand in higher education – setting limits on enrollment in specific fields and setting admission criteria that artificially reduced demand. The Structured Opportunity Market is bringing a new paradigm that often includes:



- A consumer-driven approach to enrollment management, with an emphasis on squeezing more out of public higher education systems while at the same time allowing the growth of private providers.
- Funding schemes that increasingly rely on private sources (fees and tuition) to provide operational funds and resources for student aid. These fees not only generate new operating funds, but also help to decipher the motivated student from the casual user, which it might be argued create greater efficiencies.
- Public funding that fosters greater differentiation among public-sector institutions and expands the revenue stream for student aid.
- Market and government-induced differentiation in institutional missions, which in theory helps match student interests with academic programs and focuses institutions on their role in a larger system of higher education.
- A network of institutions that provide “open admissions” for post-secondary education and training, often largely vocational in orientation but offering a route to universities.
- An increased focus on providing degree and course compatibility, with the possibility of matriculation between like and different higher education institutions.
- Increased interest in international students, as a way of attracting talent, raising visibility and generating additional income.
- A built-in assumption of enrollment growth, but with differing abilities to build enrollment capacity because of problems with operating versus capital resources.

A Matter of Political Priorities?

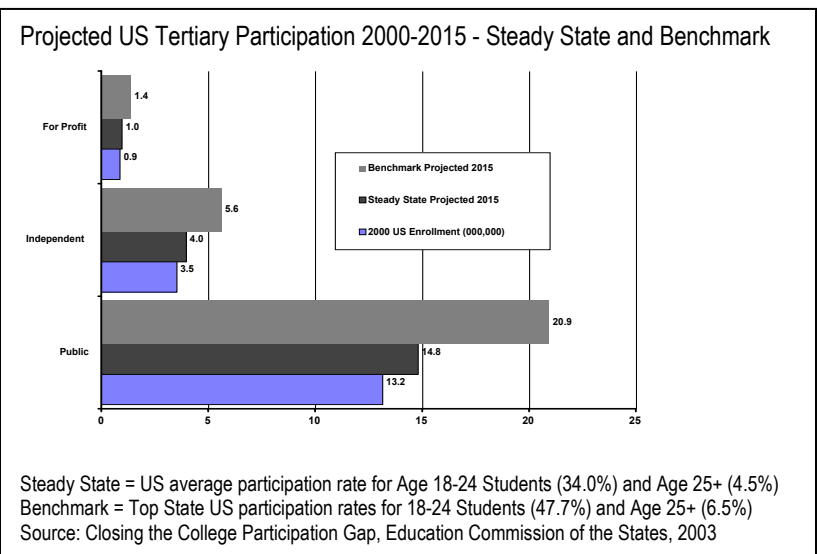
Most contemporary pundits agree that there are significant problems with access and financing public colleges and universities. In the United States, John Aubrey Douglass noted that these are second- or third-tier national policy issues.

“In many EU countries, they are first-tier issues, with concerted efforts to, in the words of the Bologna Agreement, “increase international competitiveness of a European system of higher education.” They have formed supranational forums for debating and forming policies to assess and reposition the EU. Arguably, the U.S. federal government has a greater historical and contemporary role in supporting higher education than in supporting K-12. Although such a suggestion cuts against the current political ethos of free markets and less government and raises the danger of another stifling round of accountability bureaucracy, one might reconsider how a national strategy could strengthen American higher education.

“On their own, states general lack a broader understanding or concern regarding the issue of national competitiveness and the larger problems of growing social and economic stratification. Individual states may seek increased participation rates and recognize the need for additional resources for public higher education; but most are financially incapable (because of competing needs, political gridlock, and legal restrictions on generating revenue) of launching a rate of investment similar to the post-World War II and 1960s eras. Indeed, the resources and political commitment in that period that significantly expanded access required a collaboration of state and federal government—neither could do it on their own. Certainly, those political eras and policy approaches could not and should not be directly replicated. However, the specter of privatization and market models will probably not generate the investment rates and political commitment needed to adequately bolster American education and to retain its leadership position.”

Several statistics point to U.S. stagnation in the education system. High school graduation rates rank the United States 20th in the world if the U.S. Department of Education’s 75 percent rate is used; many believe the true graduation rate is even lower, at about 64 percent. In addition, the United States is no longer number one in the percentage of the 18- to 24-year-old cohort who go on to higher education and graduate. In 2004, the United States’ 33 percent rate fell behind 13 other countries and was a percentage point below the average for OECD countries.

One indicator of the differences between the U.S. and EU higher education



markets was offered in a chart that provided data on enrollment increases by major continents. Even with significant population growth in North America (dominated by the United States), overall postsecondary enrollment grew by only 2.6% between 1990 and 1997—this at a time when immigration has contributed to an 11.4% overall increase in the number of students in elementary and secondary schools. In sharp contrast, European higher education enrollment increased 15.2% over this short seven-year period, while growing at only 3.1% at the elementary and secondary levels. This reflects, on the one hand, relative slow population growth and on the other, the significant emphasis on expanding access to tertiary education.

