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Debt and Taxes: Can the Financial Industry Save Public Universities?

Privatization Is Now the Problem—Not the Solution

WHAT IS THE CRISIS IN US public universities?

We are generally told only part of the story: taxpayer funding has declined. This *is* the crisis according to most university leaders. They tell us that it is simply "unrealistic" for public universities to rely on state support and that tuition must inevitably replace taxation as a revenue source. If the state is the problem, then "privatization"—the increased reliance on non-state funds—is the solution. Those of us who resist it are portrayed as living in the past or naive.

There is, however, another part of the story less often told: the ability of public colleges to spend so much more depends on their ability to charge more; and they can charge more because there has been a long-term tuition *bubble*.[1] The price of public higher education has been growing at twice the rate of the economy, twice as fast as health insurance, and three to four times more quickly than consumer prices in general.[2] University leaders were, of course, both observers of this bubble and participants in it. They would not have privatized so eagerly if they did not see tuition as a faster and surer form of enrollment-generated revenue growth than taxpayer funding. From their perspective, privatization is not a defensive strategy for revenue replacement but rather an opportunity for aggressive revenue growth they could not afford to miss.

Privatization, as conceived by university leaders in the 1990s, was never a strategy by which public universities would eventually become private (by

ABSTRACT This article examines the limitations of tuition (higher personal debt) as a mode of funding public university systems and, also, the widespread resistance to *any* tax increase by citizens with falling or stagnant income and growing burdens of debt. It argues that the questions of debt servitude and tax resistance must be considered together if public universities are to regain taxpayer support and become, once again, drivers of greater economic and social equality. REPRESENTATIONS 116. Fall 2011 ISSN 0734–6018, electronic ISSN 1533–855X, pages 128–55. DOI:10.1525/rep.2011.116.1.128.

being sold, for example, to a nonprofit or for-profit corporation). It was, rather, a new and robust model for expanding public universities that leveraged the state's potential willingness to fund *additional* students by getting *all* students to pay *more*. Under this model, students would be told that they must pay ever-increasing tuition because the state would never pay *enough* to fully fund the enrollment growth necessary to keep their universities *public*. And they would be *willing* to pay more because they expected prices in higher education would continue to rise (sometimes even faster than housing prices) regardless of their ability to pay.[3] It is because of this price bubble that public universities could increase enrollments despite diminished state support.[4]

The present crisis in public higher education does not begin and end with the loss of state funding; it reflects the fragility, incoherence, and moral cynicism of privatization as a scheme for continuing to grow whether state funds rise or fall. The scheme was to maximize the *total revenues* generated from students by increasing both enrollments and tuition with no requirement or expectation that tuition would cover the resulting decline in state-funded *per student revenues* that would result from higher enrollments. According to this plan, the budgetary quality of instruction would necessarily deteriorate with enrollment growth even if the public university's reputational quality (its brand) survives, perhaps because its total budget is growing.[5] The gross revenue gains that come from higher enrollments with higher fees can then be used to offset the net losses public universities run in other areas, such as sponsored research projects, which, according to some estimates, cost $1.20 for every $1.00 they bring in.[6] The result is that costs in universities continue to rise in almost every area except instructional delivery—which is where administrators know how to economize[7]—and these noninstructional costs are heavily subsidized by high enrollments, especially in humanities and social sciences, which "earn" much more in tuition and fees than is returned to them in campus budgets.[8]

But why did public universities think their students would pay more for a deteriorating product? Incurring higher costs is a way of getting more revenue only if there is more to be gotten—and normally rising costs for a lower-quality education would result in falling demand. But universities, both public and private, assume that when students buy a degree they are not paying merely for the cost of an instructional *service*; they are also purchasing a financial *asset*—a kind of insurance against a rising income gap between graduates and nongraduates. The price of this insurance could increase much faster than the rate of inflation and independently of any rise or fall in the cost of instruction. As long as the value of the financial asset embedded in tuition continued to grow, based on a widening income spread between those with college educations and everyone else, public universities could

expect to expand their market (enrollment), raise their price (tuition), and lower delivery costs.[9]

My counterintuitive argument is that, contrary to what university leaders tell us, privatization is both a symptom and a driver of the crisis in higher education and not the solution. Today's public universities are selling debt (and other financial products) to prospective students on the assumption that the income gap between college graduates and nongraduates would continue to increase as it did in the 1990s, when all income growth was concentrated in the top 20 percent. Public higher education now faces a financial crisis because the 80/20 gap, which grew during the transition to a technology-driven economy, has *not* increased much over the past decade. Meanwhile, a potentially greater income gap has appeared among recent college graduates, whose unemployment rate is now approaching the national average. Of those who are employed, 50 percent have jobs that do not require a college degree and that pay on average 40 percent less than jobs requiring a degree.[10] Since 1998 almost all US income growth has occurred in the top 1 percent. Those incomes are very high indeed, and many high earners are college graduates. But paying more for a college degree is not a good way of betting against being in the bottom 99 percent of earners in a state like California, where 33 percent of high school graduates qualify for public universities and about 20 percent are expected to enroll. It is now the leaders of public universities in states like California who are stuck in a past in which the 80/20 income gap mattered and who are unwilling to be "realistic" about the future of a failing revenue model, privatization.

California is in fact the best example of what was once right about the US system of public higher education and what has gone so badly wrong. The 1960 California Master Plan for Higher Education tied the growth and quality of public universities, especially the University of California (UC), to a rising prosperity in which all Californians shared, albeit to different degrees. In master-plan California, the higher education represented by UC was the name of an aspiration, a desire that was perceived to make the whole state better off economically and culturally—and more equal socioeconomically—as the growing supply of educated people reduced income inequality. In the heyday of the master plan, Governor Ronald Reagan, who rose to office by attacking Berkeley's student movement, introduced California's first progressive income tax in order to keep the state's university system tuition free. He understood the master plan, which was created by his Democratic predecessor Pat Brown, as a successful compromise between class reproduction and class mobility that even Republican taxpayers would support at a time (the early 1970s) when California reached its demographic peak in the percentage of its population attending public schools (K–16).

The art of running a great publicly funded university like UC was to design a curriculum in which students study full-time with multiple professors in courses of varying size, so that the state funds supplied for growing enrollments could be used to benefit the institution overall. This is how UC was once able to get better as it also became larger to meet the demographic needs of the state.

For the past decade, UC has been aggressively pursuing revenue growth through privatization that has made the university worse by design.[11] Between 1999 and 2004 it increased in-state enrollment by 40 percent. Then, between 2004 and 2010, it doubled the tuition it charged those in-state students. Because one-third of this tuition increase was "returned" in order to "aid" the lowest income students (who were already paying no tuition), the net effect of UC's enrollment growth combined with tuition increases would have increased the "unrestricted" (nonstate) income generated from higher enrollments by 84 percent, assuming that enrollment growth had stopped when tuition growth accelerated after 2004 rather than continuing to rise by another 13 percent. UC never had a plan to restore per-student funding to the pregrowth level of 1999–2000. By now, that would require in-state tuition of more than $25,000, which is more than twice the $12,192 that UC presently charges. The university's growth plan was simply to expand while cutting instructional spending—especially on those campuses expected to absorb the enrollment growth that taxpayers still expect.

