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And the Sky is Grey: The ambivalent outcomes of the California Master Plan for Higher Education

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Abstract

In the 1960 Master Plan for Higher Education, California in the United States famously combined the principles of excellence and access within a steep three-tiered system of higher education. It fashioned the world's strongest system of public research universities, while creating an open access system that brought college to millions of American families to the first time. Since 1960 the Master Plan has been admired and influential across the world. Yet the political and fiscal conditions supporting the Master Plan have now evaporated. California turns away hundreds of thousands of prospective students each year, and the University of California, facing spiralling deficits, finds it more difficult to maintain operating costs and compete with top private universities for leading researchers. The article discusses the rise and partial fall of the Californian system as embodied in the Master Plan, and identifies general lessons for higher education systems.

Keywords

California, Educational planning, Participation, Research, Economic inequality, Social stratification

Introduction

In the United States the late 1950s and 1960s were a time of tremendous optimism, rising aspirations and fecund public and private creativity in many social spheres. Systems, infrastructure and institutions of lasting value were built. In higher education policy, the spirit of the time was manifest in the *California Master Plan for Higher Education*, tabled on 1 February 1960 (California State Department of Education, 1960).

The Master Plan was a 15-year agenda for growing educational opportunity. It ticked all the boxes: growth, site plan, access, research excellence, fiscal realism. Enthusiastically backed by the state governor, the legislature and every higher education interest group, on the 17 October 1960 it was made America's flavour of the week when it featured on the front cover of *Time* magazine. The flavour lasted. When the Master Plan reached the end of its forecast life in 1975 it was simply continued without a break. Over the decades its discursive influence radiated outwards from California, across the nation and across the world. The 1960s American coupling of excellence and access, the world-class research university together with open participation and a ladder of educational opportunity, came to set policy benchmarks for higher education in many countries. In 1963, the Organisation for Economic Cooperation and Development (OECD) urged member nations to adopt 'development plans of the California type'. A generation later in 1989, the OECD said the Master Plan was 'recognised throughout the OECD world as a blueprint for preserving universal postsecondary education opportunity, while preserving the separate "missions" of the three types of public institutions' (Douglass, 2000, pp. 311-312).

In *The California Idea and American Higher Education* (2000) John Douglass provides a history of the lead up to the Master Plan and the civic virtues that animated it. The most comprehensive (and most nuanced and interesting) account of the genesis and application of the Plan is by its principal architect, Clark Kerr, President of the University of California from 1958 to 1967 (Kerr, 2001b). The Plan was much discussed by scholars in its first three decades, when the achievement was hegemonic and visible problems few, though it was rarely subject to searching scrutiny. In the 1990s attention shifted from universal access, to educational justice for diverse communities and the affirmative action controversy (Pusser, 2006). Then the erosion of the Plan became more obvious, especially after state budget cuts in the 2008 recession (Douglass, 2013). Chapters in a collection edited by Sheldon Rothblatt (2012), especially those of Rothblatt and Patrick Callan, constitute a sharp reappraisal by former colleagues of Kerr. They highlight inner tensions in the Plan, exposed by the changing demographics and fiscal politics of California.

Except for Douglass these accounts share a common limitation. They explore, advocate or critique the Plan largely within the framework of higher education policy and systems. This article will argue that the long-term trajectory of the plan, especially its inability to secure the system premised on social equality of opportunity that was implied in 1960, must be explained in terms of its larger setting. The Master Plan for Higher Education was more than an act of rational planning and its conditions of possibility exceeded higher education itself. It was the determined product of a distinctive set of public values. In the late 1950s and early 1960s government in America did not carry the stigma it acquired a generation later. It was still understood as the network of programmes and agencies that had steered the nation through the 1930s Depression, the New Deal and World War II amid a great patriotic effort. For many, if not most, Americans, government was the site of positive action for the public good, for the collective well-being of society, and a scientifically-informed future in which the sky was no longer the limit. The Master Plan, which elevated science and social equality together, was on the scale of other ambitious government projects of the day, like the space race, and President Lyndon

Johnson's Great Society. There was a widespread belief in public action and optimism about the consequences. This mood and those values were the bedrock of the Master Plan and atmosphere of its success. When American social values changed the Plan began to falter. The Plan also had internal structural weaknesses. But it was the external social, economic and political realm that changed the Master Plan's conditions of operation and (interacting with its internal forms) set decisive limits on what could be achieved.

The California Master Plan

The California Master Plan for Higher Education was remarkable in its clarity of vision and its far-reaching ambition but it was an ambition whose time had come. In *Capital in the Twenty-first Century* (2014), Thomas Piketty shows that special and unusual conditions after 1945 in the United States and other modernised industrial countries opened the way to greater social mobility and a larger role for social allocation via higher education. This in turn enabled governments to install more democratic access (equality of opportunity) at the centre of higher education, without necessarily displacing the established users.