Another major shift is the huge student enrollment growth in elementary and secondary schools at the same time there is only limited growth in postsecondary education. This is in contrast to the rest of the world, which is seeing much greater growth in higher education. Similarly, data shows that the United States has a high rate of population growth but anemic higher education growth, which is opposite to the pattern elsewhere in the world.

America's population continues to grow, reaching 300 million in 2006. A study by the Education Commission of the States estimates that some 2.2 million additional students will enter accredited public and private colleges and universities between 2000 and 2015 if national participation rates hold steady. Yet current rates of participation within the traditional age cohort (eighteen to twenty-four year olds) and older students (twenty-five and older) are arguably too low. If the participation rates nationally were to reflect the best-performing states, the result would be 10.3 million additional students in accredited postsecondary institutions by 2015.

Despite the current statistics on stagnation, projections of future growth indicate that institutions and policy makers need to be considering ways to expand access for students, and not simply in 2-year community colleges. With about 45% of all students in two-year community colleges (most in vocational programs), the US is arguably too dependent on 2-year institutions to be internationally competitive in the production of bachelors degrees. At the same time, Independent institutions are not looking at growing larger; for-profits will grow to more than their current 5 to 6 percent but are a niche market. This indicates that coping with growth will fall to the public higher education sector, which will become even more essential for the social and economic prosperity of the country.

Kerstin Eliasson

In Sweden, higher education has several distinctive features. The most salient difference is that there are no fees, and never have been. Sweden has looked at the possibility of charging international students from non-EU countries, but that step has not been taken. Those who argue that there should be fees for all students overlook the likely reality that any resources gained from fees would be counterbalanced by the government reducing its share of funding. So no one anticipates that the lack of fees will change.

The government sets a total amount of money that each institution can get and then resources are granted based on the number of students and how well they do. The current conservative government is focused on the quality of education. The prior social democratic government had a goal of 50 percent of the population entering higher education before the age of 25, and the rate is at about 45 percent now. But the current government believes there is a problem with quality and that there should be less of a focus on increasing the number of students.

A Question of Access

During the course of several sessions, different participants spoke about the difficulty of encouraging higher education access for all segments of the population.

Commenting on the issue of access to higher education, Mike Shattock observed that the social policy behind broadening access may have to be re-examined. He offered the following scenario:

“In the United Kingdom, 29 percent of children are born in poverty, and the gap between rich and poor has only widened in the last 10 years. Yet everything that government and institutions have done to encourage working-class people to attend university has had little impact on higher education rates for low-income students. Funds that would pay for Oxford and Cambridge educations have gone unclaimed, and working-class admission rates are falling.”

“What we are up against is a social class that doesn't want the benefits we think we can offer. It's assumed that the disadvantaged want places in the best universities – but why do we assume that? It turns out that the more disadvantaged want places in the least successful institutions because they feel more comfortable there. In a way, what we are facing is a kind of social resistance to upward mobility...this is quite a significant issue because it affects the whole business of access policy.”

Christine Musselin noted that in France students may even be paid to attend school. Nonetheless, the percentage of lower-income students in higher education has decreased in the last decade.

Another participant said that universities are often “foreign territory” for working-class students and that it is up to universities to find ways to create a more accepting environment, as opposed to expecting the students to change so they fit in.

Other participants commented that there needs to be more examination of why low-cost or even free access does not increase participation by disadvantaged groups. This is particularly important at a time when many are making the intuitive, but apparently flawed, argument that rising tuition is limiting access.

Regarding access, Sweden's approach has not been to single out non-traditional students, but to include them in the system through geographic expansion of higher education into all regions of the country. In addition, preparatory courses are offered for those who lack eligibility. Since the mid-1990s, the proportion of students with working-class backgrounds has increased from 18 to 24 percent.

The real challenge for Sweden is in the secondary education system, where only 75 percent stay in school and graduate. This is particularly a problem with boys. Since secondary school is where many students make their decision about what to do with their lives, it is important to reach them at this level to influence them about their futures.

One final point: During elections, politicians often talk about the importance of education and research, but the resources do not readily follow. Despite the realization that higher education is important for the future, governments are unwilling to devote enough resources to the higher education system.

Grant Harman

Higher education in Australia has evolved through several periods of reform since 1974, when all tuition and fees were abolished with the goal of substantially increasing participation by lower-income groups. There was a substantial increase in enrollment, and many students from low-income families entered the higher education system. However, evaluation studies showed there was only a minimal change in the social composition of the student population, so pessimism set in about the ability of the no-tuition policy to be effective.

In 1987, another Labor government came into office at a time of economic problems. Australia was far too dependent on a limited number of exports, so it was decided to broaden the export base. A major part of this reform was a substantial investment in higher education. To fund the investment, fees were re-instituted but with an income-contingent approach. Each student would be charged a set fee, but payment would be deferred until after graduation and after his or her income rose to the average for the community. This was seen as little detriment to low-income students, who would be required to repay the fees only if their pay rose to the point where they were no longer in the low-income level. The collection is run through the income tax system, which has worked extremely well. However, it has had very little impact on higher education participation by different groups of students.

