"Universities in Trouble: The Current Crisis in American Higher Education"

Presentation at a meeting jointly organized by the German Stanford Association and the Hertie School of Governance
Berlin, October 19, 2010

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As one listens and looks around the U.S., the state of higher education seems to have become a matter of rather serious concern. The president of Harvard, Drew Gilpin Faust, writes an article in the New York Times on "the university's crisis of purpose"2; John Hennessy, the president of Stanford, worries about a possible "collision point" over federal research funding for universities³; Mark Taylor, one of Columbia University's distinguished scholars, writes about "academic bankruptcy" on the Op-Ed page of the New York Times⁴; The Economist, under the somewhat mischievous title "Declining by Degree", asks whether America's universities will go the way of its car companies and concludes "America's universities lost their way badly in the era of easy money. If they do not find it again, they may go the way of General Motors"⁵; James Adams of the National Bureau of Economic Research asks in a recent paper "Is the U.S. losing its pre-eminence in higher education?"6; wherever you look, higher education is being criticized from the political right as well as the political left for being inefficient, costly, and overstaffed with administrators, the common theme being expressed in the subtitle of one recent book: "How Colleges Are Wasting Our Money and Failing Our Kids and What We Can Do About It."7

So what's going on? Is this the American system of higher education that we all used to like and cherish, and that some of us liked to think of something like the gold standard of higher education? Obviously, a good part of this is the usual cycle of euphoria and malaise that is typical of the discourse on such inherently capricious subjects as higher education. German higher education had the most recent incarnation of its own malaise

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² Drew Gilpin Faust, The University's Crisis of Purpose. New York Times, September 6, 2009.

³ The Stanford Report, June 10, 2010.

⁴ The New York Times, August 15, 2010.

⁵ Declining by Degree: Will America's Universities Go the Way of Its Car Companies? The Economist, September 2, 2010.

⁶ James D. Adams, Is the U.S. Losing Its Preeminence in Higher Education? National Bureau of Economic Research (NBER) Working Paper Series No. 15233, Cambridge, MA, 2009 (www.nber.org/papers/w15233).

⁷ Andrew Hacker and Claudia Dreifus, Higher Education? How Colleges Are Wasting Our Money and Failing Our Kids and What We Can Do About It. New York: Holt/Times Books, 2010. See also Jay P. Greene, Administrative Bloat at American Universities: The Real Reason for High Costs in Higher Education (Goldwater Institute Policy Report, August 17, 2010)

^{(&}lt;a href="http://www.goldwaterinstitute.org/article/4941">http://www.goldwaterinstitute.org/article/4941); Mark Schneider, The Cost of Failure Factories in American Higher Education (American Enterprise Institute, Education Outlook No. 6). Washington: AEI, 2008 (http://www.aei.org/outlook/28863).

in the late 1980s and early 1990s when people like Peter Glotz considered German universities "rotten to the core" and Jürgen Mittelstraß thought they were "incapable of reform". Even though these criticisms were largely well deserved at the time, German higher education seems to have survived that crisis reasonably well.

Will American higher education survive its current malaise similarly well, or are matters more serious than that? That is not a trivial question. After all, even though you may not subscribe to the notion of the U.S. being something like the gold standard in higher education, there is no question but that, at least for the second half of the 20th century and for better or worse, American higher education has been an extraordinarily influential model for higher education worldwide. If that system should now be in some state of crisis, it would be no trivial matter for the world of higher learning at large.

I will present to you my own analysis of what is going on in American higher education. My overall conclusion is that, first, yes, the American system *is* in trouble; secondly, that it is in several kinds of trouble at the same time; thirdly, that the system, or at least some parts of it, will survive its current predicament; and fourthly, that in the process, these different kinds of trouble add up to a serious challenge to the viability of what I see as the American model of higher education.

As I see it, there are at least four major challenges that American higher education has to face these days. To deal with any one of them would be a tall order; to face these four simultaneously makes for a formidable task indeed. I am talking about

- a challenge of purpose and identity,
- a financial challenge,
- the challenges of competition, and lastly, and perhaps most seriously,
- a political challenge.

The challenge of purpose and identity

As I already mentioned, just about a year ago Drew Gilpin Faust, a distinguished historian and President of Harvard University, published a remarkable piece in the *New York Times* entitled "The University's Crisis of Purpose". This is not exactly a new topic, but Professor Faust gives it a much sharper edge against the background of the current economic and financial crisis. She deplores "the growing dominance of economic justifications for universities" and takes critical stock of the rising tendency to measure the universities' success more and more by the currency of their contribution to collective and individual prosperity:

"The economic downturn has had what is perhaps an even more worrisome impact. It has reinforced America's deep-seated notion that a college degree serves largely instrumental purposes... But even as we as a nation have embraced education as critical to economic growth and opportunity, we should

⁸ Jürgen Mittelstrass, Die Unis sind reformunfähig, Spiegel Spezial 1993/3, 134-141; Peter Glotz, Im Kern verrottet? Fünf vor Zwölf an Deutschlands Universitäten. Stuttgart: DVA, 1996.

⁹ Faust, The University's Crisis of Purpose, op.cit.

remember that colleges and universities are about a great deal more than measurable utility. Unlike perhaps any other institutions in the world, they embrace the long view and nurture the kind of critical perspectives that look far beyond the present."¹⁰

She wonders whether "the market model (has) become the fundamental and defining identity of higher education", and feels compelled to emphasize that universities also have a responsibility to serve as the critical consciousness of society, as a provider of meaning and as a constant source of questioning the assumptions on which our lives are predicated. "Human beings need meaning, understanding and perspective as well as jobs" is her concise and emphatic plea for a broader vision of the university's purpose¹¹.