Before World War I, inherited wealth and capital incomes had retarded the potential for upward social mobility through work and education. However, the world wars and the 1930s Depression evacuated many of the great fortunes. This partial emptying out of the upper echelon of society provided more space for social mobility after 1945. Progressive income tax, capital taxes and inheritance taxes, which had been used to mobilise resources for the war effort, continued into the postwar era, reducing inter-generational transfer and creating more room for the expansion of the middle class (Piketty, 2014, p. 374). The top tax rate was high and managers' salaries were restrained, compared to later experience. In the United States between the 1940s and the 1970s, savings from labour were the main source of wealth, rather than capital incomes, and facilitated the spread of home-ownership by what Piketty calls the 'patrimonial middle class' (p. 260). In 1960s America there was more than the usual scope for upward movement into the top layers of society and, partly because of that, more room opening up in the middle of society. The long thirty years of economic growth between 1945-1975 drove the expansion of public and private sector employment and the former, especially, enlarged the scope for merit. This, together with its role in science and technology, brought higher education into a more central role in American society. It was the pathway to the future for families, the economy and the nation. Higher education in 1950s/1970s US was a great engine room for the growing middle class. Nowhere in the world was higher education practiced on a larger scale, and with more original thought and far-reaching innovation, than in fast growing California, the largest American state and the nation's frontier of opportunity for over a century. It is not surprising California produced the best known of all blueprints for system organisation.

Negotiation of the Master Plan

The central figure in fashioning higher education in California was Clark Kerr, Chancellor of the University of California at Berkeley from 1952 to 1957, and President of the University of California from 1958 to 1967. Kerr was the principal architect of the 1960 Master Plan; the author of what is still the best book on modern research universities, *The Uses of the University* (2001a/1963); and in 1967-1980 was chair and director of the Carnegie Commission on Higher Education, and the Carnegie Council on Policy Studies in Higher Education, which commissioned a long series of influential national reports.

Clark Kerr was not only the architect but was the instigator, negotiator, advocate and public face of the Master Plan. The immediate conditions for a plan were clear. On the one hand, there was a growth crisis in California, unregulated sprawl, and competition between sectors of education with no clear division of labour. On the other hand, the state had enough money to finance an expanding higher education system. The question was, if there was to be a plan then whose plan would it be? The research campuses in the University of California system, educating the top students, building science and determined to lift their national role? The state teachers' colleges, some of which had powerful political support, wanted funded research, doctoral education and university status. The uncontrolled proliferation of new state colleges, supported by canny local politicians, had been one trigger of the Plan. Kerr 'realised that the University needed to take the lead in building a consensus, particularly if the University wanted to maintain its unique role in the tripartite system' (Douglass, 2000, p. 248). Over successive months of site surveys and enrolment projections the details of the Plan were hammered out between the contending parties.

The strategy of the University [of California] was clear. Our three new campuses ... along with the expansion of programs at Davis, Santa Barbara, and Riverside, were adequate to fill an anticipated void in facilities for training PhDs and conducting research and in the political map of fast-growing population areas without a UC campus. We did not want to share resources with sixteen additional 'university' campuses (the twelve established state colleges and four more then being developed) who would then claim lower teaching loads for their faculties and higher research subsidies at greater cost. And we did not want to watch the state colleges abandon their highly important skill training functions for teachers in the hot pursuit of the holy grail of elite research status. The state did not need a higher education system where every component was intent on being another Harvard or Berkeley or Stanford. An upward drift was desirable in quality but in the direction of several models. What we needed were three improved models—the open-access model, the polytechnic model, and the research university model. If the state colleges 'went university', some new colleges would have to be founded to serve the polytechnic role (Kerr, 2001b, p. 178).

The bargaining on the Plan laid the basis for the three-tier hierarchy that followed and is still in place. Kerr and the University of California came out on top. Though the colleges gained coherence and autonomy as a sector, and were eventually to become the California State University, they were unable to secure a general research and doctoral role. California already had nine per cent of the nation's population but 15 per cent of its elite research universities, argued Kerr (Douglass, 2000, p. 184). It did not need more research universities. Kerr worked hard in the meetings to protect the University's near monopoly of research, holding his nerve as the deadline for final agreement was approached.

Excellence and access

The policy hallmark, normative power and lasting achievement of the Master Plan was that it explicitly combined the principles of excellence and access in a practical way. Until 1960 these had been largely seen as opposing principles. Kerr and the Master Planners demonstrated that under specific external and internal conditions both principles, access and excellence, could be achieved within a single system. The external conditions of the Plan were its political, economic and social environment, including the consensus on values. The internal conditions were the structures and functioning of the higher education

system and of the Plan itself. The Master Plan's internal structural mechanism for achieving excellence and access at the same time was its three-tier institutional hierarchy.

The elite University of California secured its role as excellent by monopolising the public investment in research and confining recruitment to the top 12.5 per cent of the high school graduate cohort. The UC was separated from the two-year community colleges by the middle sector, the state colleges/university, that provided four-year degrees to the top 33.3 per cent of school graduates. Without research and doctoral training, the colleges were positioned as the top tier of mass higher education. Below them were the volume building open access community colleges where most of the enrolment was concentrated. The downward segmentation of opportunity, with firm barriers to upward academic drift by both the two-year and four-year institutions, was to be softened by guaranteed upward transfers between tiers. Given that most enrolments were to be in the bottom tier, if the Plan was to sustain and expand equality of opportunity, much depended on the transfer function, and on the capacity of the school system to adequately prepare students from all districts, and all social and ethnic backgrounds, so they could move successfully upwards.