This has been an expensive system for the government, which has had to cover the costs upfront. To encourage other sources of funding, universities are allowed to charge a fee for postgraduate work and a fee for international students. Today, 25 percent of total enrollment is fee-paying international students, and in some research institutions it is more like 30 percent. This has been somewhat controversial with concern about the commercial aspects of charging fees and the need to reserve places for Australian students.

But studies have shown that international enrolments have not affected the availability of places for Australian students and that overall the recruitment of international students has been highly successful, with many positive effects on campuses. In 1996, the system was further refined to allow universities to accept full-fee domestic students. Once universities fill their government-subsidized places, they can recruit additional students. The reasoning is that if the universities can offer places for full fees to international students, Australian students should also have the option if they fail to secure a government-subsidized spot. Today more than half the universities are offering full-fee places.

Nonetheless, the future of higher education in Australia presents a dilemma. The government has been ungenerous with support: in the past 10 years, the public funding per student has dramatically decreased and that has impacted institutions. In 1990, there was one teacher for every 12 students; today, there is one teacher for every 23 students. The universities have failed to convince the community that more funding is needed, which may mean further fee increases and reliance on other sources for funding in the future.

VIII. Science and Technology Initiatives and Strategies for Economic Development

Otto C-C Lin explained the Taiwan model for fostering the transfer of technology from theory to reality. Henry Etzkowitz discussed the role of the university in a new era of innovation stimulated by university/industry/government interactions. Taizo Yakushiji described the challenges that Japan faces and the priorities it has set for the near term. And John Zysman talked

Session Chair: Irwin Feller, Pennsylvania State University

Speakers:

- **Otto C. C. Lin, Hong Kong University of Science and Technology and China Nansha Technology**
- **Henry Etzkowitz, University of Newcastle**
- **Taizo Yakushiji, Council for Science and Technology Policy, Government of Japan**

Commentary:

- **John Zysman, UC Berkeley**

about the emergence of multiple strategies and models encouraged by globalization.

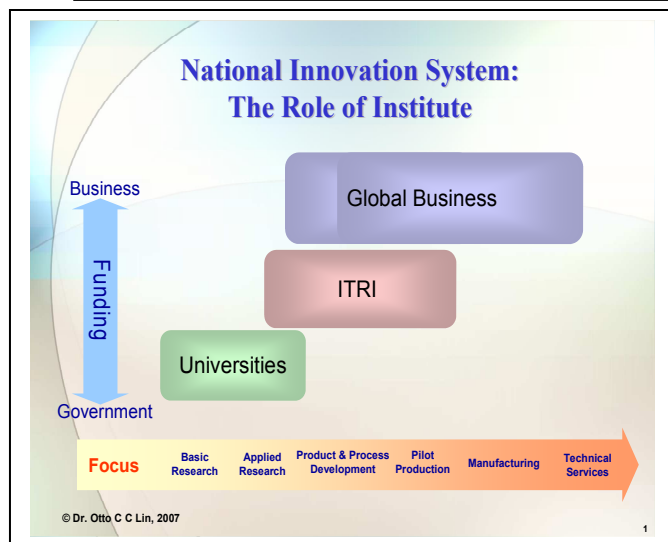
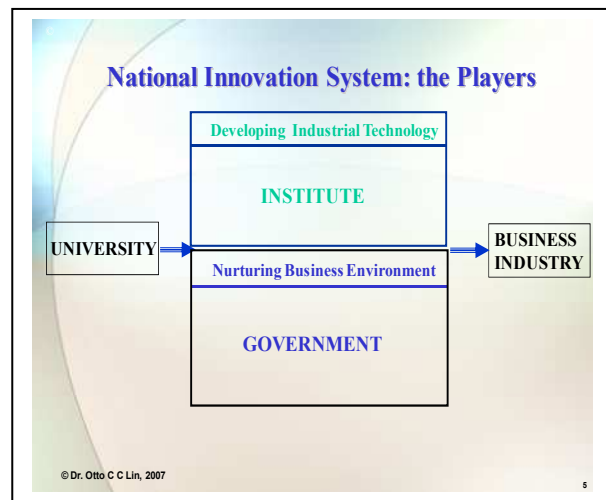
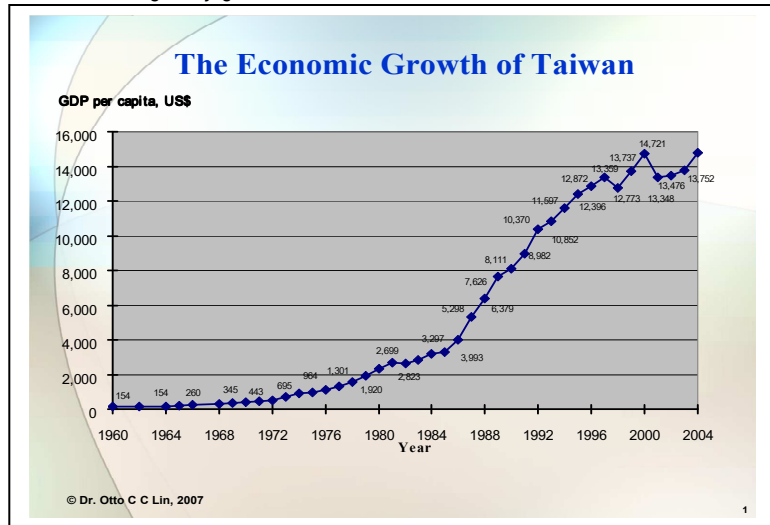
Otto C.C. Lin