Most of UC's top administrators probably know that privatization is failing. Its internal documents no longer assume that students will pile on educational debt to avoid a lifetime of stagnant earnings as income growth becomes limited to an ever-smaller percentage of college graduates. In retrospect, privatization now seems like an attempt to leverage taxpayer funding so as to benefit from a late twentieth-century pattern of income growth and distribution that has turned out to be transitional rather than permanent. But public universities cannot simply go back to taxpayer funding as though decades of excessive debt, including student debt, had not already been incurred by taxpayers who bought more education, healthcare, and housing than their current incomes could sustain. As debt service eats up a growing portion of expected future income, many middle-income families who resist higher borrowing are likely to resist higher taxes, especially if they *also* have to set aside more money for defined contribution pensions. Is setting aside hundreds of dollars each month to pay off the compound interest on student loans that average $24,000 on graduation over fifteen years (or more) a better use of that income than earning tax-free compound interest on savings for retirement? It's not if the incomes of many graduates are likely to be stagnant.

The real crisis in public higher education is not only a crisis in the system of taxpayer financing. In failing to admit, or perhaps to understand, the financial

model that led them to speculate on a bubble, our public universities have lost their way; they are losing public support as a result.

Education Is Both a Public and a Private Good

Although public higher education now sells higher fees to students as a way to benefit from growing income inequality, this was not always its story. Proponents of public universities have always argued that levels of educational attainment are highly correlated with economic development and growth. But during the postwar period (c. 1950–78), it was also common to argue that economic growth produces greater income *equality*, partly through the expansion of low-cost public higher education. This view was refined by Simon Kuznets, who would later win a Nobel Prize, as an argument that the historical correlation between aggregate income growth and income dispersion took the shape of an "inverted U."[12] By this he meant that early capitalist development tended to deepen income inequality until there was a democratic reaction that produced the redistributive policies of the welfare state. Here, progressive taxation (along with guaranteed pensions and veterans' benefits) reduced income differentials and generated public revenues that provided more equal access to economic advantages, like education and housing, that would otherwise require increased savings.

California's postwar boom was a good illustration of the "inverted U." During the 1950s and '60s the state's economy was led by unionized defense industries with cost-plus federal contracts. Family incomes rose in every quintile, and disparities between rich and poor reached a historic low. Because greater income equality was by then considered a normal consequence of economic growth in a democracy, high-school educated factory workers were willing to be taxed so that their children could go to college for free under the 1960 California Master Plan for Higher Education.[13]

Before the hyperinflation of the 1970s it seemed that with a growing supply of educated people income gaps would continue to narrow in the state and that a better-educated generation would be proud to tax itself progressively to provide similar benefits for the next generation. But income gaps began to widen and, as the Cold War wound down, the state's defense industry ceased to be the leading sector of its economy. California's transition from defense to high technology eventually produced a new pattern of income growth during the 1980s and '90s that transformed its income distribution from one of the most equal in the United States to one of the least equal by 2008, when capital markets crashed.

The result was already becoming clear by century's end. In 2000, California's legislative analyst, Elizabeth Hill, reported that between 1975 and 1998

all income growth in the state went to the top 20 percent of taxpayers; the incomes of the bottom 80 percent were stagnant or falling. The principal explanation, she said, was an "increase in the economic return to education . . . caused by the rapid pace of technological change in recent years."[14] In other words, education was a reasonable proxy for being in the 20 percent that got ahead because the only industries in which wages were high and rising tended to hire college graduates.

The surprising news in the legislative analyst's report was that income inequality could increase in periods of economic expansion and not just in periods of recession. She was concerned about this trend and thought it should be reversed by public policy. But leading figures in public higher education, at UC and across the nation, would gradually take a more opportunistic view. In candid moments they described the postwar link between high growth and greater equality that produced the California Master Plan as a historical anomaly that could not have continued. Their public stance was to extrapolate from the history of California's economy in the 1980s and '90s, projecting a new national future of high growth and high inequality.[15] In 2003, the year before UC fully implemented privatization, US GDP grew by 10 percent while median income dropped 4 percent. But despite (or maybe because of) this drop, the median household was still willing to borrow more: personal debt had risen nationally to 130 percent of personal income from less than 80 percent in the late 1990s.[16] Greater creditworthiness had become a substitute for higher income—which could itself be leveraged to get more credit.[17]

In the new economic world that UC believed it had entered, capitalism was no longer considered the source of income inequality that could be *corrected* by wider access to education. Now, higher education was itself regarded as the principal cause of income inequality in a capitalism that was led by intellectual property and driven by finance.[18] Universities, both public and private, were thus prepared to charge students for at least part of the so-called "education premium," which was in California the income spread between the top 20 percent and the rest (the 80/20 spread). The greater the 80/20 spread became, the more people would demand a higher education as the only available insurance against being left behind.

As a result of their apparent ability to raise their price while increasing demand, public universities were able to sell Wall Street on the idea that they were a growth "industry" that could attract taxpayer money without depending on it. According to this theory, public higher education has two major products: economic growth and greater income inequality. It follows that the public *should* invest in higher education to create growth, but if it does not (or even if it *does*), the price of the "education premium" can be charged to the individual as tuition. Viewed as a purely private good, the

education premium can be priced independently of any subsidy that comes from donor endowments in the case of private universities or from taxpayers in the case of public universities.

Privatization Is Not Simply Commodification; It Is also Financialization

One frequent criticism of privatizing public universities is that it turns public higher education into a mere commodity, or consumer good, rather than a public good. This is indeed objectionable to the extent that it occurs. It is, however, something that individual instructors have considerable power to resist in their teaching practice, and that liberal arts faculties are generally *expected* to resist as part of their university's self-legitimation as the provider of an education and not merely an instructional service.[19]

A further objection is that public research universities like UC *cannot* commodify the educational component of their public mission and still get the revenue growth they expect from higher enrollment. Commodification on its own might be expected to drive the tuition of public higher education down through cheaper delivery and a glut of graduates on the job market.[20] But the plan of very large public university systems such as UC has been to increase enrollments while charging more per student.

Privatization, as a scheme for funding the *growth* of public universities, thus means more than simply commodifying the educational experience. It also means *financializing* the effect of growing income gaps. The core assumption of privatization-as-financialization is that rising income inequality increases the fear of falling behind and thus the willingness of middle-class students to borrow more. If this reasoning is correct, UC students should be indifferent to the choice between paying for the education premium up front (as equity) or taking on debt—higher tuition would simply move some students further up what financial economists call the "efficient frontier" between being an investor and being a borrower. This argument opens the door to greater convergence in the prices charged by publics and comparably ranked privates.

By following the logic of financialization, UC could theoretically raise revenues from enrollment growth for as long as Californians were more willing to incur debt than to pay higher taxes. Planners at UC assumed that Californians would do this because borrowing makes them feel richer (at first) and taxation always makes them feel poorer, and because debt for higher education can be considered an "investment" in their own human capital—or, at least, a partial hedge against the fear of long-term income stagnation, what some economists call "malemployment" or simple unemployment.

Funding the growth of public higher education through debt markets rather than taxation does not assume a broad rise in incomes as the California Master Plan did. Whether *mean* income rises or falls, UC now wants to charge a premium, over and above what the state will pay to subsidize enrollments, for the growing *variance* in income attributable to higher education.

