

## **CLARK KERR LECTURE 4**

### ***The Future of the Californian Model of Higher Education***

Thursday, October 9, 2014

3:00pm - 4:30pm, Geisel Library, Seuss Room

University of California, San Diego

#### **[Uses of the University and world map]**

Thank you kindly Jud, and thank you all for welcoming us to UC San Diego. My wife Anna, who is also a scholar of higher education, and our son Sasha, are here today. It is a pleasure to visit the campus for the first time.

It is fitting that we honour the contribution of Clark Kerr at UCSD. Clark Kerr was a great thinker who was also a great achiever. The modern system and institution builders in higher education deserve all our respect. We work within the halls built by that generation. Clark Kerr was the foremost of the builders. He negotiated the name UC San Diego. Construction was approved in 1960, the year of the Californian Master Plan for Higher Education, in which Kerr was central. The campus opened in 1964, the year after Kerr's Godkin Lectures at Harvard. These became the book *The Uses of the University*, still the best description of the modern institution, the large comprehensive science university, which he called the 'Multiversity'.

Today I start with Clark Kerr, *The Uses of the University*, and the Master Plan. Together these works constitute what can be called the distinctive Californian Model of Higher Education. The Californian Model is a system approach to higher education, rather than a recipe for the university as a single stand-alone institution, a firm competing against all comers. The Californian-style system serves the state and its people and expands at need, providing access to all. It combines mass education with excellence, on the basis of diverse provision in different sectors of higher education, and is crowned by the large research Multiversity, such as UCSD, with its many missions. Apart from Clark Kerr, others have also contributed to the Californian Model, and I will briefly discuss the Berkeley sociologist Martin Trow. Then I trace the evolution of the Californian Model in two spheres.

The first sphere is the wider higher education world, in the United States and beyond, where aspects of the Californian Model have been very influential. The second sphere is California itself, where the Master Plan and the values embodied by the Plan have run into difficulties. I will review the

issues affecting the Californian Model of higher education, before closing with a few thoughts about possible future developments.

**[Clark Kerr on front cover of *Time* 1960]**

Clark Kerr began his professional life as a social scientist who specialized in industrial relations, and became successful mediator in labour disputes. He never stopped being an empirical social scientist, interested in ideas and with a practical bent. His intellectual method paralleled his approach to university affairs. He posed contrasting poles of interpretation and then made synthetic judgments in the middle ground. Sheldon Rothblatt makes the comment that Kerr saw the world in terms of ‘in betweens’, rather than absolutes. He was not an ideologue. He wanted to embrace and understand the complexity of the social, economic and political world, not over-simplify it. For example, in the Multiversity concept, in which the modern university carries a huge range of missions, tasks, agendas, groups, interests—rather than embodying one single idea or principle—Kerr’s notion of multiplicity enables a more inclusive and less doctrinaire vision of the institution.

Clark Kerr’s leadership style paralleled his intellectual methods: inclusion, and working the middle ground. As UC president and head at Carnegie he operated by consensus and saw mediation as the supreme function of leaders. But the role of the mediator was not to find the mid point between contending parties. It was to articulate a higher level of agreement, a synthesis that would contain the ideas or concerns of all parties, and turning them into a new comprehensive solution all could endorse. We might call this a transformative form of mediation. It requires confidence, imagination, a clear grasp of the different fragments, and a strong sense of the whole. It also requires words that are plain and cut through to the root.

This is how Clark Kerr writes in *The Uses of the University*. He joins spare and simple prose to a pellucid clarity in analysis. He is a humanistic social scientist, at home with numbers but not ruled by them. He generalizes brilliantly but is anchored in the material world. His observations are immediate and plausible. They make our own experience clear to ourselves.

Kerr separates fact and value sufficiently to allow this kind of explanation to emerge. As he stated in 1963, he saw it as his task to explain the Multiversity, how it worked and the environment in which it sat, not to preach one or another position on what it should be. The separation between fact and values is never absolute. Explanation can be used to inform normative projects; and Kerr’s empirical observations were shaped by his values. Yet his values were also a partly open system. He knew there

was always more to learn. New facts and explanations were possible. Different people could have good ideas. And values were open to tests of evidence, and so could evolve over time—another reason to value realism.