This presentation discusses the crisis of the public university from the standpoint of its relevance to the society as the driver of technology progress. It presents a model of the innovation system by looking at the roles of organizations and players. Institutions of higher education provide services to society in the form of the creation of knowledge, providing economic sustainability and promoting social harmony. But it has been noted that commercialization of scientific research results from the university is often difficult. The reason is that the process of innovation involves more factors than just science. To commercialize innovations successfully, one has to do applied and market research, product and process development, pilot production, market trials and technology diffusion. This requires contributions from professionals other than scientists. In addition, there has to be a good business environment, in the form of policy, planning, taxation systems, legal system, infrastructure, skilled manpower, venture capital availability and other factors.

The question is which institutions can perform each of these activities the best. On one end, universities conduct research; on the other, business and industry provide the commercialization. In the middle, institutes can develop the capability to transfer technology and the government can nurture a strong environment conducive to business. How do these players interact? One model is for each of the players to have separate roles with little interference – but also with very poor, inefficient connections. Another model is for the government to own and run all parts of the process, as seen in many centrally planned economies such as the former Soviet Union states. Under the latter model, it would be difficult to nurture first-class businesses or first-class universities.

The goal of the Taiwan model has been to create a system where the four players do not overlap or duplicate functions but where they can instead interact productively. Before the 1980s, there was a large gap between universities and industries. The government set up the Industrial Technology Research Institute (ITRI) to bridge that gap, lead technology development, and create and spin off small companies take technology to the marketplace. This has been successful in several areas, including micro-electronics, notebook PCs, and composite materials.

The ITRI operation follows several key principles. First, ITRI operates as both a national research and development institute and as a non-profit corporation. Second, its positioning in the national innovation system is to bridge the university-industry gap, working with industry to commercialize new technology products and partnering with universities on basic research. ITRI Projects are selected on the basis of niche advantage, market orientation, economic feasibility, industrial partnership and competitive potential. Financially, ITRI seeks to maintain a 50-50 composition for balanced



funding from public and private sectors. ITRI serves both to diffuse and to transfer technology. As guidelines, ITRI transfers technology on a non-exclusive basis using an open, fair and transparent procedure. Once transferred, ITRI will strategically withdraw from the same technology field for non-competition with the recipient. ITRI will also facilitate the transfer of technical personnel with the project on a voluntary basis. It was ITRI's goal to achieve social returns than private gain for the Institute.

The success of the ITRI model can be measured in the number of technologies transferred, companies sponsored and patents granted – numbers that have steadily grown throughout the years since the mid-1980s. With these developments, Taiwan's economic growth has climbed steadily.

In conclusion, the process of transforming scientific research results to commercial products requires the concerted efforts of many institutional and individual players. Taiwan established a national innovation system to define the goals, responsibilities and rules for the players. For a developed economy, the university generally plays the role of innovation leader and the driver of technology. But for a new developing economy, where the university and the industry are relatively weak, the technology institute can play the leadership role if properly structured. By fostering university-institute-industry collaboration on technology development, economic growth can be expedited.

Henry Etzkowitz

From the 18th century onward, industry and government were the major spheres for leadership and shaping society. Today, in the 21st century, the university has moved into the leading role because of the development of the knowledge-based society. Why the university, rather than research and development firms or other types of institutions? Because the university has a competitive advantage. Universities have the students, and many of the best ideas come from students. The key to success in research is to recruit the best students.

In addition to universities playing a significant role, the key players – industry, government and universities – are now not only fulfilling their traditional roles but also have begun to take on the roles of each other. Government is moving beyond regulating and financing to providing venture capital for new businesses. Universities are serving as incubators for new businesses.

In this type of environment, innovation is stimulated at the focal point of government, industry and academia. The university model of innovation is applicable everywhere in the world because universities are everywhere. The ideal typical model has some key elements, including having entrepreneurial faculty at the university who will move technology from the research phase out into industry. While some have feared that if universities are involved in innovation it will take away time and energy from research, the opposite is the case. The stimulation from solving practice problems is likely to result in further theoretical innovation.

The first academic revolution was in the 19th century. Now universities are in the midst of the second revolution, evolving their mission to include teaching, research and economic development. There are many examples. In Rio de Janeiro, they have begun to integrate into all curricula training to write a business plan – because knowing how to operate organizations and work together as an organized group is as relevant in the liberal arts as it is in engineering. In Sweden, students are encouraged to bring a proposal and learn how to create a business, step by step.