The desire of public universities to reap a premium from growing income variance brings us into the realm of options pricing theory. Modern options theory, which developed in the 1970s, allows us to price changes in the variance of any number (in technical terms its "volatility"), which in the context of university tuition is a measure of present uncertainty about how high the highest incomes will rise, how low the lowest incomes will fall, and how likely the average income will be.

But what is the *value* of the embedded option (or "education premium") on which UC and other public universities hope to capitalize? Some forms of insurance against growing inequality could be highly valuable in a time of economic uncertainty.[21] But in order to financialize the public higher education system in a state like California we would need to price an income hedge that approximates the participation rate in public universities, which happens to be around 20 percent. We might thus ask what it should cost to hedge against a widening gap between the top 20 percent and the bottom 80 percent, and then ask how the price would change if we increase public university access and sell insurance against growth in, say, an increase in the 60/40 spread.

How much would such insurance be worth? Would a higher level of access require a lower-cost "education premium" as incomes become more homogeneous and stagnant in the 60/40 range? Would the price of income insurance (as a financial asset) be higher if students could buy it on whatever income spread showed greatest movement? Why should colleges and universities have a monopoly on selling income insurance when their sales commission is high, the payoff is questionable, and financial markets could provide a much wider menu of prices and spread with a real promise of payback if an income supplement is needed? Let's leave aside these questions and suppose that one could actually buy an option, tradable on public markets, that would protect against a rapid increase in the spread between the incomes of the top 20 percent and the bottom 80 percent.[22] Would the fact that income dispersion, and hence uncertainty, has generally increased drive up the price? In California between 1998 and 2008 the 80/20 gap in incomes (also known as the "education premium") did *not* significantly grow. There would have been almost no growth in the incomes of the top 20 percent if we were to subtract the income growth of the top 1 percent. It's thus likely that the option of being in the top 20 percent, even if higher education could guarantee this, would be worth less to people than it was during

California's transition to high tech, when broadly educated people could get jobs for which no prior training was available.

The magnitude of the change in California's income distribution is staggering. In 2007, the last year before the crash, 30 percent of *all* California income growth was in the top 1 percent of California taxpayers. *Their* average income was $1.8 million and their average one-year increase was $128,000, an amount that was three times the *total* income of the average taxpayer. If 2007 income gains were distributed in the same proportion as in 1998, when UC developed its privatization plan, 99 percent of all California taxpayers would have declared an average additional income of $8,388 on each return. Put differently, the inflation-adjusted income *gain* of the top 1 percent in California was 4.3 percent in the last prerecession year, which was more than eight times the percentage gain of middle-income Californians.[23]

UC Berkeley economist Emmanuel Saez, who studies income concentration in the United States as a whole, reports that the top 1 percent received 24 percent of national income before the 2008 crash and that the top *.01* percent (just over 15,000 families) received 6 percent of national income. If we exclude the top 1 percent, the income of the bottom 99 percent of US taxpayers would have risen only .75 percent per year between 1993 and 2008, while the top 1 percent of incomes rose at 3.9 percent per year over the same fifteen-year period.[24] This has completely undone the achievement of the "great contraction" in income gaps (Kuznets's "inverted U") that occurred in the decades following the Great Depression of 1929. As of 2010, US income inequality has returned to its 1929 peak. As summed up by the Chinese financial analyst Andy Xie, "The top 1 percent of the U.S. population is getting one-fourth of the national income and nearly half of the national wealth, twice as much as two decades ago."[25]

How would these data on income dispersion affect the ability of public universities like UC to continue raising tuition? California's economy grew between 1998 and 2008, but during the same period the gap between the top 20 percent and the bottom 80 percent became less salient than income gaps among those with college educations. Educational attainment may still be a major cause of aggregate economic growth, but it is becoming a less important explanation of income distribution than the other factors contributing to runaway inequality (which include the downgrading of many management and professional jobs and the growing burden of precareer debt). A former student who must pay off compound interest on loans for fifteen to twenty years will benefit less over a lifetime from earning compound interest on his or her pension contributions. As income concentration increases there is a growing doughnut hole in the expected "education premium" as something public universities can leverage in the present to increase student borrowing.

The great unsolved problem for UC as it moves toward "online education" is how to make students pay for the embedded option component of a degree when the service component (online instruction) is equivalent to "content" that equally prestigious universities make available for free. (Massachusetts Institute of Technology [MIT] does not have this problem: it gives away its classes but does not offer them for MIT credit or degrees. If MIT is doing this, how can UC still financialize its power to offer "access" in the form of degrees to a widening market?)[26] Suzanne Guerlac's piece in this issue complements my argument by describing UC's venture into online learning as a process of commoditizing, and ultimately shaming, the academic profession. This brings us to the brink of asking whether financialization can still work once commodification has overtaken the liberal arts curriculum that was the distinctive, and legitimating, feature of a twentieth-century university education.[27]

The Federal Government Is Subsidizing Privatization Through the Student Loan Program

If the income protection public universities are selling is not likely to grow, why do they still assume that there is more revenue to be gotten from student enrollments? And why do they see tuition, rather than taxation, as the surest and fastest way to get it?

Undergirding US higher education, both public and private, is a system of leveraged federal support that takes the form of loans to students made available *through* schools and funded *by* global capital markets. All postsecondary students in the United States are eligible to pay for higher education on credit because the federal government guarantees their loans. Many of these loans are available to anyone but they count as financial aid because they are subprime: Students qualify to borrow regardless of their ability to repay, regardless of what they study and regardless of how much they already owe, up to the federally stipulated lifetime maximum that can be as high as $163,000. This makes the higher education industry more recession-proof than most others, and has until recently boosted the stock of corporations that own for-profit universities.[28] In the absence of federal student loans it would not have been possible for public colleges and universities, where 76 percent of US students enroll, to raise tuition by 59 percent in a decade when median family income rose by only 2 percent.[29]

But the federal student loan program did not provide much support for public universities like UC when in-state tuition was free and out-of-state tuition was returned to the state as a reimbursement for its investment in the university. Privatization—based on debt-financed tuition—became feasible at

UC only after a series of relatively informal agreements in which the state allowed the university to keep both in-state and out-of-state tuition and to treat the expected revenue streams from tuition as capital rather than public revenue. The present ability of UC to borrow from capital markets on much more favorable terms than can the State of California depends upon UC's ability to charge an access fee for student loans (tuition) and to increase this access fee much more rapidly, and predictably, than the state can increase taxes.

Presumably, the state allowed UC to treat tuition as private income in order to gain greater access to Wall Street for financing capital projects and *also* to benefit more from the federal student loan programs for which students qualify upon admission to any postsecondary school. These programs work like elementary school voucher programs in the sense that they don't favor public institutions over privates and for-profits. State universities, including UC, are well aware of this, and have long believed that their own students underutilize the federally created lending programs that fueled the growth of the for-profit sector of higher education.