The obligation that Kerr felt, to understand and explain higher education in realistic fashion, imposed on him, as an intellectual, a specific mental discipline: a responsibility to open the Multiversity to scrutiny. Inside the sector this created a more sophisticated reflexivity about institutional form. Kerr is still required reading for new university presidents. Yet his sharp picture of the Multiversity opened him to criticism from different quarters. He later said that he should have been less the social scientist, more guarded, in the Godkin Lectures. ‘I paid a heavy price for being an honest and realistic commentator’, he said. We are fortunate that he did not have that hindsight, though we can sympathize with his predicament.

The first Godkin Lecture provides a history of different ideas of the university; reflects on the evolution of the American institution, and its key moments, the land grant movement and the research and graduate university that began at Hopkins; explains the Multiversity as a plurality of communities, interests and agendas; and reflects on governance and differing styles of presidential leadership, culminating in the president as mediator. In an amusing, perceptive passage Kerr describes the work of the president. (Here we must briefly tolerate the grating sexist language. Kerr wrote when university presidents were almost always men alone).

The university president in the United States is expected to be a friend of the students, a colleague of the faculty, a good fellow with the alumni, a sound administrator with the trustees, a good speaker with the public, an astute bargainer with the foundations and the federal agencies, a politician with the state legislature, a friend of industry, labour, and agriculture, a persuasive diplomat with donors, a champion of education generally, a supporter of the professions (particularly law and medicine), a spokesman to the press, a scholar in his own right, a public servant at the state and national levels, a devotee of opera and football equally, a decent human being, a good husband and father, an active member of a church. Above all he must enjoy travelling in airplanes, eating his meals in public, and attending public ceremonies. No one can be all of these things. Some succeed in being none.

He should be firm, yet gentle; sensitive to others, insensitive to himself; look to the past and future, yet be firmly planted in the present; both

visionary and sound; affable, yet reflective; know the value of a dollar and realize that ideas cannot be bought; inspiring in his visions yet cautious in what it does; a man of principle yet able to make a deal; a man with broad perspective who will follow the details conscientiously; a good American but ready to criticize the status quo fearlessly; a seeker of the truth where the truth may not hurt too much; a source of public policy pronouncements when they do not reflect on his own institution. He should sound like a mouse at home and look like a lion abroad. He is one of the marginal men in a democratic society ... on the margins of many groups, many ideas, many endeavours, many characteristics. He is a marginal man but at the very centre of the total process (pp. 22-23).

Lecture 2 situates the Multiversity in its federal policy setting. Research funding had created the 'federal grant university'. Direct relations between granting agencies and disciplines skewed the balance between fields, and disembedded faculty stars and research centres from the Multiversity. Research income compromised undergraduate teaching. Familiar issues.

Lecture 3 expanded on both sets of themes. The two big developments in higher education were the principles of universal access, and of progress through science. The Multiversity was seen as driver of economic growth, and all-round solver of problems. The faculty were conservative, but external factors for change were irresistible: growth, the spread of professional credentialing, university involvement in society. 'The knowledge industry' was now central to business and government. Universities were becoming more like industry. Resources becoming concentrated in units that produced marketable knowledge, stratifying the sector. 'Inter-university rivalry' was intense. Kerr did not call it 'academic capitalism' but described some of the signs. There were three challenges ahead: to improve undergraduate instruction; to create a more unified intellectual world, with stronger humanities and social sciences; and to 'relate the administration' better to faculty and students. Again familiar.

The Godkin Lectures are a great summary. They failed to predict Silicon Valley, the Internet, the off-shoring of production, and neo-liberal policy, but no-one else predicted them either. My only reservation is about Kerr's account of the coherence of the Multiversity. In the first Godkin lecture he remarked that 'universities have a unique capacity for riding off in all direction and still staying in the same place'. So what is it that holds the Multiversity together? Kerr had various answers to this, implicit and explicit. One answer was 'nothing'. Nothing holds the Multiversity together.