At the time, the revolutionary change was open access. The Plan guaranteed a place in college for every high school graduate or person otherwise qualified who chose to attend. In 1960, 45 per cent of California's college-age population matriculated to a higher education institution. The national average was about 25 per cent. The Master Plan promised to keep California ahead of the country. It endorsed the continued growth of participation, in response to both economic need and popular demand, which were not distinguished. It proposed a tripling of the state's enrolment by 1975. It appeared to suggest that with access barriers gone and upward mobility secured, there would be social equality of opportunity through higher education. The promise of access is now a policy commonplace in many countries, but the 1960 Master Plan in California started this.

While universal access was attractive in fiscal terms it was not as lavish as it might appear. For the first 15 years, the Master Plan promised to save money by shifting part of the expected growth from four-year to two-year institutions (Douglass, 2000, pp. 287-289). Community colleges were to be established within commuting distance of almost every resident in the state but were less costly than research universities or teachers' colleges.

Public character of the Master Plan

The California Master Plan says much about the commitment of then Californian society, and perhaps American society, to the collective public good in higher education—that sense of social solidarity that long sustained American democracy (often hidden beneath an individualist veneer) and was taken in by the postwar system builders in American higher education, some in the states and some in the federal sphere. The mentality of Clark Kerr and his contemporaries was very different to the neoliberal mentality that later dominated American public life, with its assumption that the outcomes of market competition were by definition just outcomes, and public planning was an unwarranted intrusion. Kerr wrote his doctoral thesis on itinerant cross-state workers in the Great Depression and had no illusion that the market was socially just. Public planning, public vision and public dollars built the California higher education system. If California had left the task of building to the market, that system would not have emerged spontaneously.

The Master Plan was quintessentially public in its commitment to universal access, and in its systemic character, in the organising of three sub-sectors on the basis of a firm division of labour. All three tiers embodied the public good mission and its ideas of democratic openness and service to all citizens. The Plan also was structured collectively; it embodied the idea of higher education as more than a set of individual institutions. These

were inter-dependent institutions operating within the framework of common public structures and committed to a single set of planning ideas. Institutions, and within them individual schools and research groups, competed with each other, but within structured limits. It was a major departure from the idea of university as stand-alone firm which was then influential in the American private sector, and is more dominant in much of the worldwide thinking about higher education today.

The Plan also did something else of interest to universities everywhere. It sustained the long-term autonomy of higher education in a highly politicised state. It meant that provided all sectors kept to the rules, higher education could more or less regulate itself. The constituent campuses of the University of California were protected by the Office of the President from the direct interference that plagued public universities in other states. Legally, the UC campuses were not owned by the state government, or the people of California, but by the regents. It was a formal independence unusual in the university world, though the funding relationship with the state underpinned continuing ties (Rothblatt, 2007, p. 258). The state colleges, later the California State University, were likewise sustained by a new Board of Trustees which also ensured that they no longer competed against each other without constraint. Instead of an overarching governing board, there was a low-key coordinating council to ensure cooperation between the sectors.

The autonomy of the institutions did not necessarily contradict the public character of the Master Plan. Californian higher education was positioned as a kind of public civil society, universal but separate from government. The public connectivity of the institutions was sustained through both their relations with their boards and their direct dealings with the world but they could choose the ways in which they would be socially responsive. This was a different kind of ‘public’ to that of direct government administration: democratic in purpose, access and transparency, and in the range of social engagement, but closed to electoral contest or political capture.

Yet the institutions could not retreat too far from public responsibility. The trust inherent in the Master Plan rested on the capacity of universities and colleges to identify and meet emerging social needs on a voluntary basis, to listen to vocal groups, and to also keep on persuading them that higher education for all was the California way. They had to become advocates for access and excellence. In this gift economy, what the higher education institutions offered to the public, jointly and severally, were the gifts of mass education, meritocracy, discovery and intellectual leadership. The two-year colleges provided an open door to all comers, undertaking to provide for the literacy of California as well as its social opportunities. The elite UC campuses were committed to providing all of scientific infrastructure, general disciplinary education and professional training at the highest possible level. Public university education and science were seen as the higher public good, the crown of the modern secular order, not banks and not battleships.

In the public non-market form of production there is no natural limit to the volume and quality of outputs. There are merely opportunity costs, when within a bundle of finite resources one course of action is chosen over another. There are also limits to the imagination, but this is less of a constraint in research universities with scope for bright people to take decentralised initiatives. In return the UC campuses gained the freedom to accumulate resources, and local, national and global power, on a secure basis—providing the public subsidies continued to flow. In charge of their own destiny, they could become institutionally distinctive and creative. This freed the research multiversity to do public good, and to be itself, while holding it at the pinnacle of the higher education system.

Outcomes of the Plan

How did the different components of the California Master Plan fare after Clark Kerr and his colleagues had done their work?