From the standpoint of the federal government and global financial markets there is no essential difference between public and private education. There is, rather, a single system, including the for-profits, that can finance its growth by drawing on a vast pool of credit available to students who can use it for tuition, living expenses, or any other purpose. The secondary market in student loans is particularly attractive to foreign investors because two-thirds are backed by US Treasury obligations, and all provide lenders the most favorable legal treatment that exists in credit markets. The US student loan industry, originally a federal program, was privatized in 1997 at approximately the same time as the federally backed home mortgage industry, and then securitized between 2000 and 2008, when student loans were packaged into complex credit instruments that were sold to international lenders and sovereign wealth funds.[30] Student loans were highly desirable components of these credit instruments because the federal guarantee now applied to a much larger pool of credit than had been available to students in 1998, which is why UC's President Robert Dynes and Governor Arnold Schwarzenegger decided to tap this pool of credit to finance UC's growth after 2004, just as the same pool of credit was already financing the growth of the for-profit sector and the housing market.

Unlike home loans, however, which depended on the rising value of the houses used as collateral, the availability of loans to students did not presuppose the rising value of an education, or even of a degree. Their education is not collateral—it cannot be repossessed if they don't repay their loans. Students are able to borrow without a job because the US government provides collateral to private lenders in the form of a guarantee or because it

provides the loan directly. This system is good news to lenders because the revenue stream from students is as secure as a US Treasury obligation, and it can be good news to students insofar as admission to any postsecondary institution provides them with access to tens of thousands of dollars in subprime credit with few questions asked, even if tuition takes out a major chunk, especially at private universities and liberal arts colleges.

Over time, however, the principal beneficiaries of federal support for student loans have been for-profit schools, which received 66 percent of their revenue from federal student loans, and accounted for 25 percent of all student borrowing, at a time when they still enrolled only 10 percent of all students. (They also accounted for 43 percent of the federal dollars paid to lenders because of student loan defaults.) A disproportionate share of student borrowing goes to finance for-profit higher education, where 94 percent of four-year students take out federal loans. During the decade in which public four-year universities have doubled their tuition, for-profits have grown from approximately 2 percent to more than 12 percent of all post-secondary enrollments in the United States, almost entirely on the strength of high borrowing by low-income students.[31]

Why *hasn't* public higher education benefitted more from its attempt to privatize? One reason is that public universities are generally part of state systems that students can enter at various price points with higher or lower levels of borrowing. In the United States as a whole, student borrowing for four-year public universities did *not* substantially increase when their tuition doubled and their unmet financial need increased. Instead, a national study reports that "recent high school graduates are moving down the price ladder of higher education to the lowest priced rungs in the community colleges." It goes on to say that "this shift . . . is now occurring across all income classes," creating pressure on community colleges for which students borrow very little, since the community colleges are cutting back on classes and programs due to declining state funds.[32]

The same national study shows, however, that students are willing to borrow heavily to attend for-profit schools and that these appear to be low-income students who are squeezed out of community colleges when other students transfer down. The mean loan/work expectation for attending these proprietary (that is, for-profit) schools was $18,763 for students in the bottom quartile of family income, which amounted to a mean net price that was 108 percent of parental income.[33] This is what students and their families must borrow, notwithstanding the large amount of federal aid that is channeled through these schools. Because for-profit schools enroll almost entirely from the bottom of the income scale, they absorb 24 percent of all Pell Grants with 12 percent of all students. The University of Phoenix alone received $1 billion in Pell Grants and got over 90 percent of its total revenues

from federal loans or grants for which its students became eligible upon admission, even though its six-year graduation rate is only 9 percent. The US system of federally financed higher education does, indeed, raise capital to support low-income students, but it does this in the form of selling them debt to attend for-profits, 46 percent of whose students borrow with an average "unmet need" (net of scholarships and grants) of over $24,000 as of 2007, three times the average at publics.[34] Over a quarter of the students at for-profits graduate owing more than $40,000, in comparison to the 15 percent who graduate from publics with this level of debt.[35]

What about UC? Like many other public universities, it has doubled its tuition over the past five years and nearly tripled it since 1998. But unlike many in the national study it has not raised its formal loan/work expectation (the $9.8 thousand "self-help" requirement that even low-income students must borrow or earn) since 1998 and has not seen a decline in the percentage of its students on Pell Grants. The stated reason that UC has not raised its "self-help" requirement is, however, that despite soaring incomes at the top, the *median* income of recent UC graduates since 1998 has been essentially stagnant: it remains around $38,000, although the top incomes are much higher. But when UC holds the line on "self-help," what goes up instead is the expected "parental contribution" for a UC education, even though UC's data also show that median family income in California has barely risen since 1998. Although some students borrow the maximum because they can, the percentage that does so is roughly the same in all reported income groups and is not rising. Most UC students who borrow seem to have capped their total debt because their *own* income expectations are stagnant. They are not generally borrowing more as they see the worst-off Californians fall even further behind, which is what UC's tuition growth model may have assumed they would do.

In 2008, just before the financial crash, UC President Yudof commissioned a study on how to improve middle-income access if UC continued to increase tuition by around 10 percent each year, as it planned to do. The commission, which was chaired by UC Berkeley Chancellor Robert Birgeneau, reported that family contributions toward a UC degree for those on full financial aid came to about 8 percent of their income in 2008, but that they steeply rose to 17 percent at the $90,000 income level where financial aid phased out and full tuition phased in; it then fell back to 8 percent for incomes at around $200,000, while continuing to decline as family income rose and tuition remained constant.

The Birgeneau Commission did not drive home its implicit critique of UC's illusory sliding scale: it could easily have said that if the top 1 percent paid 17 percent of declared family income, their cost of sending one child to UC would be on average $306,000, which is nine times what they presently

pay. It did, however, conclude that students from families earning $70,000–140,000 were (or would soon be) at a "tipping point" in terms of willingness to borrow more to pay for tuition increases, and therefore recommended the return-to-aid from undergraduate tuition be increased from 33 to 45 percent in order to put more money into financial aid as tuition grew.[36]

Whether UC has already reached, or will soon approach, the national tipping point at which students *will not* borrow rather than transferring down, the fact is that students *have not* borrowed more over the past decade as tuition doubled. Rather, student debt at graduation has remained at a relatively constant $12,000 across all quintiles for which data are available, and the percentage of students who borrow more (perhaps because they use these funds for other purposes) is also fairly constant across all quintiles, except for the quintile just above eligibility for financial aid where borrowing levels have increased and student participation rates have dropped by nearly half.[37]

Some UC apologists interpret the fact that student borrowing for UC has not gone up as evidence that tuition increases have made it increasingly affordable, but this ignores the ways in which US higher education—public, private, and for-profit—now constitutes a single system.[38] There is a similar pattern in California. As tuition rises, students eligible for UC transfer down to get cheaper credits and degrees in the CSU system, which has turned away in recent years more than 40,000 eligible California students as of two years ago.[39] This affects the California Community Colleges (CCCs), where a recent study shows that an increasing number of degree-seeking students, including 19 percent of blacks and 16 percent of Latinos, will eventually transfer to a for-profit that does not require them to have transferrable credits, or even a high school diploma. After six years, 70 percent of degree-seeking community college students will have dropped out and only 15 percent will have fulfilled the "Master Plan Intent" of completing the first two years of the requirements for a bachelor's degree at UC or California State University (CSU). The study concludes:

> An increasing share of transfer students is enrolling in the for-profit sector, where what little is known about student outcomes provides ample reason for concern about poor outcomes and high indebtedness. The students going to the for-profit sector are disproportionately the under-represented minority populations whose degree attainment we most need to improve.[40]

Higher prices at UC have thus produced enrollment bottlenecks at the CCC level, where according to a new survey one-third of all students could not get into the courses they needed as compared to one-sixth nationally who face the same problem.[41] Jobless, low-income students, no longer well served by community colleges, find places in federally financed for-profit

schools that expand to meet demand and allow them to live on credit and student grants for as long as they are willing to borrow for tuition.