In Newcastle, a declining industrial region, there is a plan for a huge science park. It is not as simple as “build it and they will come.” So Newcastle is encouraging participation by offering entrepreneurs the opportunity to become professors of practice, researching, teaching and bringing their businesses to the park. The concept is already beginning to see success.

The policy implications are that both old and new universities need to be strengthened through entrepreneurship and networking. By taking a leadership role with innovation, universities are well positioned to add economic development to their mission of meeting society's needs through teaching and research.

Taizo Yakushiji

Many talk about innovation as a vaguely defined concept. In Japan, there is a state policy and approach that is based on a very specific way of thinking about innovation. This presentation will describe six major problems that Japan is facing, five targets for Japanese innovation, and six priorities for allocating funds to address innovation in the short term. Japan has a strong record of investing in research and innovation. By policy, 3 percent of the gross domestic product is invested in research. In comparison, China is aiming at 2 percent within 20 years; Japan already exceeds 3 percent.

The drive behind Japan's Innovation 25 initiative are six problems that the country is facing: 1) a declining and aging population; 2) competing with the growth in China and India; 3) the disadvantage of a rigid culture in a world that favors knowledge-based,

networked societies; 4) the explosive progress of globalization; 5) world population growth threatening sustainability, as evidenced by global warming and environmental degradation; and 6) an increasing division between the poor and the wealthy.

Japan has identified five targets for innovation:

- Long healthy lives – finding ways to retain people in the workforce longer since there is a declining population to support the economy.
- Safe and secure society – finding technological solutions to many of the natural disasters that threaten Japan and the world.
- Diversified workforce – strengthening the workforce of the future through diversity.
- Resolving environmental problems – leading the way in addressing the world’s environmental challenges.
- Creating an open society – encouraging Japanese to look outward and become more globalized.

To support these targets, Japan is investing in environmental research, developing human resources and reforming the rigid university system. More funding is being allocated to science and technology research and development. In addition, Japan wants to engage young people in university research and give them more independence by finding ways around the current system that funnels funding to senior professors. Finally, there is a move to shift evaluation techniques from measuring inputs to evaluating outcomes and results. Through these priority investments, Japan hopes to stimulate renewed innovation.

John Zysman

The past era was a time of major projects and science-based engineering, large vertically integrated companies with research as part of their long-term growth strategies, and linear development – invest at one end and economic growth would come out the other end.

Today, all of those elements have changed. The question becomes in a new world, what should universities do and how should they organize themselves. The answer may be very different in different countries, but several features will emerge.

First, modularization. Products are unbundled and distributed, and companies are moving from integrated to dispersed. At first, this may seem limiting, but it actually opens up multiple options, and a variety of strategies and outcomes are emerging. Taiwan’s microchips and laptop computer businesses are a good example. Ireland did things completely differently than Taiwan by forming partnerships with global businesses. And the Danes have become extremely effective at buying commodities on the local market and turning them into successful branded industries (for example, buying cheap plastic and turning them into Legos). The Finns have been extremely effective in moving from a forestry industry to a forestry equipment agency, harvesting technology that is developed elsewhere in the world and then making use of it to create a successful economy.

Two of the consequences of this new approach are commoditization and intensification of competition. That means that the advantage from innovation cannot be held as long, so successful businesses most find the sweet spot of competition and innovation. What companies end up doing is constantly shifting their strategy about what they do in-house, through mergers, acquisitions, contracting out, buying services from the outside, and contracting with universities.

Academic Freedom and the Ability to Say “No”

John Douglass noted that in a time of growing pressure to form partnerships with industry, universities need to retain or develop the ability and formal policies on how to say “no.” Deciding to accept or decline partnerships based on academic reasons rather than on monetary potential requires a certain level of autonomy and freedom, and organizational ability.

Kerstin Eliasson said this issue is a universal problem. It is very difficult for faculty to say no when they are faced with a lack of resources. Their ability to withstand the pressure is very dependent on strong university leadership. Another factor is that arrangements that require matching funding are increasing, which provides an easier avenue for saying no since fund-raising may be too demanding on faculty time and energy.

Another participant noted that in the US or many other developed economies, universities seek research partnerships but the balance of power often rests with faculty, who have the ability to decide what research they are willing to do and what research they are not interested in taking on.

What followed was a discussion on the differences in institutional autonomy, sense of mission, the expectations of government and society, and the traditions (or lack thereof) of academic freedom in differing nations – including China versus the US.

Katherine Lyall and John Douglass suggested that there might be a role for developing a universal set of principals to set a benchmark and guide institutions, particularly those in rapidly developing economies, often with a strong emphasis on science, technology and the professions, and with nascent policies on academic freedom and institutional autonomy.

A second change is the transformation of business into services rather than products. People try to escape commoditization by turning what they are selling into a value-added service, with “service” defined as everything that is not a product. So companies like IBM declare that they are no longer a technology business but instead are a service provider. The Chinese are very good at making cranes, but instead of marketing cranes directly they succeed by going into port management.

For the university, the question becomes what kind of commodity can it offer? The answer is people who have global experience, who know something that is valued, and who have the ability to effectively apply science and engineering knowledge.