The division of labour between the three sub-sectors has proven stable, more so than in countries which have seen upward ‘academic drift’ from the lower tiers. On the other hand, in California the multiversity has travelled better than has the overall system design. There is continued commitment to some aspects of the Master Plan vision but not others. The goal of excellence has been realised more completely than that of access. Equality of social opportunity through public higher education now seems much further off than in the first two decades of the Plan’s expanding provision. Clark Kerr would have been only half pleased at the outcome of his work. This is partly due to weaknesses internal to the Plan’s design, interacting with contextual factors. However, it is primarily due to changes in the external political economic environment. The political, ideological, fiscal and social conditions of higher education are now very different to those of 1960. As noted, the consensus on public values has shifted. Underlying that change, there is less real scope for social mobility and equality of opportunity than before—partly due to the closing of Piketty’s window for social mobility that opened after World War II, and partly due to ideological-political shifts, for example in tax policy. No doubt all these factors are linked.

Excellence

The University of California (UC) sustains unquestionable research excellence across all campuses, except UC Merced, founded in 2005, which is still emerging. In the Shanghai Academic Ranking of World Universities (ARWU), focused solely on research, seven UC campuses were in the world top 60 in 2016. UC Berkeley was third behind Harvard and Stanford Universities, and ahead of the University of Cambridge in the UK, Princeton, Oxford and Caltech. UC Los Angeles was twelfth and San Diego was in fourteenth place, followed by San Francisco (21), Santa Barbara (42), Irvine (58), Davis (75) and Santa Cruz (83). Riverside was also in the first 200 (ARWU, 2016). If science is the hope of the world, then much of that hope continues to be invested in California.

[Insert Table 1 about here]

The University of Leiden Centre for Science and Technology Studies (CWTS) provides detailed comparisons of high quality university research output. It lists the number of high citation journal papers, in the top 10 per cent of their field by citation rate, from each university (see Table 1). In the 2012-2015, 21.7 per cent of Berkeley papers were high citation papers. There were 2628 such papers in the four years, behind only Harvard, Stanford, much larger public universities in Toronto in Canada and Michigan in the US, and Johns Hopkins which has massive medical research. This is a good indication of Berkeley’s total scientific firepower. Berkeley did this without a medical school and the associated research in clinical medicine. The nearby medical school to Berkeley is UC San Francisco, which had 1967 high citation papers in 2012-15. Together Berkeley and San Francisco had 4595 such papers, 36 per cent more than local rival Stanford. In the Leiden field-specific measures, UC Berkeley was first in the world in high citation papers in Physical Sciences and Engineering. UC Davis was first in the world in Life and Earth Sciences with UC Berkeley fourth. UC San Francisco had the fourth largest number of high citation papers in Biomedical and Health Sciences (University of Leiden, 2017).

Despite this stellar achievement, state funding cuts, especially after the 2008-2009 recession, mean that the UC has become less competitive vis a vis Stanford, Caltech and

the University of Southern California in competition for the most sought-after global research talent. UC tuition has been pushed up for the growing number of out-of-state students, helping to keep the in-state price down, but there has been ever more nimble footwork with tuition discounts and student aid (Douglass, 2013; Wilton, 2014).

Access

Moving from the excellence objective to the access objective, the picture is more mixed. The UC campuses still make a good contribution to access. The lower tiers did for the first 25 years of the Master Plan, but since then their contribution has faltered.

The UC campuses—including Berkeley, Los Angeles and San Diego—take in more students from socio-economically disadvantaged backgrounds than do almost any other leading research universities, anywhere in the world, far more than Oxford and Cambridge in the UK (Boliver, 2013). In total, 42 per cent of all UC students receive federal Pell Grants, allocated to families with incomes of \$44,000 a year or less, enabling these universities to play a great role in facilitating social mobility. UC Berkeley and UC Los Angeles together enroll more Pell Grant students than the top sixteen private universities in the United States. In 2014 Berkeley enrolled 9742 students in receipt of PELL grants compared to 10,106 at Cornell, Columbia, Pennsylvania, Harvard, Brown, Yale, Dartmouth and Princeton combined (Wilton, 2014). All student aid in the University of California is needs-based. Under Berkeley's progressive tuition regime, 40 per cent of students pay no tuition and are financed by tuition from higher income families. In all 65 per cent of UC Berkeley students receive financial aid, and half of all of those students graduate with no debt. In 2013, the average debt of Berkeley graduates of \$19,000 was just over two thirds of the national average of \$27,000 (Douglass, 2013, pp. 4-5).

However, the UC enrolls in a relatively small minority of the age cohort. It cannot on its own sustain a successful equality of opportunity regime across Californian society. The outcomes from higher education as a whole have been less favourable. In terms of the principles that shaped the Master Plan, the most significant change was that public higher education in California has lost the capacity to provide for universal access. In addition, it no longer sustains the quality of mass higher education amid expanding participation.

The community colleges first began to turn away students in bad budget years in the 1980s. Now, in the later 2010s, at least 200,000 potential students each year miss out on a place. CSU enrolment was first reduced by 50,000 in the early 1990s, and after the 2008-2010 recession the CSUs were again unable to accept all eligible students (Douglass, 2013, p. 10; Callan, 2012, p. 71). Worldwide a growing number of national systems provide near universal access to higher education. California created universal access and then lost it. California is no longer the national model for high participation higher education. In 1960 state participation was double the national average. In 2010 California was 43rd of the 50 American states in the proportion of 18-24 year olds with Baccalaureate status.