In the wake of the most serious economic crisis the United States has faced in over eighty years, this debate about the identity and the purposes of higher education has become widespread and raises serious doubts about the meaning and identity of the modern university. How does one reconcile the obvious economic utility of higher education with its fundamental commitment to pursuing knowledge for the sake of knowledge? And when resources get scarcer and scarcer, which of these is going to give? Stanford went through a great deal of soul-searching along these lines when it had to determine, a few years ago and well before the current economic crisis, the priorities for its current, \$4.3 billion fund-raising campaign, and ended up with what is a somewhat uneasy attempt to reconcile these two principal functions of a university – including in its priorities human health (with a clear emphasis on stem cell research), the environment and sustainability, the further internationalization of the university, the role of the arts and creativity in human life, K-12 (i.e., primary and secondary) education, and the enhancement of graduate education 12.

One stage on which this "crisis of meaning" in American higher education (and probably not only in *American* higher education) is being debated and acted out is the area of content and curriculum, i.e., the question of what, in this day and age, the American college and university should teach, and *why* – one of the notoriously neglected aspects of university reform everywhere¹³ and one intimately connected to the question of "what knowledge matters"¹⁴. Stanford has just recently appointed a task force of faculty, staff, and students to critically review the entire undergraduate curriculum¹⁵, and there are similar efforts underway elsewhere in the U.S.¹⁶. This is not surprising, because

¹⁰ Ibid.

¹¹ Ibid.

¹² http://annualreport.stanford.edu

Yehuda Elkana, Freedom and Interdisciplinarity: The Future of the University Curriculum. Berlin 2009 (unpublished manuscript); see also the recent manifesto of an international group of scholars in favor of more serious attention to content and curriculum in higher education: www.curriculumreform.org.
 Hans N. Weiler, Challenging the Orthodoxies of Knowledge: Epistemological, Structural and Political Implications for Higher Education. Guy Neave (ed.), Knowledge, Power and Dissent: Critical Perspectives on Higher Education and Research in Knowledge Society. Paris: UNESCO Publishing, 2006, 61-87
 http://news.stanford.edu/news/2010/february1/undergraduate-curriculum-taskforce-020510.html
 E.g., William M. Sullivan and Matthew S. Rosin, A New Agenda for Higher Education: Shaping a Life of the Mind for Practice. San Francisco: Jossey-Bass, 2008; Association of American Colleges and Universities, College Learning for the New Global Century: A Report from the National Leadership

nowhere does the question of meaning and purpose become more tangible than in the question of what the university expects its faculty to teach and its students to learn.

Behind the questions about curriculum per se lurk broader and even more troubling issues. I very much agree with my colleague James March in his concern over what he calls the erosion of citizenship (or the lack of "citizens with a sense of social obligation") in the U.S. – a development for which at least in part universities will have to assume responsibility and which would have to loom large in any debate over the purpose and role of the modern university¹⁷.

Pursuing this debate over the purpose of the modern university is one of the key challenges for higher education not only in the U.S., but in other countries as well. That debate will require a balance between openness and affirmation: On the one hand, the university must come to terms with what its purpose and its mission is. It must also recognize, however, that it may be quite natural and, indeed, imperative for universities to sustain a perennial "crisis of purpose" – in the spirit of what Gerhard Casper at one point called the need for the university "to reinvent itself on a daily basis"¹⁸.

The financial challenge

It does seem a bit paradoxical to speak of a "financial crisis" in American higher education when some universities are still investing hundreds of millions of dollars in new building projects. In Stanford's case, we are talking about \$647 million in 2009/2010 alone – a major new science and engineering quad, a new campus for the Business School (the "Knight Management Center"), a brand-new Performing Arts Center, the new Munger cluster of residences for Law School and other graduate students, plus plans for a total re-building of the Medical Center – to name just the most conspicuous construction sites on campus these days. But the paradox isn't quite as paradoxical as it seems; the profound medium- and long-term financial dilemma of higher education in the United States is quite real – at Stanford as well as in most other institutions of higher education.

Some of the symptoms of this crisis have become well known: The endowments of the major private universities have undergone a serious erosion as a result of the decline in the financial markets; in the case of Stanford, the value of the university's endowment fell in fiscal 2009 from \$17.2 billion to \$12.6 billion, a drop of 26.7% (just about the same as the S&P 500 index); Harvard had the highest loss with 27.3%, followed by Cornell (26%), Stanford, Yale, Duke, and Princeton.

Council for Liberal Education and America's Promise (LEAP). Washington, DC: AAC&U, 2007 (www.aacu.org)

¹⁷ James G. March, Personal communication, April 22, 2010.

¹⁸ Gerhard Casper, Cares of the University: Five-Year Report to the Board of Trustees and the Academic Council of Stanford University (1997). Office of the President, Stanford University, Stanford, CA 94305-2060

There are two pieces of good news in this otherwise grim picture: one, that, over a fiveand ten-year range, the annual gain for Stanford's pool of investments far outperformed virtually all other market indicators and came to 6.8% over 5 years and 9% over ten years (even though those years, for which the S&P 500 index recorded a decline of 2.2%, included the bursting of the "dotcom bubble" in 2000)¹⁹. The other piece of good news is that the financial markets - and thus, the earnings of endowments - have started to recover: Stanford just reported a return of 14.4 % on its investment pool for the year that ended in June, and that is true for most other private universities.