Another answer was 'the university president'. A third answer was the 'name' of the university. This was nearer the mark. In my judgment, what holds the Multiversity together is social status. Research universities are a status economy. Their institutional status is reproduced by selective entry and research performance, two drivers that feed into each other. High quality students bring status to the institution, they reproduce its selectivity, and in return receive institutional brand status as graduates, though this brand value varies by field of study. In turn, the educational mission drives the revenues needed to sustain research performance in a competitive market; and superior research lifts institutional status with its power to attract top students. Status binds institutions only in the elite sector. There is no status at the lower levels. This is one of the reasons for the fragmentation of mass higher education, evident today, pulled between the different forms of four-year and two-year programs, small non-profit colleges, the burgeoning for-profits, and teacher-free online offerings.

The 1960 Master Plan, in which Clark Kerr played a central role, exemplified the Kerr virtues of 'in-betweenism' and inclusion. It was an inclusive Kerr style transformative bargain. The colleges, later the CSU, gained coherence as a sector; while the University protected its near monopoly of research. This ensured such a thick distribution of research funding that fifty years later nine of the ten campuses are listed in the world top 100 research universities. The state could show that it was satisfying popular demand, while the Master Plan was economically cheap for the first 15 years because it shifted part of the future growth from four-year to two-year colleges. At the same time, for higher education the Plan meant 'the end of the open market approach of lawmakers and local communities towards creating new campuses', as John Douglass puts it. Why did the State agree close off its fiscal and political options on a long-term basis?

The answer lies in the political culture. The late 1950s and the 1960s were a highly creative time. It was the time of the Great Society, and the greater civil rights movement. Both government and its critics wanted to make a better world. Rothblatt states: 'The period was one in which the very idea of planning in itself was held in high esteem'. The memory of World War Two was still green, sustaining the potential for big collective solutions. The Soviet Sputnik in 1957 had pushed science and universities up the agenda. In this context, one very different to today, a well documented plan for higher education, that promised shared opportunities for individual freedom, in the national interest, had wide and deep appeal.

The content of the Master Plan tapped into an older tradition Douglass calls 'The California Idea'. This derived from the California Progressives, a late nineteenth century middle-class political reform movement that saw education as the basis for 'a modern and scientifically advanced society'. The Progressives believed that all high school graduates should have the postsecondary opportunities. The state should progressively expand the number of public institutions, especially in emerging population centres. There was much development of higher education between 1900 and 1920. The 1960 Plan rode a second wave of progressivism.

Though the Plan did not specifically guarantee universal access, the politics that developed around implementation of the Plan 'guaranteed that there would be a place in college for every high school graduate or person otherwise qualified who chose to attend,' as Kerr put it. The Plan endorsed continued growth of participation into the future, in response to economic need and popular demand (seen as more or less the same thing). It also endorsed the equalization of educational opportunity and removal of access barriers. Improving equality of opportunity became central to education.

The Master Plan also sustained the long-term autonomy of higher education in a highly politicized state. Provided all sectors kept to the rules, higher education could more or less regulate itself, with the universities protected by sector offices from the interference that plagued institutions in other states. This autonomy did not necessarily contradict the public character of the Master Plan. Higher education was positioned as a kind of civil society, separate from government while universal and public: an alternate form of 'public', democratic in purpose and access, but closed to electoral contest or political capture. This freed the Multiversity to both do public good and be itself, while holding it at the pinnacle of the system.

From its beginning the Plan excited enthusiasm in the country, as the Time cover illustrates. Clark Kerr came under consideration for positions in Washington. JFK offered him Secretary of State for Labour. LBJ offered him Secretary of State for Health, Education and Welfare. Kerr decided to stay with the University and the Master Plan. California was the land of opportunity, and the Plan became a by-word for new opportunities through higher education. California became the national leader in thinking about higher education. Among the influential Californians was Martin Trow.