The challenge for the American university system is to continue to be successful in an era when it may no longer be able to pull in people from around the world to sustain the technology “pump.” There may need to be a national project to justify a large national investment; perhaps global warming will serve that kind of purpose. If there is a weakness in the American system, it is that we do not always realize that the rest of the world is out there and we do not do a good job of harvesting what goes on elsewhere and building collaboration. We also fail to capture the backend of technology once we have developed the front end.

What all of this suggests, and what the three prior presentations demonstrate, is that there are multiple stories with no single answers. Each place has a radically different concept and position in the global economy. The university sits in the position to stimulate innovation, but the appropriate tactics and strategies will need to be identified for each situation.

Finding What Works in an Environment

One participant agreed with John Zysman that there is a variety of approaches to encouraging innovation. The key is to find what works in a specific environment. If the Europeans merely copy the United States, there will be mistakes unless there is a thoughtful assessment of the environment.

Another participant noted that although many different approaches may be successful, there are several elements of the U.S. system that are acknowledged as contributors to its success in driving innovation and economic development:

- Protection of intellectual property rights
- Availability of venture capital
- Supportive tax policies
- Ability to attract key talent

IX. Comparative Approaches to Governance and Management of Higher Education Systems

Christine Musselin focused her presentation on conditions in Germany and France. Jeroen Huisman addressed common patterns among countries that are changing their approaches to governance. And C. Judson King spoke of the challenges facing universities in the United States in an era of eroding trust.

Christine Musselin

Two main changes are taking place in European universities, particularly as demonstrated by the experiences in Germany and France. One is that universities are becoming organizations, with an identity, rationality and hierarchy. The other is that, in their new form, universities are being delegated responsibilities that in the past were the role of government.

The questions addressed here are what does this change mean and what are the consequences? There are several implications. First, the devolution of tasks and management to the universities presents a new challenge for university leaders. The main problem they face is how to have their decisions on academic positions and staff – which in the past were made by ministries – seen as legitimate. They have the option of doing nothing and protecting the existing equilibrium. But in both France and Germany, universities have tended to be much more directive and have tried to find an appropriate balance. In many cases, they rely on peer review to legitimize their decisions, and also take into consideration student demands.

The second implication revolves around the management of staff. This has transformed the university and its academic relationships. Universities in France in the past were shelters for academics; they more or less provided rooms for the academics but little else. The relationship between the university and the academic faculty member was very loose. In Germany, the universities took more of an investor role, recruiting professors, locating basic funding for them, but in no way intervening once the recruitment process was complete. In both countries, universities have now moved closer to the entrepreneur/wage-earner relationship with their academics.

Session Chair: Katharine Lyall, University of Wisconsin

Speakers:

- **Christine Musselin, Centre de Sociologies des Organisations, Sciences Po et CNRS, France**
- **Jeroen Huisman, University of Bath**
- **C. Judson King, CSHE, UC Berkeley**

A third implication is that in order to manage positions and staff, European universities have had to develop more administrative competency.

In addition to changes on the part of university administration, the academic profession itself is undergoing changes. In France, there was a co-management approach between the State and the academic profession, while in Germany the regional ministries had a much stronger role in balancing among disciplines. In both cases, nevertheless, the academic profession will have decreased authority because of the increased capability for the university to make decisions.

Jeroen Huisman

Institutional governance is the general procedures that people have in place to control, administer and give direction to the university. Based on developments in Europe, there are impressive changes taking place regarding governance of universities. Many countries show sweeping changes, and it is easy to conclude that what is happening is clearly different in each place. But there are also visible common patterns in all the countries. Three elements are particularly evident:

- All countries show concern for strengthening the executive powers within institutions.
- All countries stress the accountability role of the executives and the board.
- There is a surprising stress on external representatives being included in governance structures, based on the belief that those not directly linked to academics should play a role.

The interesting development is that countries have arrived at these elements without any evidence that these are valuable and effective changes. Sometimes choices are substantiated by looking to the corporate sector as a model, but the literature in this area makes it clear that no one knows what the best solution is. It is also surprising that countries have come up with similar solutions, indicating a one-size-fits-all solution even though few believe that one size is workable for all situations.

It is important to recognize that simply identifying and implementing good governance does not mean that everyone can sit down and relax. People can work well in a poorly run institution, and poor work can be done in a well-run institution. There are other things that are more important, so good governance is not the only answer. Nonetheless, it is interesting to look into the question of how governance is evolving and why particular structures are favored.

C. Judson King

In the United States, public universities are creatures of 50 different states, so if one were to talk about the governance system, one would have to address 50 different environments. In general, however, there are systems of universities in each state. Some have a vertical structure, where a single system includes research universities, comprehensive universities, specialized campuses and in some cases two-year institutions. In contrast, California has a horizontal structure, with three separate systems. The University of California system is oriented toward research; the California State University system focuses on teaching, four-year degrees and some masters degrees but no research mission; and the community college system provides entry to higher education for many students.