The transfer function has failed to meet the original expectation that it would encourage participation and sustain equality of opportunity within the steeply stratified system. Community colleges are pulled between immediate graduate employability and the academic requirements of transfer, which focus on the liberal curriculum (Hansen, 2011, pp. 42-43), but they are not fully funded to play either role well. The labour market standing of two-year diplomas fell further from the 1960 position and this has contributed to low community college completion, less than 20 per cent. At the same time, transfer rates are also disappointing. In 2010, 22 per cent of commencing community college students transferred to a four-year degree (Douglass, 2011, p. 22). The majority of students neither complete the programme nor transfer upwards. Tuition increases are needed to

sustain quality in both the public community colleges and the Californian State University (CSU) campuses but threaten to reduce enrolments. In the CSU completion rates are about 45 per cent, compared to 90 per cent on the UC campuses (Douglass, 2011, p. 27).

Equality of opportunity is also stymied by the skew in participation in favour of the white middle class, in access, retention, graduation and upward transfer. Though Latinos were 38 per cent of the population and 43 per cent of high school graduates in 2009 they were 28 per cent of students in public higher education, and only 16 per cent in the UC. On the UC campuses the white proportion was 38 per cent (compared to a 40 per cent population share), the Asian-Pacific a high 33 per cent (13 per cent population share), and the African-American share 4 per cent (7 per cent). The ethnic distribution in the CSU and community colleges was closer to the population averages (Callan, 2012, pp. 74-75). Rather than the transfer function compensating for these ethnic inequalities, it worsens them. Community colleges in middle class districts figure strongly in access to Berkeley and other UCs. For example, in 1995, upward transfer rates from community colleges to the CSUs and UCs ranged from 8 per cent in Southern California to 50 per cent in the San Francisco Bay Area. The transfer rate is much lower among African-American and Hispanic students than white or Asian students (Rothblatt, 2007, p. 268).

Internal and external problems

Internal and external factors conspired to bring the Master Plan undone.

The internal tensions in the Master Plan were structured into it by the steepness of the tiers and the Master Plan's inability to tweak the division of labour between them when the circumstances changed. The Plan under-estimated future growth and the effects of growth on the balance between the tiers. After 1960, not only did the Californian population grow more rapidly than predicted, social demand for higher education outstripped demographic growth, no doubt partly because the Plan itself lifted aspirations. However, the scope to grow egalitarian access rested on several simultaneous factors: the capacity of the schools to bring students from all Californian communities and social groups to the starting gate for higher education, the capacity of community colleges to bring students through to successful completion, the scope for upward transfer from the community colleges through to the CSU and the UC, and a proportional expansion of the UC and CSU in line with the growth in the bottom tier sector, the community colleges. And each of these developments depended on the maintenance of public resources, and continued no or low tuition, in schooling and in three tiers of higher education. In other words, a primary difficulty was that the resource needs of the expanding system were greater than envisioned in 1960, especially after 1980. This not only meant that the Plan implied a fiscal impost greater than had been expected, it meant that it was highly vulnerable to downward fiscal shifts.

Growing costs also further locked in the balance between sectors, at the cost of upward social mobility. As planned, growth was concentrated in the community colleges. The CSU and UC systems were not expanded in proportion. In most other nations with research universities the proportion of young people entering those institutions has expanded markedly in the last forty years, via growth of those universities and the opening of new ones. In some countries, the majority of higher education students attend doctoral institutions. This not only brings more people closer to the well-springs of new knowledge, it broadens the social highway into professional and managerial occupations. In California access to research universities has been confined to the top 12.5 per cent of school leavers for almost sixty years. This was a flaw in the original system design. It placed too much pressure on the transfer function, which, as noted, faltered in volume and was socially

stratified. But transfer between institutions in a vertical hierarchy is always a second-best form of social access because it requires in students a greater stamina of aspiration.

Changing demographics

The external factors within California were the state's changing ethnic demography, which undermined the educational assumptions and fiscal politics on which the Plan was premised. The larger external factors were the growing social and economic inequality in the country as a whole—and, as noted, changes in the policy climate and in the dominant ideas, which both produced and reflected growing social inequality, and undermined the potential for public higher education to pursue equality of opportunity.

Ten years after the Master Plan in 1970 California was 77 per cent white, 12 per cent Latino, 7 per cent Afro-American and just 3 per cent Asian or Pacific Islander. In the next forty years this demographic distribution changed dramatically. As noted, in 2010 the white population share had fallen to 40 per cent, though with a relatively high average income, while the Latino share had reached 38 per cent. Many were first generation legal or illegal migrants. The Latino population was much younger than the white population, constituting 51 per cent of Grade 6 in the public schools, compared to 27 per cent white, 11 per cent Asian/Pacific and 7 per cent African-American. Latino and African-American families had mixed class locations but were disproportionately concentrated in under-funded schools in poor communities. In 2012, 79 per cent of all high school students who started in 2008-09 had graduated, with 8 per cent still at school, but Latinos had a school graduation rate of 73 per cent, and African-Americans students only 66 per cent.

After the 1970s an ageing middle class white population in California had a reducing stake in public schooling. It became less willing to pay the taxes necessary to finance schools and community colleges that provided broad-based opportunity. The withdrawal of support for taxation and public education eventually spilled over into university funding.