### **[Martin Trow]**

Martin Trow was a sociologist who directed the Berkeley Center for the Study of Higher Education from 1976 to 1988. In 1974 he prepared a paper

for OECD on 'Problems in the transition from elite to mass higher education'. This paper has profoundly influenced policy thinking in the United States and many other countries. Trow isolated three phases in the evolution of higher education: elite higher education; mass higher education, where participation reached 15 per cent or so of the age group; and universal systems where participation exceeded 50 per cent. Most social scientists of the time thought that the growth of higher education was a function of growing economic demand for higher level skills. Martin Trow acknowledged economic growth but did not see it as primary. As he saw it, the main driver of growth was aspirations for social position. People invested in higher education in order to augment their position, as human capital theory suggested, but most of them did so without knowledge of the specific outcomes of that investment. They knew only that whatever the state of the labour markets, it was better to be a graduate than a non-graduate. Thus popular demand for higher education was not shaped by the logic of economic scarcity. And this meant that expansion would not stop.

'It seems to me very unlikely', predicted Trow, 'that any advanced industrial society can or will be able to stabilize the numbers'. Despite 'loose talk about graduate unemployment or of an oversupply', he stated, 'it is still clear that people who have gone on to higher education thereby increase their chances for having more secure, more interesting, and better paid work throughout their lives.' As more people went to higher education, it became normalized, 'a symbol of rising social status' (p. 41). It became a universal aspiration. Graduate unemployment was not a problem, because of the 'educational inflation of occupations'. Graduate jobs were not fixed in nature but moved down the occupational scale when graduate numbers increase. Graduates displaced those without college, sometimes using their educated capabilities to enrich those jobs. 'What mass higher education does is to break the old rigid connection between education and the occupational structure', said Trow. His crucial insight was that once mass higher education was established, social demand would expand until it approached universality, unless there were strong barriers, such as cost or low retention at school. Government would have to respond to social demand for places. And so it has proven, around the world.

So the Californian Model was established. A self-regulating system that continually expands to meet social demand, while providing for economic need. A system approach, with an ordered and hierarchical division of labour, based on defined missions, sustaining access while protecting the elite research sector and maintaining the reproductive social order. Values of openness, optimism, public spiritedness and common enterprise. All

Californians free to pursue their goals and dreams, their careers and earnings and riches, by using public higher education.

### **[GTER OECD/ Europe]**

I said earlier that the Californian Model of higher education has achieved worldwide influence, but has run into problems at home. Let's look first at the global patterns. Whether it was a process of conscious imitation, or a case of responding to similar conditions to those in California, since 1960 most countries have followed the Californian approach, in two respects.

The first we might call the Martin Trow factor: the continuous expansion of access to higher education in response to social demand. The second we can call the Clark Kerr factor, adoption of the large science university, the Multiversity, at the crown of the higher education system. Many countries have also adopted the Master Plan's separation between sectors of higher education with distinctive missions, though few have imitated the system used in the University of California, and the Californian State University.

### **[GTER world regions]**

Let's look first at the growth of participation in higher education. In the last twenty years, especially, there has been a surge of expansion across the whole higher education world. The Gross Tertiary Enrolment Ratio, or GTER, refers people enrolled at tertiary level, including two-year programs, as a proportion of the school leaver age-group. In 1975 the GTER in the United States was 51 per cent, much the highest at the time, with just one other nation above 30 per cent. Fast forward to 2012, two years ago. There were 54 national education systems with a GTER of above 51 per cent.

The gap between the US and other high participation nations is closing. In itself that is not bad. But I want to emphasize the broader pattern. There is a world tendency towards High Participation Systems in higher education.

### **[Latin America GTER]**

The tendency now extends beyond the OECD countries in the previous graph to middle-income countries and emerging states. In almost every nation with a per capita income of over \$3000 US per head—one twentieth of the USA—as the middle class grows, participation increases, usually at a rapid rate. And when participation reaches Martin Trow's 'universal' level of 50 per cent, it goes on increasing. Remember, California was first.