In sum, the California Master Plan for Higher Education is now operating in reverse. Higher prices at UC have produced a downward cascade of enrollments within the public system. And jobless, low-income students who are no longer served by CCCs find places in *federally financed* for-profit schools that expand to meet demand and allow them to live on credit and student grants for as long as they are willing to borrow for tuition. The effect of growing debt-aversion at the top is that students with fewer choices at the bottom end up with a large amount of debt and a low likelihood of being able to repay it.[42] Federal loan programs that originally intended to put money in the hands of low-income students have thus undermined state-financed higher education by fully funding the for-profit sector while driving lower-income students, who should be better served by public education, into levels of debt that will impoverish them for most of their lives. Californians protesting higher tuition at UC and CSU have not even begun to confront the question of the whether the master plan itself is dead, when only 15 percent of degree-seeking students entering CCCs are eligible to move up in the educational system while nearly 70 percent end up transferring down or moving out.

To Defend Public Higher Education We Must Articulate the Link Between Debt Burdens and Tax Burdens

The crisis in public higher education has become a focal point for understanding the effect financialization has had on our public institutions and values. For a time, the emerging income gaps produced by the rapid development of Silicon Valley and its clones created a window of opportunity for UC to charge more for tuition. As those gaps have widened, however, that window may have closed and another may be opening as a result of protests against the growing inequality that financialization both creates and exploits.

In his January 2011 budget California's new governor, Jerry Brown, tried to thwart UC's plan for annual tuition increases by treating the November 2010 rise as an offset, or reimbursement, of California's historical investment in UC—the equivalent of an education tax. Perhaps he took this approach because students were protesting, perhaps because he remembered that this is how California treated all UC tuition, which was then charged only to out-of-staters, when he was governor in the 1970s.[43] I am aware of no legal change since then that allows UC to treat any, or all, of its tuition revenue as "private" in the way that the bond markets have been told that it is. But Jerry

Brown has thus far presented no plan to fund California public higher education out of tax revenue if it reverses its path toward privatization.

Why not raise taxes and provide higher education as a publicly funded good that does not depend upon individual access to private credit markets? Thinkers on comparative political economy wonder why welfare states have been cut back since the 1980s even though the cost of restoring them would fall most heavily on fewer citizens as incomes become less equal. Why isn't social democracy still the natural corrective to income inequality once it reaches intolerable levels, as Kuznets argued it had been in the mid–twentieth century?[44]

With respect to California, my colleagues in the Council of UC Faculty Associations, Stanton Glantz and Eric Hays, have raised a similar question. Their analysis (done in late 2009) demonstrates that restoring UC, CSU, and the CCCs to the preprivatization funding levels of 2000 would cost the *median* tax filer only $32 per year, less than a tank of gasoline. Tax increases would remain low well into the fourth quartile, and more than 40 percent of the total increased cost would fall on the top decile (as they would for any social program). Why wouldn't 90 percent of Californians vote to tax the richest 10 percent in order to avoid incurring an *average* debt of over $12,000 to attend UC?[45]

One reason is that California incomes are already *so* unequal that higher tax rates, even if they are not on the whole progressive, seem to scapegoat an ever-shrinking proportion of rich people.[46] Even though the median family's tax would go up only $32 dollars to restore UC funding, that family now earns so little that it would probably qualify for Pell Grants and pay nothing for UC tuition. The *average* tax filer would pay an increase of approximately $3,800 per year (more than a hundred times as much as the median filer) to restore California public higher education.

In the top 1 percent, however, many tax filers would have an increased payment that is more than the annual cost of attending UC, which they could presumably afford if their declared incomes are rising by $180,000 each year. Compared to most other states, California is home to a disproportionate number of people who reaped huge benefits from financialization and high technology and their combination over the past two decades. Its state revenue is also disproportionately dependent on the fluctuations in these taxpayers' annual incomes. But rather than broadening the tax base and raising rates, the political debate in Sacramento has focused on the opportunity to cut defined benefit pensions owed to public employees because the 2008 market crash is now fully reflected in the actuarial data of these pension plans, and the 2011 market recovery is not. Why is there so little debate over the tax benefits and subsidies provided to the private sector?

A common answer is that as the rich get richer, they can buy greater influence over the political process and the mainstream media, which influence public opinion. There is truth to this, although alternative media (such as Facebook, Twitter, Google, and blog spaces like the *Huffington Post*), which provide avenues for dissent on other issues, are even more heavily controlled by the new rich.

A deeper answer, however, concerns the direct relation between debt and taxes: the more people owe, the greater tax relief they are likely to demand regardless of how rich others are. The UC students who now protest tuition increases, for example, will find it difficult to pay higher taxes once they start repaying their existing student loans at $1,000 per month. This debt service is what they must pay to the financial sector before they can afford the tax increases that democracy allows them to reject. The lower their taxes, the more they can borrow; and the more they borrow the more they can spend without having to earn more. But the more they owe as a percentage of current earning, the poorer they will be: an ever-larger portion of their future earnings stream will *belong* to the financial services industry.[47]

The money to finance California's system of public higher education is not in the pockets of *most* California taxpayers; instead it is in the enormous upcharge that the financial services industry has generated in order to finance the system of higher education that we now have, including the for-profits.[48] The financial institutions that trade in student loans are underwritten by federal guarantees, subsidies, and legal treatment more favorable than any other lenders receive. These federal programs may have been intended to put money in the hands of low-income students, but their result has been to undermine the mission of state-financed higher education by fully funding the for-profit sector while driving many lower-income students, who should be better served by public education, into levels of debt that will impoverish them for most of their lives. Ultimately, the trend toward greater income disparities in the United States must be reversed to provide economic growth along with housing, healthcare, pensions, *and* education. This can't happen unless students, and other citizens, become aware of the *total lifetime upcharge* they can expect pay to the financial services industry for gaining very limited access to these bedrock necessities. Only then can they combat the *power* that capital markets have over national and state governments that do not satisfy the demand for greater fiscal austerity.[49]

To begin addressing the role that capital markets play in the democratic politics of states like California one would have to compare *how much in taxes people could afford to pay if they had no debt service and how much more debt they could take on if they paid no taxes.* This question is the kernel of the struggle over privatization and its relation to public values, and I will return to it in my conclusion. For the moment, however, I want to stress that many students

who borrow to attend college end up paying more in debt service on those loans than they will in state income taxes for many years.