The bad news is, of course, that the precipitous decline in the value of the endowment has had immediate and serious effects on the operating budget of the institutions concerned. At Stanford as in most of its peer institutions, payout from the endowment normally provides about 30% of each year's operating expenses (at Stanford in FY 2009: \$1.1 billion of \$3.7 billion), so one can easily imagine how directly and massively a serious reduction in the endowment affects the operating budget: the Stanford Provost expected for the 2010 budget a drop in investment income of 16% over the previous year²⁰. In responding to this crisis, Stanford has embarked on a very serious budget reduction effort over the last two years, laying off some 450 staff members (about 4% of the non-academic workforce), freezing over 50 open faculty positions, cutting the budgets of all university units by between 13 and 15 percent, and delaying or cancelling capital investment projects for a total of \$1.1 billion. In addition, the university is seeking to enhance its revenue side by aggressively increasing outside research support which creates at least temporary staff positions and helps the university budget through the recovery of indirect cost²¹.

There are further and even more serious effects of the overall financial crisis that compound the budget picture for universities like Stanford. Philanthropic giving becomes more difficult in hard times, and there are hidden costs (e.g., of compromised research agendas) in seeking more and more outside research funds. One of the most dramatic effects of the economic downturn, however, is in the area of financial aid for undergraduates. Stanford as most other leading institutions retains the principle of need-blind admissions, committing themselves to making up the financial shortfall of students who are found to be good enough to be admitted but unable to pay²². Over the last ten years, Stanford's budget for financial aid had grown by about \$5 million a year, reaching \$75 million in 2008; from 2008 to 2009, however, that budget jumped in one year from \$75 million to \$102.3 million, or 36%, and is estimated to reach \$111.5 million in 2010. A major portion of financial aid used to come out of the earnings of the endowment pool; as these earnings shrink, even more funding is needed from other sources.

http://news.stanford.edu/news/2009/november9/faculty-senate-powers-110909.html
http://news.stanford.edu/news/2009/june3/budget-060309.html

For data in this paragraph and the next, see the Provost's presentation of the 2009-2010 Stanford University Budget Plan to the Faculty Senate on May 28, 2009 (http://budget.stanford.edu/2010_budget_plan.pdf). 22 Stanford is maintaining its enhanced undergraduate financial aid program under which families with

less then \$100,000 of income no longer pay tuition, and families with less then \$60,000 pay neither tuiton nor room and board (http://news.stanford.edu/news/2009/june3/budget-060309.html).

It is interesting to note that one thing one might have expected to happen in a time of financial uncertainty has *not* happened, namely, a decrease in the demand for high-quality, high-priced college education. Virtually all major American universities, public as well as private, report for 2010 significant increases (between 4 and 20 percent) in their numbers of undergraduate applications over 2009; Stanford had an increase of just over 5%, Harvard just under 5%; even more spectacular gains were reported by the University of Pennsylvania (18%), Brown (20%), and Princeton (19%) – even troubled UC Berkeley had a plus of almost 4%²³. It would be interesting to speculate about what may cause this increased demand; my own guess is that, in times of economic uncertainty, the long-term value of a prestigious college education may gain in people's estimation – especially for as long as it is accompanied by a policy of need-blind admissions.

What I have tried to show is that the overall financial predicament in *private* higher education in the U.S. is very real and very serious, but probably not fatal. That is only part of the story, however, and I am afraid not the most dramatic part. Much more dramatic still is the financial situation of America's public colleges and universities and their students. Faced with unprecedented budget deficits, state governments in the U.S. - infamously led by California - have even further curtailed their already modest budgets for higher education, forcing state universities to cut programs, faculty and staff while at the same time increasing tuition significantly without corresponding increases in financial aid. The situation is made even more dramatic by the fact that, just as funding for higher education is drying up to an unprecedented degree, many states are facing exceptionally large cohorts of high school graduates seeking access to higher education; states like Nevada, Arizona and Utah project growth rates in high school graduates between 19 and 26 percent, while all three states face major shortfalls in their state budgets and in their allocation to higher education – as a result of drops in tax revenue of up to 19% (notably in Arizona, New Mexico, Oklahoma, and Texas). Nevada alone, facing a shortfall in its state budget of almost 60 percent, cut its support for higher education by over 30% in two consecutive years, and now faces the prospect of having to close entire schools, departments, and degree programs. "There is more demand and fewer courses" - is how my colleague Michael Kirst sums up the situation²⁴.

Nor is this an isolated picture. Ten states, from Alabama and Massachusetts to Utah and West Virginia, have cut their spending for higher education between 2008 and 2010 by percentages ranging from 8 to 20 percent²⁵. Many of these and other states have relied heavily on federal stimulus dollars to make up the shortfall – from California, which covered 8% of its higher education spending from federal funds, to Colorado,

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 $^{^{\}rm 23}$ Blog "The Choice", The New York Times, March 31, 2010

²⁴ Katharine Mieszkowski, Pressures of New Students and Old Weigh on Community Colleges. New York Times, April 8, 2010; Tamar Lewin, Community Colleges Cutting Back on Open Access, The New York Times, June 24, 2010.

²⁵ Rare exceptions from the overall trend are North Dakota and Montana, the only two states in the U.S. without a budget gap in the current fiscal year (The Chronicle of Higher Education, Online edition, March 21, 2010).

where fully 18% of its higher education spending came from federal stimulus funds (the funds provided by the Obama administration's \$70 billion "American Recovery and Reinvestment Act [ARRA] of 2009")²⁶. This is obviously a very risky course of action as funds from this stimulus bill are now almost spent, and the U.S. Congress is very unlikely, given its concern over the mounting federal debt, to provide any more funds. To be sure, there is considerable variation across states in the degree of hardship, but the overall situation is dismal, and while it may be premature to speak, as some people do, of "the death of public education", the situation in public higher education is very serious indeed²⁷.