### **[world regions GTER]**



At the world level the GTER jumped from 14 per cent in 1992 to 32 per cent in 2012. Most of the growth was in the last decade. The GTER now exceeds 50 per cent across the whole of Western and Eastern Europe, North America, much of Latin America, and East Asia except China. Between 1992 and 2012 it increased markedly in each world region except Central Asia. Only sub-Saharan Africa is largely outside the pattern. GTERs are low in South Asia, but in India rose from 6 to 25 per cent in the last twenty years.

### **[examples of fast growing science systems]**

Second, there is an equally spectacular spread of capacity in science and growth in the number of world-class universities. In 1995, 37 nations published over 1000 research papers in the science journals, a proxy indicator for indigenous capacity in global science. By 2011 there were 51 such nations. The new science nations include Croatia, Serbia, Slovenia, Chile, Malaysia, Thailand and Tunisia. The fastest growing science system is Iran, where since 1995 the number of journal papers has increased by 25 per cent a year, mostly in strategic physical sciences. Other nations where output growth exceeds 9 per cent a year include China, South Korea, Turkey, Portugal, Singapore, Brazil. Look at Korea's trajectory on the graph.

### **[three world regions of R&D]**

The standout has been East Asian science and higher education—China, Hong Kong, Taiwan, and South Korea, together with Singapore in Southeast Asia, which share the cultural heritage of classical Chinese civilization. In these systems the quantity and quality of investment in R&D, published science, and the number of research universities, are improving with extraordinary rapidity. East Asia has become the third great region for research, after North America and Western Europe/UK. By 2014 East Asia will have passed North American in aggregate terms.

### **[USA and China research papers]**

In China the number of journal papers published in English each year is growing by 17 per cent a year, even faster than in Korea. Output now exceeds half the US output. The star indicates the approximate level in 2014. Quality is also climbing rapidly. In the year 2000, China published only 0.6 per cent of the world's highest cited papers in the field of Chemistry—the papers ranked in the top 1 per cent on citation rate. Twelve years later in 2012, China published 16.3 per cent of the leading papers in Chemistry, half as many as the US. From 0.6 to 16.3 per cent in twelve years. In future much of our science will come from East Asia.

In 2004 there were eight Chinese universities in the world's top 500 research universities, as measured by the Shanghai Academic Ranking of World Universities. In 2014 there were 32. The number of ranked universities from Taiwan, Korea, Malaysia, Brazil and Chile also increased, and Iran, Egypt, Turkey and Saudi Arabia entered the top 500.

Clark Kerr's Multiversity is spreading to the four corners of the world. This poses challenges and opportunities for American higher education. Higher education is a core social sector that influences government, business, technology and other domains. The evolving relations between universities in the US, and the fast rising East Asian systems on the other side of the Pacific, will do much to shape the future in this country and the world—not just the future of higher education, but the future of society and economy.

### **[Map of California]**

So the Californian Model—or aspects of it—has been the leading influence on higher education development everywhere. But the high access, high science Californian Model has run into difficulties at home.

Californian higher education is ruled not only by the 1960 Master Plan but also by Proposition 13 of 1978. The belief embodied in Proposition 13, that government tax/spend is a reduction of individual liberty, is incompatible with common public provision. You know what happened. Prop. 13 reduced county revenues by 40 per cent and undermined K-12 and community colleges. In 1988 Proposition 98 tied 40 per cent of the state budget to K-12 schools and CCC. UC and CSU were locked into the small part of the budget where the State still had discretion. In the first three budgets of the 1990s state funding of the University of California was cut heavily. But this was dwarfed by the effects of the Recession from 2008 onwards. A catastrophic drop in revenues met an unsustainable fiscal system, with no Plan B.

In the last decade state funding to UC has been cut by a third, and institutions in all three sectors, UC, CSU and community colleges, have turned away students who would have entered in previous decades. The promises of universal access and meritocratic transfer, at the heart of the Californian Model and the rationale for popular support, have been broken.