It is beyond the scope of this argument to calculate how much financial benefit is generated *because* of student borrowing that goes to enrich and empower the financial sector. The orders of magnitude would be very large. The owed *principal* on outstanding student loans is already one-third of all personal credit (not counting home mortgages); as the principal owed reaches $1 trillion it becomes roughly equivalent to the amount of US Treasury obligations owned by China. The federal deficit was estimated to be $1.4 trillion in early 2011; the total borrowing of US states and cities is approximately $2.3 trillion. Add up the lifetime debt service that former students will pay on $1 trillion, over and above the principal they borrow, and you could run a very good public university system for what we are paying capital markets to fund an ever-worsening one—or in the abstract, we could simply add a level of *public* borrowing for higher education that would be enough to finance two moderately sized US states.

But one need not even engage in such flights of fancy to broaden our thinking about the relation between public borrowing, private borrowing, and taxation. If UC *itself* were to use its excellent credit rating to give students the *option* of a free education in return for paying 5 to 7 percent of their income for the next fifteen to twenty years, it could capture some of the future revenues that capital markets are now reaping by financializing UC's fading ability to keep on raising tuition. If, however, UC would not be willing to take this risk, then it is implicitly betting against a growing 80/20 gap when it raises tuition while shedding that risk in much the same way that Goldman Sachs did when it sold clients collateralized debt instruments that it was hedging against.

In order to develop support for public higher education as it should be, however, UC's defenders must stop selling it as a driver of income inequality and reimagine it as once again a counterforce that drives greater equality of all kinds. We cannot simply advocate higher taxes in California without addressing why tax relief has become so important to citizens with unmanageable levels of debt. Equitable debt relief is a precondition of higher taxation and ultimately such debt relief must come at the expense of capital markets. There is now *both* a tax revolt and a debt revolt in the United States, along with global pressure by financial markets to get public institutions to rein in their spending and control sovereign debt.[50]

Issues about the growth of public spending must be addressed: The public universities that we need in California and across the United States do not need to grow as much as they can in order to spend as much as they can so that they can improve their brands and better attract students. To fight financialization we must reduce commodification and make do with smaller institutions that do not compete with elite private schools in the area of branding and amenities.

And public universities like UC need to stop acting as front ends for the student debt that allows them to charge higher tuition than many of their students can afford to pay.[51] Public universities in California have been relative laggards in this process: California is only forty-third among US states in its level of student debt,[52] which is why UC believes it can attract out-of-state students to replace the in-state students who transfer down.[53] But because of California's tradition of tuition-free public higher education, protests and political push-back are occurring relatively early in the privatization process, allowing less "headroom" for UC tuition growth than its planners expected.[54] The University of California may yet be the place where privatization can be stopped and eventually reversed.

I have used UC throughout this article as a paradigm of two models for expanding public higher education: a model that assumes greater income equality combined with broad-based taxpayer support, and a newer model that assumes greater income inequality and thus uncertainty about future earnings. My argument is that UC has been attempting to benefit from this uncertainty by charging higher tuition to what is now a *national* marketing target—middle-income students who still have unused borrowing power. Its strategy is to financialize a worsening income distribution associated with college degrees while commodifying and cheapening the service actually delivered. My analysis shows that this revenue model could only have worked to support the public university we have when income inequality seems most explainable as a "premium" for higher education as such and that it is doomed to fail when income inequality worsens beyond this point.

The university's own internal documents show awareness that the tuition-growth model has already passed the point at which middle-income students in California are willing to borrow, as long as master-plan CSUs and CCCs are still available to them. For UC this simply means replacing them with out-of-state students who will pay private university tuition to attend some campuses. It assumes that other master-plan colleges will take care of Californians who are not willing to borrow to purchase the financial asset embedded in a UC degree. The effect of this influx of out-of-state students on jobless in-state students who are crowded out of CCCs (and who are disproportionately low-income and/or minority students) is that this group of in-state students will have no other option but for-profit vocational schools, which allow them to live on credit while enrolled but which also have low graduation rates, low placement rates, and very high debt-default rates. Education here becomes a factor in economic inequality in the worst possible way—unmanageable student debt will be a significant drag on the lifetime disposable income of many who expect to occupy the middle of the income scale. Now that UC officials have come to understand the futility of privatization,

their continuing pursuit of it as the only way forward reflects, at best, a lack of any other ideas.

What should the rest of us in public higher education do, now that we know? Recognizing that privatization is a *plan* and not simply a reaction to the "state budget" is only a first step toward understanding its perverse effects and ultimate incoherence. This opens possibilities for proactive onsite resistance to specific implementations of the privatization project. Faculty and students need to grasp that the only points at which public universities claim to produce the financial asset called an "education premium" is at the point of admission (which makes students eligible for loans) and graduation (which makes students start repaying them).[55] This is the extent and limit of the power administrators have in granting the academic credit for which students can pay using personal credit. Faculty, students, and staff control course content, course enrollment, and (to a lesser extent) the award of course credit. The power that we in public universities have to self-organize in these credit markets is limited but real, and the power that can be exercised against us is great, but finite. In taking the measure of that power through continuing experimental action it should encourage us to know that the historical moment for privatizing public universities has already passed and that its ideological afterlife assumes that faculty and students, especially in the humanities and social sciences, will continue to legitimate the education these universities offer as a "premium" product.

Our challenge in resisting privatization is to articulate a vision for higher education that makes it an answer to the problem of growing inequality and debt-servitude rather than a symptom, and increasingly a driver, of that problem. There are many sites at which faculty, students, and staff comply with, or are complicit in, the current financial model that can be loci of resistance if we can find new and better ways of educating the public—that do not require universities to price and market their offer of admission as a financial asset.

There is no way forward unless the tax revolt, which is now more than three decades old, can be linked to a debt revolt, which is just beginning—and unless both can lead to a renewal of the role of public universities as forces for equality and democracy.

Notes

1. The "revenue theory of costs" at universities was first described in Howard Bowen, *The Costs of Higher Education* (San Francisco, 1980); Jane V. Wellman summarizes it as follows: "that the institutions raise all the money they can, and

spend all the money they have." See Jane V. Wellman, "Costs, Prices and Affordability," Background Paper for Secretary of Education's Commission on the Future of Higher Education," ED.gov, U.S. Department of Education, http://www2.ed.gov/about/bdscomm/list/hiedfuture/reports/wellman.pdf.

2. Most writings on higher education make a version of this point. See, e.g., Wellman, "Costs, Prices and Affordability," and Anya Kamenetz, *Generation Debt: How Our Future Was Sold Out for Student Loans, Bad Jobs, No Benefits, and Tax Cuts for Rich Geezers—And How to Fight Back* (New York, 2006).
3. The inflation-adjusted price of all higher education has risen by 200 percent since the 1980s despite the fact that inflation-adjusted median income rose by less than 10 percent. Most of the increase at public universities has occurred since 2000, a period in which adjusted median income did not rise at all.
4. Public universities expect to get additional funding from the state in return for taking higher enrollments—the total amount is generally negotiated as part of their annual budget process—but they get more revenue from higher enrollments even if the state reneges, as it did in California after 2008. A recent audit of the University of California shows that its total revenue from state support plus student fees actually *grew* by 22 percent from 2005–6 to 2009–10 despite a 9 percent drop in aggregate state funding due to the recession. The audit attributes this overall revenue growth to a combination of higher enrollments (13 percent) and student fee increases that netted a 47 percent gain. California State Auditor, "University of California: Although the University Maintains Extensive Financial Records, It Should Provide Additional Information to Improve Public Understanding of Its Operations," July 2011, Report 2010–105, chap. 1, Table 1. http://www.bsa.ca.gov/pdfs/reports/2010-105.pdf.