Taxation as theft

The tax revolt in California and other states was impelled by the deep seated belief held by many Americans that taxation for all but a minimal set of public goods, such as national defence, was illegitimate. Such beliefs, never entirely absent in the United States, gathered an increasing support from the mid 1970s onwards.

In 1978, the anti-tax movement in California broke through by securing a ballot majority for Proposition 13, which sharply reduced property taxes, the main source of income for local counties and school districts. When the state moved to protect schools, cities and local communities, this placed the rest of the budget in jeopardy, including higher education. A host of further tax cutting and tax-related measures followed. In 1988, partly to compensate for Proposition 13, California adopted Proposition 88, which allocated 40 per cent of state income to schools and community colleges. After all the spending mandates and tax limitations had been accounted for, only 15 per cent of the budget was unallocated. The three public higher education systems were funded out of that 15 per cent. Proposition 13 and the tax revolt showed that the ageing white middle class was unwilling to resource schooling of good quality across all districts, for all citizens and non-citizens, including legal and illegal migrants (Pelfrey, 2012, p. 70).

The full impact on higher education was not felt immediately. It accumulated. Periods of growing state revenue alternated with funding cuts that were not fully restored. From 1990, it was apparent that California could no longer fully support the Master Plan. Then

the 2008-2009 recession triggered a massive fiscal decline that was passed on to all three public systems. Much of the reduction in state funding now looks permanent.

Evacuation of the common good

But why did support for the common public good deteriorate in California and in the United States, at the level of mainstream economic and social policy? More than a populist anti-statism or rhetorical rejection of taxation was involved in this policy displacement.

The ideas that gave respectability to the tax revolt originated in Cold War strategic circles in the United States soon after World War II. In 1951 defence intellectual Kenneth Arrow (1963) published a paper on 'Social choice and individual values', which inquired into whether it was possible to derive collectively rational decisions from the aggregation of individuals' preferences. Arrow used set theory to prove that when two or more persons made decisions over three or more alternatives, it was logically impossible to derive collectively rational group decisions from the individual preferences, whether through voting, social welfare policy or markets. There was no prospect of achieving a common decision consistent with every person's individual preferences. In instances of collective decision-making, one or the other assumption would have to give way—either the outcome of individual preferences would not be collectively rational, or individuals would lose their freedom to determine personal ends. There could be no such thing as 'the public good' without violating individual freedoms. This became known as the 'impossibility theorem'.

Crucially, Arrow's argument was grounded in his starting position: that methodological individualism prevailed, meaning that all goods were individualised, there were no collective social goods distinct from the aggregation of individual goods (Lukes, 1973; Amadae, 2003, p. 122); that individuals made rational decisions based on utility; that their preferences were unrestricted and inviolable; and the preferences were incomparable (Amadae, 2003, p. 84 and pp. 103-104). An autarkic individual freedom was absolute. The shared conditions enabling that freedom to be enjoyed were taken for granted—though such social conditions would be destroyed when all persons pursued their absolute self-interest without regard for others. However, the pure logic of Arrow's ultra-individualist rejection of Soviet collectivism appealed to many American intellectuals (p. 106). Arrow's ideas were taken further by James Buchanan, the principal creator of public choice theory. Buchanan opposed himself to what he called the 'normative delusion' that 'the state was, somehow, a benevolent entity and those who made decisions on behalf of the state were guided by consideration of the general or public interest' (Buchanan, 1997, p. 85).

Ideas matter. With Ronald Reagan, the public choice theorists had a president willing to put their arguments into action. Reagan's 1980 campaign slogan stated that government was not the solution, it was the problem, the exact reversal of the spirit of the 1960s, when there was public support for large collective solutions of Master Plan type. While setting himself against the notion of a common public interest, Reagan reduced taxation on high incomes and capital gains, reduced spending on social programmes, including federal education funding, and weakened unions in the workplace, opening a surge in executive incomes. The top tax rate fell from 70 per cent to 28 per cent. Not coincidentally, the increase in measured income inequality in the United States dates from 1980.

Income inequality after 1980

Since 1980 there has been extraordinary growth in the inequality of private incomes and wealth in the United States, freed up by this policy evacuation of the public good. Growing inequality has reworked the conditions, character and potentials of programmes focused on

equality, pulling public higher education away from the world that Clark Kerr and his colleagues inhabited and served, in which the Master Plan was a practical solution.

In the Anglo-American countries, the concentration of wealth and income in hands of each of the top 10 per cent, top 1 per cent, top 0.1 per cent and top 0.01 per cent have risen very considerably since 1980 (Piketty, 2014; Stiglitz, 2013; Dorling, 2014; OECD, 2014.). Between 1980 and 2010 in the US the income share held by the top 0.1 per cent of persons rose from 2 per cent to nearly 10 per cent. Piketty finds that income from labour in the United States is now ‘about as unequally distributed as has ever been observed anywhere (Piketty, 2014, p. 319 and p. 256). Eduardo Saez (2013) notes that the top 1 per cent of income earners in the United States captured 95 per cent of the income gains made in the recovery after the recession, in 2009-2012 (Saez, 2013, p. 3). At the other end of the scale, between 2000 and 2010 the average income of the poorest 10 per cent of Americans fell by 15 per cent in real terms, according to the OECD (OECD, 2014, p. 1).