The atmosphere is radically different to that of the 1960s. The very idea of 'public' or common benefits, orchestrated by the state, is under fire from heavy ideological guns. It is a mantra. Private good, public bad. Competition good, cooperation bad. Markets good, public planning bad. In this setting state fiscal policy has become profoundly dysfunctional and it has been

impossible to develop the Master Plan in line with changing needs, or to move forward in its long ambition to achieve equality of opportunity.

The OECD Secretary-General Angel Gurría said recently: 'Education can lift people out of poverty and social exclusion, but to do so we need to break the link between social background and educational opportunity'. But in the US equality of opportunity has been going backwards. The efforts of public education to sustain social equity have been over-determined by the larger economic and social forces that have fostered inequality, and concentrated value in higher education more exclusively on the leading universities.

According to Joseph Stiglitz in *The Price of Inequality* (2012), most Americans are worse off than in 1997, with lower real incomes. But in the partial economic recovery in 2009-2010, the top 1 per cent seized an amazing 93 per cent of the total increase in US national income. Stiglitz adds: 'The rich, needing few public services and worried that a strong government might redistribute income, use their political influence to cut taxes and curb government spending.' This leads to under-investments in infrastructure, education, and technology.' In *Capital in the Twenty-first Century* (2014), Thomas Piketty discusses the role of higher education, especially high status universities, in reproducing inequality. States Piketty: inter-generational reproduction through education is lowest in the Nordic countries and highest in the United States', with Germany, France and the UK in the middle. In other words, social mobility through higher education is significantly lower in the US than in all of Western Europe.

In *Degrees of Inequality* (2014) Suzanne Mettler agrees that equality of opportunity has run aground. 'Over the past thirty years ... our system of higher education has gone from facilitating upward mobility to exacerbating social inequality.' Mettler shows that in the United States in 2011, of persons in the top income quartile, 71 per cent completed college by early adulthood. This had increased from 40 per cent in 1970. In the bottom quartile the completion rate had also increased—but only from 6 to 10 per cent. In the second bottom quartile it rose from 11 to 15 per cent. In other words, half the population is almost shut out. The higher education system turns over 'something that increasingly resembles a caste system: it takes Americans who grew up in different social strata and it widens the divisions between them and makes them more rigid.' Higher education 'stratifies Americans by income group rather than providing them with ladders of opportunity.' Mettler focuses on the financial disadvantages for poor families, and false alternative of the for-profits, where many have been

enticed. She assembles strong data: rising public tuition, declining Pell grants, affluent Americans expanding their benefits from tuition tax policy.

Mettler subjects for-profit colleges to a devastating critique. For-profits build student numbers with misleading claims about job prospects and transfer pathways. For-profit students experience the highest average loan debt in any sector, the lowest and slowest completion rates, questionable job prospects if they do graduate, and much the highest default rates on student loans. For-profits enroll one in ten college students but utilize one dollar in four of federal student aid. Public support provides 86 per cent of their revenue. Mettler estimates the subsidy at \$32 billion a year. For-profits have a curious glamour, and have long been propped up by pro-corporate policies in Congress, but even for students who do complete, the diploma is less valuable than a diploma from public education.

Paradoxically, the weakening of upward mobility, which limits the group that gains private benefit from higher education, is joined to an increasing focus on those same private earnings benefits. In many quarters public higher education is understood solely in terms of the private rates of return to degrees, and graduate employment. There is little focus on the other outcomes for graduates—personal development, better health outcomes, more prudent personal financial management, more effective political participation; better adaptation to technological innovations, more diverse cultural activities, greater social tolerance of difference and so on. It is a radical reduction of what Californians should expect from their institutions.

The shift in the public/private balance, and daily problems of public higher education, are felt differentially at top and bottom of the Californian system.