The net results of these developments are devastating: Hundreds of thousands of students are being turned away from colleges and community colleges for lack of capacity, tens of thousands in California alone, over 5,000 at a single community college in Nevada, 1,655 at City College in San Francisco which cut 710 out of the 8,800 classes it had planned²⁸. There are massive increases in tuition at public institutions (more than 30% in California) without any corresponding increases in financial aid funds; entire programs are being closed with a loss of thousands of jobs, including those of tenured faculty; the quality of the learning environment deteriorates rapidly: one college offers some of its classes at midnight, the only time when classroom space was available; another college sets the thermostat in its classrooms to 15 degrees C in the middle of winter to save on utility bills. The president of SUNY Albany just announced the elimination of the university's departments of French, Italian, Classics, Russian, and Drama²⁹. The list could go on.

Nor is help in sight: state budgets will continue to be hard pressed between support for medical care, long-term pension liabilities, and the rising cost of prisons; in particular, the rising cost of Medicaid, or medical aid for the poor, has emerged as the single most important competitor for state funding for higher education. Peter Orszag, the former director of the White House Office of Management and Budget, has shown that, 25 years ago, state spending on higher education was 50% greater than spending on Medicaid, whereas today it's reversed: states spend 50% more on Medicaid than on higher education³⁰. What makes a bad situation worse, of course, is that there is absolutely no political appetite for raising taxes anywhere in the U.S. Small wonder, then, that many observers see public higher education go "down a path to mediocrity" 31, and that the outgoing Chairman of the Board of Trustees of California State University

²⁶ Sara Hebel, State Cuts are Pushing Public Colleges into Peril. The Chronicle of Higher Education, March 14, 2010; see also Stan Katz, Can We Afford Our State Colleges? The Chronicle of Higher Education, Online edition, April 3, 2010: "Everyone agreed that the next few years will be worse than the past couple of years - the federal stimulus money will be spent, state budget deficits will continue to grow, the easiest savings from cost-cutting will have already been taken".

Derrick Z. Jackson, The death of public education, The Boston Globe (Online edition), April 6,2010 ²⁸ Katharine Mieszkowski, op. cit.

²⁹ Stanley Fish, The Crisis of the Humanities Officially Arrives. The New York Times, October 11, 2010.

³⁰ Peter Orszag, A Health Care Plan for Colleges. The New York Times, September 19, 2010.

reaches the bitter conclusion that "California is on the verge of destroying the very system that once made this state great." ³²

The challenges of competition

Higher education has become, much more so than ever before, an intensely competitive business both nationally and internationally. Universities compete with each other within and across national boundaries for the best faculty, the best students, the best rankings, the most prestigious publications, the most gifts and the most opulent research moneys. Traditionally, everybody involved had more or less automatically assumed that in this competition, America always came out on top. One only needs to look at the Shanghai or the Times Educational Supplement rankings, or at where the most talented European or Asian graduate students and postdocs migrate, at Nobel Prize winners, at public and private funding spent on higher education – the U.S. invariably used to be at the top of the heap.

That, I believe, is changing, however imperceptibly. The American share of "highly influential" papers published in peer-reviewed journals has dropped from 63 percent in 1998 to 58 percent in 2003. Just four percent of American college graduates major in Engineering, compared to 13 percent in Europe and 20 percent in Asia. The latest OECD figures indicate that the U.S. has slipped to 12th place among OECD countries in terms of the percentage of college graduates in the critically important group of 25-34 year olds³³. A recent study showed a strong relationship between a slowdown in scientific publications by American researchers and sluggish growth in state appropriations to public research universities³⁴. An alarming report on the dangers of America's declining scientific strength (under the telling title "Rising Above the Gathering Storm") appeared in 2005 and led to the "America Competes Act" of 2007³⁵, a law that authorized a doubling of public spending on research in the natural sciences; the only problem was that Congress has so far not provided anywhere near the funds needed to implement the program³⁶.

Let us look at the competition. Europe has been making some serious efforts to repatriate some of the scientific talent that it lost to the U.S. and has made some significant investments, at the national level as well as for the EU, in internationally

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³² Press Release, San Francisco State University Alumni Association, November 13, 2009

³³ College Board, The College Completion Agenda: 2010 Progress Report. Executive Summary, p. 6. Germany, incidentally, ranks 28th.

Robert K. Bell, with Derek Hill and Rolf F. Lehming, The Changing Research and Publication Environment in American Research Universities (National Science Foundation Working Paper SRS 07-204, July 2007) (http://www.nsf.gov/statistics/srs07204/pdf/srs07204.pdf).

Officially the "The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act (COMPETES)" (H.R. 2272)

³⁶ Karin Fischer, America Falling: Longtime Dominance in Education Erodes, The Chronicle of Higher Education, October 5, 2009; there is new hope, however, in a move by the Science Committee of the U.S. House of Representatives to restore at least a major portion of the funds originally planned for the Act's implementation: Paul Basken, Lawmakers Renew Commitment to Science Spending, Despite Budget-Deficit Fears. Chronicle of Higher Education, April 29, 2010.

competitive research capacity; the German "Excellence Initiative" which identified in its first round nine "elite universities" and is about to go into its second round, is a case in point. The order of magnitude of initiatives like this, however, is so far rather modest: In the case of the German Excellence Initiative, the total volume of all the funding in the first round over three years (€1.9 billion or \$2.6 billion) does not even reach the volume of one annual (consolidated) budget of Stanford University (\$3.67 billion). In assessing Europe's efforts, one also has to take into account developments like the recent decision by the British government to cut funding for its universities by \$877 million out of a total allocation of \$11.3 billion, or almost 8%³⁷.