There are advantages and disadvantages to each structure. In California's horizontal structure, the possibility of financial competition has been reduced for the various research campuses and there is less political tugging between universities. In fact, the structure has the important effect of controlling the number of research institutions.

Despite the different governance structures, there are currently six common tensions affecting higher education in the United States:

Two Divergent Phenomena?

The presentations on European governance seem to indicate that more authority is devolving to institutions there at the same time that institutions in the United States are seeing diminished independence and autonomy. Are these two divergent phenomena?

Christine Musselin clarified that although universities in Europe are taking on more responsibilities, it does not mean there is less control over what they can do. They may be able to make more decisions than in the past, but they are still constrained by the state and society on what they can do. Much like in the United States, if they want to receive their funding, they must respect the constraints.

- Declining trust in institutions – there is a feeling on the part of universities that they must exercise their independence, but the public sees them as uncaring about problems and has questions about their integrity.
- Change in funding sources – there is a trend away from full public funding to much more use of private resources and raising fees. In some ways this relates to the tendency for higher education to be viewed as good for the individual rather than as a public good. It has also led to admission controversies, the issue of supply and demand, and questions about who controls admission policies.
- Institutional privatization – universities in several states are turning more to private support and less to public resources for funding.
- Accountability – there are pressures from many directions to demonstrate that universities are performing up to public expectations.
- Shift in the roles of presidents and provosts – university leaders in the past have been focused internally. Now their role is often focused outside the institution because of interactions with board members, donors and legislators.
- Shared governance – there is a major issue about how faculty are brought into and reflected in the governance structure.

Another Comparative Template

In addition to comparisons identified in the governance presentations, there are other issues relating to governance that can be examined for similarities and differences. These include:

- Academic freedom (what to teach, how to teach it, who will teach and who will be taught)
- Fund generation and control
- The right of self-organization

Looking at these issues helps identify where the power and authority in any particular governance structure resides.

X. Reflection on Discussion and Targets for Further Research

Reflections on the discussion were delivered by Robert Berdahl, Taizo Yakushiji, Daniel Fallon and John Zysman, followed by participant suggestions about shared lessons and further research. Key points included the following:

- **Crisis** – Whether a crisis exists depends on how “crisis” is defined, but there is general agreement that higher education is going through a transformation across many different dimensions. There are the issues of massification, globalization and competition, mergers of structures and systems, and new models of partnerships with government and industry. The question is how well higher education manages the transformation while maintaining the essential qualities of the university.
- **Public trust** – Higher education is central to a productive, healthy society, but to play their role well it is critical that universities retain the public trust. This is difficult because of perceptions and the realities regarding affordability, accessibility and accountability. Redefining the role of higher education and articulating that role, which includes educating citizens to play their parts in a democratic globalized world, are important steps in recapturing trust. In addition, the meaning of being a public institution – created to serve the public good – should not be lost, even in an era of diminishing public investment in higher education.
- **Funding and costs** – This has multiple aspects, including the optimal way to support/subsidize low-income students; better economic management by universities; adjustment to the changing mix of public, private and entrepreneurial sources for funding; the affordable level of investment by society in mass higher education (now that the system has moved from educating a top elite to addressing the needs of the masses); the growing gap between resources available to public and private institutions (and the consequences that flow from that in terms of faculty migration, research capability and governance issues); and the struggle by non-research public institutions, which provide education for important professions such as teachers, nurses and social workers.

Crisis: Danger + Opportunity

Shared by Dan Fallon:

The symbol that translates as “crisis” in Chinese is a combination of two characters. The first means danger; the second indicates that if you are in danger, you have to find the opportunity that is presented within the danger. Many feel the crisis of higher education as a danger; now is the time to search for the opportunity presented by the crisis.