In the Nordic countries in the 1970s, the most equal modern societies, the top 1 per cent received about 7 per cent of all income. In Europe in 2010, the top 1 per cent received 10 per cent, in the United States 20 per cent, same level as in the aristocratic societies of late nineteenth century Europe (Piketty, 2014, pp. 247-249). However, the modern form of salary-based inequality is legitimated by apparent merit. High pay is seen as the product of hard work, not just property and capital, though as shown by the role of networks in elite graduate recruitment, competition for high incomes is not a level playing field. Piketty calls the United States ‘a “hypermeritocratic society”’—or at least, ‘a society that the people at the top like to describe as hypermeritocratic... a very inegalitarian society, but one in which the peak of the income hierarchy is dominated by very high incomes from labour rather than by inherited wealth’ (pp. 264-265). The argument that wage inequality in the US is primarily driven by technological change has fallen from favour. Most industrialised countries have similar technological change but divergent income patterns (Milanovic, 2011, p. 8; Piketty, 2014, p. 304 and p. 321; Stiglitz, 2013, p. 243). American inequality is centered on top end managers, especially in finance and business services (Autor et al., 2008, e.g. p. 318; Mow and Kallenberg, 2010). Two thirds of the top 0.1 per cent are managers (Piketty, 2014, pp. 300-301).

Inequality and higher education

In the United States, as in the United Kingdom, the rapid growth of economic and social inequality is occurring in a society in which formal participation in higher education is at or near an historic high. According to UNESCO data, in 2013 the Gross Tertiary Enrolment Ratio in the United States was 89.1 per cent (UNESCO, 2017). Human capital theory states that education produces human capital, which determines marginal productivity, and marginal productivity determines rates of return to graduates. This suggests that growing income inequality is grounded in a corresponding growing inequality of skills and productivity. Yet US higher education, while highly stratified, with the leading private universities dominated by affluent families, seems to be largely decoupled from the surge in top incomes since 1980, which is shaped more by tax policy and by unequal salary determination at work (Piketty, 2014, p. 315).

The intrinsic limit to equality of opportunity, in any era, is not unequal human capital but the persistence of differences between families in their economic, social and cultural resources. The growing inequality of incomes and wealth in the United States magnifies the effects of unequal social backgrounds on educational outcomes. In turn educational inequality tends to reproduce and enhance prior social and economic inequalities, especially in the highly stratified American higher education system. At the bottom end,

low income recipients, accessing low value colleges, find that as inequality grows, higher education becomes both more expensive and less useful as a means of occupational and social mobility. Both the social and economic value of mass public higher education, and the capacity and motivation of its users both tend to become emptied out. The participation rate in US higher education, once highest in the world, is now falling (UNESCO, 2017).

Within the high participation American higher education system, educational outcomes are steeply stratified by family income. In 2013, a near-universal 77 per cent of persons in the top family income quartile in the United States had completed a Bachelor degree by age 24 years. In this quartile the graduation rate had increased from 40 in 1970 to 77 per cent in 2013. In the bottom family income quartile, the graduation rate had also risen over the 43 years, but only from 6 to 9 per cent. In the second bottom quartile the graduation rate was 17 per cent in 2013 (The PELL Institute, 2015, p. 31). Less than one quarter of the bottom half of the population, in income terms, had graduated by age 24 years. However, more than three quarters of top income quartile group had done so.

These national patterns better explain the faltering of institutional funding and quality in California since the 1980s, and the attenuated completion and transfer rates in the community colleges and the California State University. In *Degrees of Inequality* (2014), political scientist Suzanne Mettler find: ‘Over the past thirty years ... our system of higher education has gone from facilitating upward mobility to exacerbating social inequality.’ Higher education fosters a society 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, 2014, pp. 4-5, p. 8). In this external setting, it was inevitable that the Master Plan’s access mission would falter. At the same time, the failure of the Plan was accentuated by its internal structural limitations.

California dreaming

In the end the execution of the Master Plan foundered where the 1960 Plan was strong—in the big picture, in the economics, politics and social values. California, and the United States, lost the public values that sustained the 1960s belief in universal social advance through higher education, and understood taxation as a shared asset that is used for the common good of each and all, rather than as a reduction in individual freedoms.

Political cultures and state strategies vary greatly across the world. In the United States, they have varied between the generations, with California’s President Reagan the turning point. The tragedy of American public higher education, once a shining example to the world, is that its original democratic promise, its contribution to self-determining individual freedom and fulfilment—which is the philosophical centrepiece of both the American political right and the political left—has been so far reduced. The American paradox is that the nation in its normal business of life regularly overturns its own ideals. In a sense, the hyper inequality of the last generation is typical of the United States—yet so was the real commitment to equality of opportunity that went before it. In that sense, the faltering of the Master Plan both negated the national character, and fulfilled it.