More serious may over the medium and long term turn out to be the competition from Asia, notably from China and India. In both countries, the efforts to both expand and improve their systems of higher education and research are nothing short of phenomenal; when you add to those efforts both their booming economies and the tremendous reservoir of human resources in these two countries, it is easy to plot a trajectory of growth that could lead to serious competition on the international level especially since, according to both Larry Summers at the White House and Dominique Strauss-Kahn at the IMF, Asia should emerge much sooner and faster from the current economic and financial crisis than either Europe or the U.S.³⁸. The Chronicle of Higher Education, the major source of information for the field in the U.S., had a special report in October of last year that was entitled "America Falling, Asia Rising" and documented the breathtaking speed with which Asian countries, notably China, were expanding their systems of higher education while the U.S. was laboring under the kinds of cutbacks and shortages that I have already described³⁹.

India is poised to go into overdrive in the development of its system of higher education. The National Knowledge Commission proposed, in its "Report to the Nation 2006-2009"⁴⁰, a massive expansion of universities – going from the current 350 institutions to ultimately 1500, including 50 "central universities" as centers of excellence, ten of them over the next three years. Following up on these recommendations, the new five-year plan provides a major first installment of public resources for the implementation of that vision, including a major increase in the number of central universities, Indian Institutes of Technology (IIT) and Indian Institutes of Management (IIM)⁴¹.

Having taken a closer look at higher education in India myself⁴², I am fully aware of the many obstacles the country has to overcome on its way to becoming truly competitive on an international scale. But it would be a mistake to underestimate either its potential or its resolve, especially once it succeeds attracting some of its better scholars to return from abroad – which it is actively in the process of doing.

³⁷ The Chronicle of Higher Education, Online edition, March 18, 2010

³⁸ Spiegel Online, 30. März 2010 (http://www.spiegel.de/wirtschaft/soziales/0,1518,686496,00.html)

³⁹ Special Report: America Falling, Asia Rising, The Chronicle of Higher Education, October 5, 2009 ⁴⁰ National Knowledge Commission, Report to the Nation 2006-2009. New Delhi: National Knowledge Commission, 2009, 62-77 (http://knowledgecommission.gov.in/downloads/report2009/eng/report09.pdf)

⁴¹ Mortgaging the Future: A Symposium on Reforming India's Higher Education System. Seminar # 587, July 2008 (http://www.india-seminar.com/2008/587.htm)

http://www.stanford.edu/~weiler/Texts07/Notes on Indian Higher Education.pdf

Much the same can be said about China, but on an even larger scale and with an even steeper trajectory of current developments in higher education. Over the last five years, the number of public universities, the number of students, the financial resources allocated to higher education and the total square footage of universities all have increased by factors between 100 and 300 percent – not to mention the rise of private universities, the number of which has increased by over 1000 percent⁴³. The rate of scientists per 1.000 employees has more than doubled over the last fifteen years, from .79 to 1.9 – still percentage-wise a long way from the rates of the U.S. and many European countries, but representing a huge resource in absolute numbers. The number of scholarly papers published by Chinese scholars in peer-reviewed journals (mainly in the sciences and engineering) has increased over the last ten years from 20.000 to 112.000, now outranking both Japan (80.000) and Germany (90.000); over the same period, the index for the U.S. increased from 265.000 to 340.000; if one were to project those kinds of growth curves into the future (which one should do with all due caution), China might surpass the U.S. by 2020. The annual growth rate of published articles over the last ten years in China has been 16.5%, compared with less than one percent in the U.S.; in Chemistry, Engineering, Mathematics, and Physics, China now ranks second or third behind the U.S. in the production of scientific journal articles in science and engineering⁴⁴. In material science, the share of Chinese publications in the worldwide total now stands at 21 percent. Not surprisingly, there are similarly steep growth rates in the number of patents registered by Chinese researchers and inventors; a recent report by Thomson Reuters concludes that "inventions from China have been growing at a faster rate than any other region"⁴⁵.

Even more aggressively than India. China is making a major effort to attract its scholars to return from abroad⁴⁶; a case in point is Andrew Chi-Chi Yao from Shanghai who, at age 35, was a professor of computer science at Stanford and a recipient of the prestigious A.M. Turing Award. When Tsinghua University offered him to return to set up the university's Institute for Theoretical Computer Science, with virtually unlimited funding, he didn't hesitate for a moment before accepting the offer⁴⁷. Looking ahead, China projects its budget for R&D to move from 1.4% of GDP in 2006 to 2.5% by 2020; If one considers that GDP itself is projected to increase by between 7% and 7.5% p.a., this should produce an overall increase in R&D funding of about 440% by 2020 over the level of 2006⁴⁸.

(www.spiegel.de/wissenschaft/mensch/),1518,674077,00.html)

⁴³ Chronicle of Higher Education, May 19, 2006.

⁴⁴ Scientific Research: Asian Countries Expand, U.S. holds steady, The Chronicle of Higher Education, October 5, 2009; see also Un Monde Chinois - Comment Pékin s'impose sur les cinq continents, Courrier International (numéro special), No 1014 du 8 au 14 avril 2010.

⁴⁵ Thomson Reuters, World IP Today Report – China, 2008

⁽http://science.thomsonreuters.com/press/2008/8494659); it should be noted that the percentage of patents coming from universities (16%) is much higher in China than in any other country (U.S.: 4%). Chinas Forscher streben zur Weltspitze, Spiegel Online, February 6, 2010

Mara Hvistendahl, China: Attract Talent First, and Outstanding Universities Will Follow, The Chronicle of Higher Education, October 5, 2009 ⁴⁸ Thomson Reuters, op.cit.