- **Accountability** – There is increasing pressure for universities to “prove” that they are providing value and that students are learning what they need. There is tension between practical, applied approaches and traditional liberal education programs (although the core values of critical thinking, problem solving, and oral and written communication skills that are embedded in traditional programs turn out to be foundational for the agility and adaptability required in a globally competitive workforce). There is danger in allowing metrics to be imposed that are not aligned with a well-defined, agreed-upon mission for universities in terms of the public good.
- **Role of Universities in Society** – There is a great deal of emphasis on universities as drivers of economic growth, both on the level of educating individuals for higher-paying jobs and on a broader base by leading the way in research and innovation. Often lost in today’s discussion are the more esoteric roles of building a cohesive society, creating an informed citizenry and broadening intellectual horizons. Because of the changing nature of the university’s role, there are new forms of partnerships, alliances and interactions with a variety of stakeholders, including industry, policy makers and students.
- **Governance** – In the changing environment that universities are facing, finding the right balance in governance structure is challenging. Autonomy, academic freedom and faculty-driven management may not be a comfortable fit with performance-based funding and accountability metrics. Government policy makers and trustees are exerting more control even at a time of diminishing public resources for universities.
- **Universal Notions of Autonomy and Academic Freedom** – As universities are encouraged and develop closer ties with the private sector and government policies are intended to bolster regional and national economies in nations with differing notions of civil liberties and political cultures, the autonomy of institutions to set academic priorities and define proper relationships is growing in importance. Particularly in developing economies such as China and India, and elsewhere, and where science and technology is given significantly higher priority than the humanities and social sciences, notions of academic freedom are evolving and need, arguably, greater definition. Developing a universal set of principals and their rationale might help to guide government ministries and help institutions in defining their proper relationship with the private sector and insuring a vibrant and productive academic culture.
- **Student Readiness** – Elementary/secondary education plays a key role in delivering students to the higher education system who are capable of doing university-level work. In addition, pre-collegiate students make life choices long before they reach the university. Outreach, both to lower education systems and the students themselves, may be a critical component of higher education success.
- **Internationalization** – In a globalized economy, it is increasingly important that students be culturally aware and capable of moving across borders comfortably. Universities are increasingly looking at international students as a source of talent and unconstrained private funds, and some are reaching out to their international counterparts to set up partnerships or traveling to other countries to establish branch campuses.
- **Creativity/Innovation** – Through their research function, universities can lead the way in stimulating innovation but their role is less clear in translating that innovation into applied technology and deliverable products. Different governance and university structures appear either to support or to retard innovation, and a variety of approaches to moving innovation to the marketplace is being implemented in different countries.
- **Curriculum** – Although academic content was not the focus of the conference, some participants indicated there are issues to consider regarding enhanced, modernized curriculum, articulation across countries and programs, and innovative pedagogy.

By raising these and other issues, the Crisis of the Publics symposium offered the symposium organizers and others ideas and input for future research that may prove valuable as higher education in the United States and around the world evolves to meet the needs and expectations of people in the 21st century.

Appendix 1.

List of Symposium Participants

Philip Altbach, Director, Center for International Higher Education, Boston College, USA

Ahmed Bawa, Deputy Vice Chancellor, University of Kwazulu-Natal, South Africa

Robert Berdahl, President, Association of American Universities, Washington DC, USA

Robert Birgeneau, Chancellor, University of California, Berkeley, USA

David Breneman, University Professor and Dean, Curry School of Education, University of Virginia, USA

Steven Brint, Professor, Sociology, UC Riverside, USA

John Aubrey Douglass, Senior Research Fellow, Center for Studies in Higher Education, UC Berkeley, USA

Kerstin Eliasson, former State Secretary for Education and Science, Sweden

Henry Etzkowitz, Chair Management of Innovation, Creativity, and Enterprise, and Professor, School of Business, University of Newcastle, UK

Daniel Fallon, Chair, Education Division, Carnegie Corporation of New York, USA

Irwin Feller, Professor Emeritus, Economics, Pennsylvania State University, USA

Grant Harman, Professor, Centre for Higher Education Management and Policy, School of Professional Development and Leadership, University of New England, Australia

Jeroen Huisman, Professor, Director, International Centre for Higher Education Management, School of Management, University of Bath, UK

Rory Hume, Provost and Executive Vice President, Academic Affairs, University of California, Office of the President, USA

C. Judson King, Director, Center for Studies in Higher Education, UC Berkeley; Provost and Senior Vice President Emeritus, University of California, USA

Wilhelm Krull, Secretary General, Volkswagen Foundation, Hannover, Germany

Otto C. C. Lin, Professor and Senior Advisor to the President, Hong Kong University of Science and Technology, Hong Kong

Katharine Lyall, Professor Emeritus, School of Education, Educational Leadership and Policy Analysis, University of Wisconsin,

USA; former President, University of Wisconsin (system).

Wan-hua Ma, Professor, Education, University of Peking, China

Christine Musselin, Senior Researcher, Centre de Sociologies des Organisations, FNSP/CNRS, Paris, France

David Palfreyman, Director, Oxford Center for Higher Education Policy, Fellow and Bursar, New College, University of Oxford, UK

Sheldon Rothblatt, Professor Emeritus, History, and former Director, Center for Studies in Higher Education, UC Berkeley, USA

Michael Shattock, Institute of Education, University of London, editor; Higher Education Management and Policy (OECD), UK

Marijk van der Wende, Professor, Comparative Higher Education Policy Studies, Center for Higher Education Policy Studies, University of Twente, Netherlands

Stephan Vincent-Lancrin, Education Research and Innovation, Directorate for Education, OECD, France

Taizo Yakushiji, Council for Science and Technology Policy, Cabinet Office; Executive Research Director, Institute for International Policy Studies, Tokyo, Japan

Chunyan Zhou, Professor, Shenyang University, China

John Zysman, Professor, Political Science, and co-Director, Berkeley Roundtable on International Economy (BRIE), UC Berkeley, USA

Appendix 2.

References and Resources

Useful Links

- [European University Association \(EUA\)](#) – A site containing documents concerning the Bologna Process and other issues concerning EU higher education reform
- [Department for Education and Skills](#) – A link to documents concerning higher education reform in the United Kingdom
- [OECD Regional Economic Development Reports](#)
- [World Higher Education Database \(WHED\)](#) - International Association of Universities - A database describing countries educational systems

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