It has been tough in the community colleges, which are impacted directly by the growing social inequalities, limited work options for migrants, and weaknesses in K-12 education. Overall school completion is only 78.5 per cent and there are stark inequalities between rich and poor school districts, which show up also as inequalities in the outcomes for different socio-ethnic-economic groups. Of those who began high school in the 2008-09 school year, 73.2 per cent of Latinos and 65.7 per cent of Afro-Americans completed in 2012. There are uneven and inadequate public resources in the colleges themselves. Some CCC are sought after because they are feeder schools for the UC system. Others struggle to hold committed students. In the absence of high transfer rates the rationale for community college education is weaker than it was when the Master Plan was announced. The economic and social value of a two-year credential has fallen since 1960.

Beyond the community colleges in California lies the CSU sector. Funding, access and affordability are all deteriorating. As with community colleges, transfer performance varies by region. Also as with the CCC, the substantive mission and structuring of CSU has not changed since the 1960s, though the threshold of higher education has lifted all over the world, and research activity has spread to many institutions that are not Multiversities. There are few systems in the high-income countries where less than a quarter of the age cohort are in doctoral universities, but the ratio is 12.5 per cent in California. California has 38 million people, yet PhDs are confined to UC, one research university site for every 3.8 million people. A more normal ratio in the higher education world is one university for every 1-2 million.

In 1960 California's rate of participation in higher education at 45 per cent was almost double that of the country as a whole at 25 per cent. Fifty years later in 2010 California was the 43<sup>rd</sup> state in the proportion of its 18-24 years olds with Baccalaureate status. The advance of four-year programs in the community colleges should be resourced and supported. In the longer term one possibility is a merger between some or all of the CSU and CCC, as suggested recently by Bill Tierney and Bryan Rodriguez of USC.

The University of California campuses are also feeling the pressure. Elite public institutions have maintained their value. This has been enhanced by the intense competition in the country for social advantage through higher education. The UC campuses remain very strong by national and world standards. Nevertheless they are fraying at the edges. The weight of part-time and contingent faculty has been increasing for a long time. One serious problem is that UC is now less competitive in hiring leading faculty. UC Berkeley, UC San Francisco, UCLA and UCSD will increasingly struggle against Stanford and the other Ivies unless the UC can raise tuition (which is currently capped) and secure more resources through philanthropy.

The public mission of the UC institutions is not necessarily compromised when in-state tuition rises. The public character of higher education, its contribution to equality of opportunity, is shaped not by whether tuition is charged, or by the sticker price; but by the combination of price, subsidies, exemptions, student loans, and university selection. The ultimate determinant of the public character of the UC is who gets in. Students from poor families, and first generation higher education students, are much better represented at Berkeley or UCSD than Stanford. According to John Douglass, both Berkeley and UCLA each have more low-income students than the *whole* Ivy League; 40 per cent of Berkeley undergraduates pay no

tuition; 65 per cent receive some financial aid; and half graduate with no debt. The UC's progressive tuition regime, and its exclusive focus on needs-based aid, are impressive. At the same time UC undergraduate degree completion rates are unmatched by any other research-intensive public university. These factors do not change if tuition rises by \$5000, though the outcomes of the progressive tuition regime must be continually monitored.

That is not to say it is plain sailing with the public mission. The context in which all are operating, that of high stakes competition, the almost exclusive focus on private benefits, and diminishing public resources, leads to internal tensions within the UC. If operating as stand-alone high-brand institutions Berkeley, UCLA and UCSD would do well. A common policy on tuition constrains them, and they would like more local administrative flexibility. Do they persist with a broad-based system-wide public mission, despite continued under-recognition of that public mission in a climate hostile to public values, and under-funding? On the other hand, the breakup of the system could weaken some of the other UC campuses. And once gone, the historic achievement would be lost. It would be too difficult to restore.

How can the state re-strengthen the Californian Model, with its double focus on access and excellence? Is it possible once again move towards equality of opportunity and social mobility in American higher education? I will close with two suggestions. The first suggestion is about tuition and federal policy on student loans. The second is about the public benefits of higher education, as distinct from the private benefits to individuals.