Yet the influence of American ideals is not confined to America or even stymied by their domestic failures. Though the Master Plan ran into sand in California, since 1960 its influence has never ceased to spread everywhere else. The core structure of the Plan, the coupling of access with excellence within a three-tiered higher education system, continue to be imitated in many systems across Europe, East Asia and beyond. California’s model of institution is even more widely imitated than its model of system. Amid rising

participation across the world (Marginson, 2016a), and policy focuses on basic science and research-led innovation, the comprehensive research multiversity that Clark Kerr described in *The Uses of the University* is now the near universal template. A growing proportion of science is now located in these institutions, not separated research academies and specialist laboratories. In an increasing proportion of countries, non-university second sectors, and institutions that specialise in a single discipline or small cluster of disciplines, and institutions offering elite teaching and professional training without research, have become folded into the research multiversities (Salmi, 2009). Many governments have implemented funding and performance management policies designed to elevate the globally-referenced research outcomes of designated elite institutions ('World-Class Universities'). Rankings have further entrenched Kerr's model as the global standard.

All the leaves have turned brown, as one California song states, and the sky is grey. But everybody in higher education, across the world, still lives in the Hotel California that another California song memorably invokes, the hotel that you can never leave. In the last half century, since the work of Clark Kerr and his fellow builders was done, no other model of higher education system or institution has proved so compelling.

Lessons from California

What general conclusions can be drawn? What are the larger lessons of the Master Plan for Higher Education, beyond California, for contemporary higher education?

Access and excellence are not always in conflict. However, the twin goals of the Master Plan goals can be reconciled only under specific conditions. Every nation is different and every time is different. Favourable conditions are not always present.

One such set of conditions is a combination of modest social inequality with low structural inequality in education. Higher education in the Nordic countries, Germany and the Netherlands combines strong research universities with high participation, free or modest tuition and good mass institutions. The per capita output of high citation research in the Netherlands and Sweden exceeds the United States and United Kingdom (UK). These countries spend more public money on education than the English-speaking nations, and un systems less vertically stratified than the American, with no top 40 universities (ARWU, 2016; Leiden University, 2017). Income distribution is less unequal (OECD, 2015), social mobility is higher (Corak, 2012), and economic inequality is more restrained by government taxes and transfers.

Another set of conditions was present on a more unstable basis in the American 1960s. Historically, stratified systems of the American type foster relatively high equality of opportunity only under unusual circumstances, as when the broad and open scope for middle class growth and upward social mobility in Clark Kerr's era coincided with strong political support for inclusive and egalitarian public education. At other times, steep structural stratification in education continually undermines the potential for educational advance by families at the base of the social pyramid. Stratification tends to empty out the social value of mass education and blocks access from below into elite tracks. Arguably, stratification is a larger barrier than tuition fees (Marginson, 2016b). In addition, social and economic inequality weakens the funding scope and political support for equalisation policies in education. It is hard to imagine the United States achieving a marked change in educational equality while income inequality continues to worsen as at present, and while high income earners continue to pay tax at a top rate of 39 per cent, or evade it altogether.

But income inequality and educational hierarchy are not routinely pathologised in the United States. The American revolution predated the French revolution and the United

States never completely broke with the idea of aristocracy inherited from Britain. Instead the ideal became a Jeffersonian aristocracy, an aristocracy of merit. In the period between the 1930s New Deal and the 1970s aftermath of the civil rights movement and the Great Society, that aristocracy of merit was modified by solidarity. For the hyper-meritocratic super-managers of today, the modernised aristocrats, with their Ivy league law schools and postgraduate business degrees, there is no such thing as solidarity; and American tax laws now permit the transmission of family wealth down the generations, suggesting regression to a more traditional power. Meanwhile, Ivy League colleges legitimate not only unequal educational outcomes but the underlying social and economic inequalities as well.

The University of California does something different but alone it is not enough. In any case, it is now clear that it is easier to sustain agreement about the public good mission of research universities than about universal high quality mass education. Above all, it was the abandonment of social solidarity in California and elsewhere in the United States that pushed the Master Plan out of reach. The crucial condition for the realisation of the twin goals of 1960 is a new consensus, based on long-term commitment to the common good.

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Table 1. Research output of the public University of California campuses and the three leading private research universities in California, 2012-15 compared to 2006-09

University and campus	All journal papers 2012-15	Proportion of papers in top 10% by citation rate 2012-15	Number of papers in top 10% by citation rate 2012-15	World rank in papers in top 10% by citation rate 2012-15	Number of papers in top 10% by citation rate 2006-09	Change in papers in top 10% 2006-09 to 2012-15
UC Berkeley	12,116	21.7%	2628	6	2270	+ 15.8%
UC Los Angeles	13,898	17.3%	2398	10	2263	+ 5.9%
UC San Diego	12,092	18.3%	2217	14	1813	+ 22.3%
UC San Francisco	9989	19.7%	1967	17	1747	+ 12.6%
UC Davis	10,871	13.7%	1493	32	1322	+ 12.9%
UC Irvine	6264	15.1%	944	82	910	+ 3.7%
UC Santa Barbara	4264	19.3%	824	99	809	+ 8.3%
UC Riverside	3087	14.1%	435	242	454	- 4.2%
UC Santa Cruz	1988	17.5%	348	300	305	+ 14.1%
Stanford U	15,113	22.3%	3372	2	2560	+ 31.7%
U Southern California	7878	14.9%	1171	58	924	+ 26.7%
Caltech	5268	21.2%	1119	61	1073	+ 4.3%

Source: Author, using data from Leiden University, 2017. Original source Thomson-Reuters' publication and citation data from Web of Science.

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