   In the two recessionary years (2008–9 and 2009–10), when the state failed to fund enrollment growth, UC generated an additional $568 million from tuition and fees of which $137 million was attributable higher enrollments and $431 million to rate increases. This did not fully offset the cumulative $751 million decrease in state funding during those two years (16–20, and Table 2), even though UC had reached its tuition targets a year or two ahead of schedule as a response to the state's budget disaster. Despite this lag, the audit reports that "over the five years we examined, the amount of revenues in the tuition and fees fund category grew more from a dollar standpoint than any other category" (16).
5. Bob Meister, "Eleven Theses on Growth," http://www.aaup-ca.org/SCFA-Theses_on_Growth_Final.pdf.
6. Research is part of a public university's mission and should be valued in all fields regardless of cost. It is, however, a fiction that high-cost research generally produces profits that subsidize the rest of the university. Public universities such as UC pursue high-cost projects because they increase gross revenues. They cover net losses on research through enrollment-generated funds and by carrying forward expenses associated high-cost (high-loss) contracts and grants. In my five years observing the UC budget process from the inside, this was rationalized on the grounds that current losses were really investments in a future in which gross revenues from all sources are projected to increase to meet the university's ever-rising costs. There was, however, no projection of a break-even point at which rising revenues would equal rising costs and the university's investment in high cost projects would be repaid. (All of us who study

UC finances are indebted to the work of Professor Charles Schwartz. See, e.g., "Who Pays the Hidden Cost of University Research," *Minding the Campus*, August 9, 2010, http://www.mindingthecampus.com/originals/2010/08/who_pays_the_hidden_cost_of_un.html and, more generally, his blog site, http://universityprobe.org/).

7. This point is documented in Wellman, "Costs, Prices and Affordability." Instructional expenditures have been declining as a proportion of total costs in public universities and cost per credit hour has also been going down due to the heavy use of adjunct faculty and graduate student instructors. For an example of research available immediately before UC embarked on privatization, see Michael Middaugh et al., "The Delaware Study of Instructional Costs and Productivity," National Center for Education Statistics, June 2003. The Delaware study is being updated by Dr. Heather A. Kelly. See, e.g., Heather Kelly, "Assessing Faculty Productivity: Looking at the Delaware Study," PowerPoint presented at the Association of Schools of Allied Health Professions 2008 Spring Conference, March 14, 2008, St. Pete Beach, FL, http://www.asahp.org/ppt/Heather_Kelly.ppt.
8. For the essential data see Christopher Newfield, "The View from 2020: How Universities Came Back," *Journal of Academic Freedom* 2 (2011): 3–4, 7–8, http://www.academicfreedomjournal.org/VolumeTwo/Newfield.pdf.
9. This enrollment-driven business model could be used by universities to get Wall Street to finance their expansion plans. For an elaboration of this point see Bob Meister, "They Pledged Your Tuition," Council of UC Faculty Associations, http://cucfa.org/news/2009_oct11.php. My three follow-up articles are available on the same website.
10. "Those college graduates working in jobs that do not require college degrees are earning substantially less per week (30–40 percent less) than their peers who work in jobs that require college degrees. These substantially lower weekly earnings reduce the private and social economic return to college education for such individuals to close to zero"; Andrew Sum, "The Nation's Recent College Graduates Face Significant Labor Market Problems," *Huffington Post*, October 19, 2010.
11. The University of California Academic Senate (based on work by its Committee on Planning and Budget) has produced authoritative studies (the "Futures Report" and the "Cuts Report") demonstrating that UC privatization, as a revenue scheme, was never part of a broader plan to maintain the budgetary quality of instruction; Committee on Planning and Budget, "The Futures Report," December 2006, http://www.universityofcalifornia.edu/senate/reports/AC.Futures.Report.0107.pdf; University Committee on Planning and Budget, "The Cuts Report," March 2008, http://www.universityofcalifornia.edu/senate/reports/cuts.report.04.08.pdf.
12. Simon Kuznets, "Economic Growth and Income Inequality," *American Economic Review* 45, no. 1 (March, 1955): 1–28.
13. California's research universities, both public and private, were heavily funded by US government contracts to do defense-related work and, after Sputnik, by the federal government's willingness to see the growth of higher education as itself defense related.
14. Elizabeth Hill, Legislative Analyst, "California's Changing Income Distribution," August 2000, 8, Legislative Analyst's Office, http://www.lao.ca.gov/2000/

0800_inc_dist/0800_income_distribution.pdf. "Particularly notable has been the shift for wages, where the share attributable to the top 20 percent of returns has increased from 37 percent in 1975 to over 49 percent in 1998. This shift is significant since wages account for over 60 percent of total income reported by households on tax returns" (2).

15. Deborah Solomon, "Questions for Mark Yudof: Big Man on Campus," *New York Times Magazine*, September 24, 2009. For an indispensable discussion of these issues see, Christopher Newfield, *Unmaking the Public University: The Forty-Year Assault on the Middle Class* (Cambridge, MA, 2008), part 3.
16. "U.S. Household Deleveraging and Future Consumption Growth," *FRBSF Economic Letter*, May 15, 2009, Federal Reserve Bank of San Francisco, http://www.frbsf.org/publications/economics/letter/2009/el2009-16.html; Reuven Glick and Kevin J. Lansing, "Global Household Leverage, House Prices, and Consumption," *FRBSF Economic Letter*, January 11, 2010, Federal Reserve Bank of San Francisco, http://www.frbsf.org/publications/economics/letter/2010/el2010-01.html. (I thank Joshua Aizenman for sharing these documents.) On the relation of household leverage to higher education, see Kamenetz, *Generation Debt*.
17. For the 20 years of post–Cold War euphoria (c. 1989–2009) poor people were encouraged to think that borrowing more is a form of enrichment and paying more in taxes as impoverishment. Neoliberal economists, such as Hernando De Soto, thus came to treat third-world poverty as a cash-flow problem: poor people did not have enough to spend. Because revolution and redistributive taxation were off the table, the solution to this problem, at least in city slums, was to allow squatters to borrow against their hovels by pledging them as collateral. For lenders, and increasingly for global capital markets, this was a play against the *spread* between the growth in urban property values and the overall growth of GDP. Lenders knew that as urban real estate increased in value poor people could pay off their loans out of higher borrowing even if they did not have higher income. And at any point where their income was insufficient to make payments, their previously unowned property could be foreclosed and developed. As long as the price of urban real estate (financial asset) was growing faster than GDP (the underlying economy), lenders did not care whether the proceeds of their loans would actually increase the incomes of the borrower. For a penetrating critique of De Soto, see Timothy Mitchell, "The Work of Economics," *Archive of European Sociology* 46, no. 2 (2005): 297–320 (and Mitchell's earlier writing cited therein).