To be sure, there is no need to hold our breath while all this happens; China as well as India face serious obstacles on their way to world prominence in the world of research and higher education. For China in particular, there is clear potential for collision between the norms of open scholarship and a prevailing "culture of conformity". Nonetheless, China seems well on its way to becoming a key international player not just in manufacturing and trade, but in the production of knowledge and of scholars as well.

The political challenge

Much as one may wish it, there is just no way to keep higher education out of "the hot and cold wind of politics"; there is far too much at stake in terms of resources, prestige, and values to expect higher education to remain above the fray when it comes to the strong winds of politics. Higher education in France and in Germany has learned this lesson the hard way, as has American higher education in the conflicts of the 1960s, in the battle for civil rights, or in the various culture wars over evolution theory, political correctness, and affirmative action.

The reason I consider the political challenge for higher education in the U.S. a particularly serious one at this time is two-fold. First, higher education has become a key issue in the highly volatile current debate over the welfare state in the U.S. or, even more fundamentally, the debate over the current and future role of the state in American society. This debate has reached a fever pitch over the past two years as a reaction to President Obama's overall strategy of moving the United States, ever so gingerly, closer to a very modest type of welfare state – the long overdue reform of the American health care system being a case in point.

As far as higher education is concerned, there are various stages on which this debate plays itself out⁴⁹. One of the central stages has to do with financial aid for students where Obama had early on set one of his priorities. On that stage, several U.S. senators, led by Senator Grassley (Republican from Iowa), have embarked on a campaign to force some of the more prosperous private universities to draw down their endowments more aggressively in order to provide more funding for student financial aid (which, as we have seen, is a particularly painful strategy at a time of shrinking endowments). The Senator seems to be in tune with public opinion, however: In a recent poll, 60 percent of Americans believed that colleges are "more concerned with their own financial well-being than with giving students a 'quality education'", and a growing number of people ask whether many universities' preoccupation with building

⁴⁹ An important side issue in this kind of political debate is the issue of American federalism and the relationship between states' rights and the rights of the federal government, where not only the constitutional norms of states' rights in education, but also a generalized distrust of "national solutions" are increasingly at odds with the fiscal realities of grossly and structurally underfunded state governments.

and preserving endowment wealth does not distort the educational mission of colleges⁵⁰.

Another stage for the political controversy over higher education was the hassle over legislation this past year on restructuring and improving federal aid for needy students (known as Pell grants). This legislation aimed at allowing much larger numbers of needy students to enter and complete college programs. Barack Obama had made that legislation the key vehicle for a substantial federal investment in higher education, targeted particularly (and, in my view, wisely) at a significant expansion and improvement of two-year community colleges as an exceptionally valuable and severely underfinanced part of the American higher education system⁵¹. On that score, however, and without doubt under the impact from the bitter struggle over health care reform, Obama suffered a major defeat⁵². His original bill had asked for a total package of \$87 billion over ten years, including (in addition to substantial amounts for student aid) \$12 billion for the support of community colleges. After all the political haggling was over, the bill ended up with less than half the funds he asked for (\$43 billion instead of \$87 billion), most of which went into the Pell grant program (\$36 billion); the portion earmarked for the Community Colleges, originally budgeted for \$12 billion so as to allow them to increase their annual output of graduates by 50%, was slashed to just \$2 billion over ten years – a reduction of 85%. With that result, the funds provided in the bill will hardly even help compensate for the cuts in funding for colleges and student aid at the state level, let alone expand college enrollment⁵³.

My second reason for speaking of a particularly serious political challenge for American higher education has to do with the fact that American society is currently battered by a wave of anti-intellectualism that is, at least in recent memory, unprecedented in both scope and intensity. To be sure, some kind of anti-intellectualism has always had a long and persistent tradition in the United States; Richard Hofstadter has documented this tradition in his important 1963 book on "Anti-Intellectualism in American Life" The late William F. Buckley, the indomitable conservative commentator, is famously on record to have said in the 1960s that he would "rather entrust the government of the United States to the first 400 people listed in the Boston telephone directory than to the faculty of Harvard University" 55.

⁵⁰ Goldie Blumenstyk, Financial Affairs: Why the Endowment-Spending Debate Matters Now More Than Ever, The Chronicle of Higher Education, March 7, 2010

A move that has led David Brooks, the conservative columnist of the New York Times, to call Obama "the most determined education reformer in the modern presidency" (New York Times, March 12, 2010).
 Kevin Carey, Taking and Incomplete: The disastrous education compromise that marred Obama's best week in office. The New Republic (Online edition: www.tnr.com), April 13, 2010

⁵³ Paul Basken, Historic Victory for Student Aid is Tinged by Lost Possibilities, The Chronicle of Higher Education, Online edition, March 25, 2010; the California Community College system alone lost \$520 million in state funding over the last year, about 8% of its overall budget (Katharine Mieszkowski, op. cit.). ⁵⁴ Richard Hofstadter, Anti-Intellectualism in American Life. New York: Vintage Books, 1963

⁵⁵ Cited in Patricia Cohen, Professor is a Label That Leans to the Left, The New York Times, January 18, 2010.