In low tax countries like this, government cannot finance high quality higher education on a universal basis. But it is possible to design a tuition regime that couples higher charges with minimal deterrent effect and no socio-economic bias—a regime in which no student from any background is deterred on financial grounds. How? Income contingent tuition loans.

Income contingent tuition loans were first introduced in Australia in 1989, so they have had a long trial, and began in the UK in 2012. Public university tuition in the UK, paid by almost all students, is fixed at a near uniform £9000 per annum (\$14,500). Students pay tuition using government-backed loans. The government advances to universities the value of the student tuition, and the graduate later pays back the loan to government. These repayments are not subject to timed repayment, like commercial loans, but are income contingent. That is, the loans are repaid through the tax system on a percentage of income basis. Repayment begins when income reaches a threshold level, which in both Australia and the UK is just

below average full-time earnings. Most graduates do not pay in the early years. One effect is to transfer the cost of tuition from family to graduate.

The tuition debt is subject to sub-commercial interest rates. In Australia it is merely indexed to the cost of living. Not all graduates repay their loans over a lifetime, particularly those who spend long periods outside the workforce. Thus the scheme is government subsidized, via the sub-commercial rate of interest, and non-repayment. In the UK and Australia the public subsidy is variously estimated at 25-45 per cent. Income contingent loans-based tuition has a soft impact on students. No money actually changes hands. Studies repeatedly show that students from poor families are not deterred from participating by tuition costs in this form.. Opportunities in Australia and the UK are less stratified than in the United States, partly because finance has been taken out of the equation.

In the United States, only the federal government could introduce income contingent tuition loans. It would shift tuition policy and public subsidy costs out of the jurisdiction of state governments, which no longer have capacity. The income contingent loans would absorb existing commercial loans, which could be an expensive process. It is a transformation almost on the scale of health care reform. The new scheme would confront vested interests and would be fiercely contested, but if implemented it would radically weaken the link between family finance and completion rates. It would put US higher education back on the road to equality of opportunity.

My other suggestion is about the public good functions of higher education. In the first instance, this is not a suggestion for policy makers, but for social science. As noted, attention is largely focused on the private benefits of higher education, such as earnings, which are easy to measure. But many outcomes of higher education are not captured as benefits for individuals, but consumed jointly. These include the contributions of institutions to government, industrial innovation, public health and social equity, and economic and political stability. There are also the factors I mentioned before such as the contributions of higher education to individuals through health outcomes, scientific literacy, political citizenship, and connectedness. These non-market individual benefits do not show in earnings equations.

Public and non-market goods produced in higher education are discussed only in vague terms. There is no agreed nomenclature. There are many loose normative claims. Evidence-based approaches are under-developed. Because public goods and non-market goods are not identified, observed or measured, they are under-funded, and neglected. We need to develop social

scientific methods that allow us to grasp these goods comprehensively. How can we move beyond a solely economic understanding of these public and non-market goods without setting aside economics? How do we measure such goods, while satisfying both inclusion and rigour?

In his *Treatise on Probability* (1921) JM Keynes said the qualities apprehended by social science can be divided into three categories: those open to measurement and computation; those to which a precise number cannot be assigned but are nonetheless capable of rank ordering (more/less, faster/slower, better/worse); and those that can be apprehended only in the exercise of expert judgment. All three categories are relevant to understanding the public goods produced in higher education. Quantification is essential if we are to provide governments, public and institutions with greater clarity about public outputs, but it is also essential to observe and monitor aspects that cannot be measured.

This is an important project on which we can work together, on a cross-country basis. If California could develop a systematic and agreed approach to measuring and monitoring the social and non-market benefits of higher education, it would once again lead the world in an important policy area.

**[concluding slide, same as opening slide]**

The public Multiversity in the global era. This slide summarizes the 2014 Clark Kerr lectures, which now are now concluding. Thank you kindly for coming today. I wish you well in your work in future, as you apply the principles of access and excellence in higher education, in synergy, in the best Californian tradition! I hope we have time now for discussion.