What we are facing in the U.S. today, however, is a much more strident and vicious brand of anti-intellectualism in which, as David Brooks recently observed in the New York Times, what started out as "a disdain for liberal intellectuals slipped into a disdain for the educated class as a whole"56. This new anti-intellectualism 57 has become one of the hallmarks of the Tea Party Movement, an extraordinarily radical and amazingly successful conservative movement that has taken an extremist stand in the current debate on the role of the state, actively militating for a return to the founding principles of the American Republic in the 18th century – with its battle cry: "Less taxes, less state, more freedom!". Its current patron saint is Sarah Palin who, for a modest fee of \$100,000, gave the keynote speech at the Tea Party Convention in Nashville earlier this year and who, as David Brooks puts it, is "relentlessly dividing the world between the 'normal Joe-Sixpack-American' and the coastal elite"58. This movement is not to be taken lightly, and its profound hatred of a president who personifies more than most modern presidents rationality and intellectual discourse is likely to be a significant factor in American politics for the foreseeable future, especially as it has strong media support in the likes of Rush Limbaugh, Glenn Beck, and Sean Hannity. In a recent NBC News/Wall Street Journal poll, 41% of Americans have a positive view of the Tea Party Movement, while only 35% have a positive view of the Democratic Party and only 25% of the Republican Party. At the moment, and with renewed determination after Congress passed the health care bill, the Tea Party Movement has widely succeeded in identifying and supporting candidates for the November 2 congressional elections that subscribe to the movement's anti-statist, anti-tax, and anti-intellectual program – people like Marco Rubio who, with Tea Party support, runs for the United States Senate in Florida with the campaign slogan to give Americans "their freedom back". It should be noted that, behind this extreme manifestation of a new and radical conservatism in American politics lies a diffuse and even more widespread disdain for the premises of the welfare state; it is guite conceivable that David Dill, a well-known scholar of educational policy is right in suspecting that the U.S. may be the only industrialized country "where the majority has an increasing disaffection for providing services including higher education for the less advantaged"⁵⁹.

So much for the political challenges, with which I want to conclude my four perspectives on the current state of higher education in the U.S. I should add, however, that those are by no means the only critical issues in American higher education; a more complete coverage would certainly have to include the problems faced in the realm of college athletics, the difficulties higher education has in coming to terms with educational

⁵⁶ David Brooks, The Tea Party Teens, New York Times, January 5, 2010

⁵⁷ It should be noted that this polarization is not at all in the tradition of conservative thinking in American politics, where for decades outstanding intellectuals, including William F. Buckley, but also Irving Kristol, Jean Kirkpatrick, and Norman Podhoretz were the dominant figures. See Mark Lilla, The Perils of Populist Chic", Wall Street Journal, November 8, 2008.

David Brooks, ibid.

David D. Dill, Personal communication, April 18, 2010; see also David D. Dill and Frans A. van Vught (eds.), National Innovation and the Academic Research Enterprise. Baltimore: Johns Hopkins University Press, 2010; David D. Dill and Maarja Beerkens (eds.), Public Policy for Academic Quality. New York: Springer, 2010 (in press).

technology, and the serious problems of teacher education. But for now, I would like to get back to two questions that have prompted this analysis in the first place: First, how serious is the current, and multiple, predicament of American higher education? And secondly, does the current situation suggest that the American model of higher education is becoming obsolete?

How serious is the situation?

Considering my report, I don't think there can be any doubt but that the situation is very serious indeed. The question is whether and how America's universities and colleges will weather this difficult situation. Will it weaken them and sap their strength, or will they live up to the challenges and come out of the crisis stronger than they were before?

As Yogi Berra, our legendary baseball-philosopher, famously put it, it's tough to make predictions, especially about the future. But after having taken a close look at the problems that higher education in the U.S. faces, let me conclude by saying two things: first and more pessimistically, that the current dilemma is surely going to do damage to the American system of higher education; and secondly and more optimistically, that America's institutions of higher education – at least some of them – will come out of this situation as strong as they were before, and perhaps even stronger. My pessimistic conclusion about the damage that the crisis will cause has to do particularly with the public segment of higher education in the U.S.; if you take together the continuing and, in my view, truly structural fiscal crisis at the state level, the considerable demographic pressure on the entrance to higher education, and the strong anti-state and anti-tax forces in American politics, it is hard to see how the problems in public higher education, and notably at the Community College level, will disappear any time soon.

The optimistic part of my prediction, on the other hand, is based on three observations. First, and notwithstanding what I have said about the political predicament of higher education, there continues to be considerable support for higher education in the American public. Drew Gilpin Faust, in her article to which I referred earlier, mentions a recent survey of American citizens which revealed that 93 percent of respondents considered our universities one of the country's "most valuable resources" A more recent poll conducted by The Associated Press and Stanford University revealed particularly strong support for community colleges, making the legislative defeat of Obama's plan for support of community colleges even more incongruous 1. The data on the growing demand for access to high-quality institutions and the fact that, even in times of severe financial crisis and diminishing personal fortunes, philanthropy for higher education institutions does remain amazingly strong are further cases in point.

⁶⁰ Drew Gilpin Faust, op.cit.

⁶¹ AP Poll: Americans support community colleges, October 5, 2010 (http://www.google.com/hostednews/ap/article/ALeqM5jxQ0j AzNFnmu5Qt2JYZh6UA0R gD9ILDQB00? docId=D9ILDQB00).

Secondly, and not unrelated to the first point, private higher education in the U.S. seems to demonstrate a remarkable degree of resilience and flexibility under conditions of stress; the business model of most private institutions, with its strong but distributed reliance on endowment funding, outside research support with realistic levels of indirect cost recovery, philanthropy and student fees does seem to work well even in times of financial downturns. Between the recovery of the financial markets and its salutary effect on endowments, the strong capacity of private research universities to generate outside research support, at least steady levels of philanthropic giving, and the (not yet exhausted) ability of private institutions to increase tuition in the face of undiminished demand, the large private universities should get over the worst of their financial problems relatively soon. It is interesting to note that some of the more prestigious public institutions, including UC Berkeley, are actively considering going private⁶², and that the for-profit sector in American higher education (institutions like the University of Phoenix) is gaining rapidly in terms of both quantity and quality, some tricky problems of management and ethics notwithstanding⁶³.

Thirdly, the kinds of synergies that have emerged in the U.S., more than in any other place in the world, between higher education and the world of business and technology remain an extraordinarily powerful ingredient in knowledge-based economic growth. Wherever in higher education these synergies are being actively and imaginatively cultivated (as they were and continue to be in Silicon Valley), there is likely to be further growth and innovation.

Is the American model becoming obsolete?

Let's take a look at the claim, made in some current discussions especially outside the U.S. ⁶⁴, that the current problems reveal a basic weakness in the American model of higher education. First of all, let's ask what "the American model" really is. In my view, the American model in higher education consists of optimizing two sets of opposites: the public and the private, and breadth and depth. In other words: The real genius of the American system of higher education lies in its ability, on the one hand, to combine public and private support, the logic of the state and the logic of the market and, on the other hand, to combine in one system the principle of high selectivity and the principle of broad access. A system that encompasses both rural community colleges and the likes of Stanford University, land-grant colleges and the lvy League, small liberal arts colleges and large for-profit enterprises is bound to have an inherent elasticity and should be structurally capable of satisfying the widest variety of individual expectations and social and economic needs. No system of higher education in the world has come even close to effectively bridging those gaps, to building those two sets of bridges, to

⁶² James C. Garland, Saving Alma Mater: A Rescue Plan for America's Public Universities. Chicago: University of Chicago Press, 2009

Robin Wilson, For-Profit Colleges Change Higher Education's Landscape. The Chronicle of Higher Education, February 7, 2010

⁶⁴ See, inter alia, David McNeill, In Tough Times, Government-Backed Foreign Universities Promote their Stability. The Chronicle of Higher Education, September 28, 2009.

reconciling those two sets of opposite dynamics. It is this model, even more than the singular accomplishments of places like Stanford, Harvard or Berkeley, that has made the American system such a conspicuous point of reference in higher education worldwide.

From Gerhard Casper, Stanford's 9th president (1992-2000), comes a particularly appropriate assessment of the essence of American higher education: "In higher education in the U.S. not everything glitters, and not everything that glitters is made of gold. The American system of higher education is a highly differentiated system where the ideal type is represented by tremendous institutional variation in response to widely different expectations and needs. Most importantly, it is a competitive system that works without the profit motive."

That model is not only not obsolete, but is becoming ever more functional in times of major change as labor markets diversify and fluctuate, as talent is both scarcer and more and more internationally mobile, as the knowledge needs of modern societies and economies become ever more diversified and demanding, and as the mobilization of talent reserves from ever wider groups in a society becomes more imperative.

The problem, however, is that the current challenges as I have described them severely disturb the delicate balance of this model. It's relatively easy for Harvard to survive the financial shortfall without a few more new buildings, but otherwise pretty much intact; it's bad for American society, however, if, at the same time, tens and hundreds of thousands of high school graduates cannot take their first step into higher education because their local community college has run out of capacity and money. The American model thrives on having both strong private and strong public universities, and on having both elite institutions and a wide open access gate for high school graduates; if the superb academic reputation of places like the University of California is severely threatened by a dramatic curtailment of resources, and if at the same time community colleges can no longer absorb the demand of young people for entry into higher education, then the system as a whole suffers – quite possibly irreparably.

Beyond the damage that its own resource problems cause the viability of the "American model" of higher education, other doubts are emerging as to how exemplary the model can be in the future. It has often been claimed that, while Humboldt's ideas about the linkage between teaching and research have a hard time surviving the massification of higher education in his own native country, his ideas are alive and well in the American research university. One important effect of the current financial predicament may well be that, under the pressure to increase revenues from both research and teaching, this

Bayerische Akademie der Wissenschaften und Carl Friedrich von Siemens Stiftung, 1996; Übersetzung durch den Verfasser.)

⁶⁵ "In der amerikanischen Hochschullandschaft glänzt bei weitem nicht alles und nicht alles, was glänzt, ist Gold. Das amerikanische Hochschulsystem ist ein hochdifferenziertes System, in dem der Idealtypus die verschiedensten Ausprägungen für die verschiedensten Erwartungen und Bedürfnisse gefunden hat. Es ist vor allem ein ohne das Profitmotiv auskommendes Wettbewerbssystem." (Gerhard Casper, Eine Welt ohne Universitäten? Werner Heisenberg Vorlesung, 3. Juli 1996. München:

linkage may come increasingly unbundled in the U.S. as well⁶⁶. In another critical perspective, David Dill expresses a great deal of skepticism about the value of the American model on the grounds that higher education in the U.S., compared to developments in, among others, Scandinavia and Australia, is no longer at the cutting edge of progress in such areas as financial aid for students or performance-based funding of universities; combined with the pervasive political reluctance to embrace and support public higher education as a national priority, he comes to the conclusion that "the U.S. is no longer the best place to look for useful guidance on addressing the future problems of higher education in other developed countries, let alone emerging countries"67.

Or do we need to re-think the essence of the "American model" altogether? Considering the political climate in the U.S., doesn't it make more sense to abandon the difficult calibration between excellence and breadth and focus the American model, as my Stanford colleague Henry Rowen suggests, on what has clearly been one of the strengths of American higher education, namely, maximizing competition and choice⁶⁸?

Another one of Yogi Berra's wisdoms is "When you come to a fork in the road, take it." I am afraid that won't do in this case. American society has some hard decisions to make about the future of its higher education system.

⁶⁸ Henry Rowen, Personal communication, April 15, 2010.

James G. March, Personal communication, April 22, 2010.
 David D. Dill, Personal communication, April 18, 2010; see also above, note 51.