    In the case of student loans (more than 75 percent of which are secured by US Treasury obligations), the issue of foreclosure does not arise, but neither does the problem of lender risk. The parallel with extending credit to third-world city-dwellers is that the total *volume* of student loans has increased, not because of greater ability to repay, but because of a widening *spread* between two economic indices: the index of income inequality and the index of aggregate economic growth. It is this spread (according to modern finance theory) that would increase *uncertainty* among potential students and thus raise the price they would pay for any kind of hedge that lenders are willing to finance.
18. The now-standard view that educational attainment explains *both* aggregate economic development and income dispersion is neatly summarized in Raghuram Rajan, *Faultlines: How Hidden Fractures Still Threaten the World Economy* (Princeton,

2010), chap. 1 ("Let Them Eat Credit"). Although Rajan believes that the tuition bubble *should* come to an end through greater public investment in higher education, some economists and business leaders have begun to argue that it *is already* coming to an end as degrees stop yielding incomes sufficient to repay the debt incurred, see, e.g., Paul Krugman, "Degrees and Dollars," *New York Times*, March 6, 2011, Opinion, http://www.nytimes.com/2011/03/07/opinion/07krugman.html, and Sarah Lacey, "Peter Thiel: We're in a Bubble and It's Not the Internet. It's Higher Education," *Tech Crunch*, April 10, 2011, http://techcrunch.com/2011/04/10/peter-thiel-were-in-a-bubble-and-its-not-the-internet-its-higher-education/.

19. Stanley Fish, "The Value of Higher Education Made Literal," *New York Times*, December 13, 2010. Fish's article is a critique of the Browne Commission Report on Higher Education in the UK.
20. The possibility is adumbrated in Anya Kamenetz, *DIY U: Edupunks, Edupreneurs, and the Coming Transformation of Higher Education* (White River Junction, VT, 2010).
21. These thoughts are based on Robert Shiller, *Macro Markets: Creating Institutions for Managing Society's Largest Economic Risks* (New York, 1993); and Robert Shiller, *The New Financial Order: Risk in the 21st Century* (Princeton, 2003). Some of Shiller's arguments derive from the seminal work of Kenneth Arrow on secondary markets that share the risk of changing income distributions. See, e.g., Kenneth Joseph Arrow, *Essays on the Theory of Risk-Bearing* (Amsterdam, 1974).
22. The option embedded in tuition would be some kind of income "swap." Its actual price would depend on its time period (ten years after graduation? An entire life-expectancy?) and on the degree to which various parts of the income band were excluded. Would it protect against all income growth *except* for the top 1 percent? Would it weight more heavily income growth just above the 20 percent level? Or income stagnation just *below* the 20 percent level? In this discussion I focus only on the role of changes in income dispersion (or variance), which is the only exponential variable in the options-pricing formula developed by Fischer Black, Myron Scholes, and Robert Merton in 1973.
23. California Budget Project, "New Data Show that California's Income Gaps Continue to Widen," *Policy Points*, California Budget Project, June 2009, http://www.cbp.org/pdfs/2009/0906_pp_IncomeGaps.pdf.
24. Emmanuel Saez, "Striking It Richer: The Evolution of Top Incomes in the United States (Updated with 2008 Estimates)," July 17, 2010. See also, "College Jobs and Inequality," *New York Times*, December 13, 2010.
25. Andy Xie, "Embarrassment of Riches," *Caixin Online*, February 1, 2011, http://english.caing.com/2011-02-01/100223434.html.
26. See Wendy Brown, "Why is UC Borrowing 7 Million to Fund the On-Line Education Pilot Project?" Remaking the University, http://utotherescue.blogspot.com/2011/04/why-is-uc-borrowing-7-million-to-fund.html.
27. Suzanne Guerlac, "Humanities 2.0: E-Learning in the Digital World," in this issue. For the changing role of humanities in making the university experience count as an "education," see Geoffrey Harpham, "From Eternity to Here: Shrinkage in American Thinking About Higher Education," in this issue.
28. Miriam Reimer, "For-Profit Education Stocks: Winners & Losers of 2010," *Street*, December 15, 2010, http://twitter.com/#!/miriamsmarket/status/150842223351644416.

29. Kamenetz, *Generation Debt*, 19.
30. Alan Michael Collinge, *The Student Loan Scam: The Most Oppressive Debt in U.S. History—and How We Can Fight Back* (Boston, 2009).

    According to Collinge, the landmark Higher Education Act of 1965 (HEA), which created student loans, was passed when public colleges were largely tuition-free: the direct loan component of this legislation, later called Stafford Loans, allowed students to borrow for tuition charged by private universities so as to relieve the pressure on public universities in the post-Sputnik era, when ramping up college enrollments had become a national goal. A further policy objective of the HEA was to bring more private capital into the student loan business by offering federal guarantees for private loans. In 1972 the Nixon administration sought to leverage this federal guarantee by creating the Student Loan Marketing Association (Sallie Mae), which bought those loans from banks to make more credit available in the market. Originally, however, Sallie Mae depended on the US Treasury to fund these purchases, so the total amount available to students from both Sallie Mae and Stafford Loans was controlled by the federal government.

    In 1997 Sallie Mae was allowed to privatize—to become privately owned and self-funding. As a private corporation Sallie Mae could leverage the federal guarantee of nonperforming loans, which still applied, to raise much larger amounts on capital markets that could be lent to students at both the federally guaranteed interest rate and the much higher rate applicable to nonguaranteed loans. Between 2003 and 2008 Sallie Mae and other major lenders were also able to securitize their student loan portfolios by creating debt-backed securities as investment vehicles through which investors, including sovereign funds, could get a return higher than that of US Treasury bonds on a principal that was guaranteed by the US Treasury in the event of default. The creation of these new investment instruments vastly increased the volume of funds available for student loans—and thus, indirectly, the obligation of the US Treasury to fund its guarantee. The result, according to Iowa Senator Tom Harken, is that "the schools keep the money, the students keep the debt and the taxpayers lose"; quoted in "Price of Admission: America's College Debt Crisis," CNBC, http://www.cnbc.com/id/39911910.
31. Mamie Lynch, Jennifer Engle, and José L. Cruz, "Subprime Opportunity: The Unfulfilled Promise of For-Profit Colleges and Universities," The Education Trust, November 22, 2010, http://www.edtrust.org/dc/Subprime.
32. "Trends in Financial Barriers to Higher Education by Parental Income and Institutional Type/Control, 1990–2008," *Postsecondary Education Opportunity* no. 111 (January 2010): 1.
33. Ibid., 11, 18.
34. Lynch, Engle, and Cruz, "Subprime Opportunity."
35. *Full Committee Hearing—The Federal Investment in For-Profit Education: Are Students Succeeding? September 30, 2010, Before the US Senate Committee on Health Education Labor & Pensions* (statement of Lauren Asher, President, The Institute for College Access and Success). See also, Lynch, Engle, and Cruz, "Subprime Opportunity."
36. "Strategic Options for Guaranteeing Long-Term Financial Accessibility for UC Undergraduates," March 2008, http://www.ucop.edu/sas/sfs/docs/affordabilityrpt2008.pdf; "Report on Financial Aid and Scholarships," October 10, 2010, http://cucfa.org/archive/2010-UCSC-Report-on-Financial-Aid.pdf.

37. UC Office of the President, "Options for Extending Financial Aid to Middle Income Undergraduates," http://cucfa.org/archive/2010-Middle-Income-Options.pdf.
38. Bob Jacobsen, "A Closer Look at UC's 'Tuition-Free Golden Past' and Who's Financially Hurting Today," March 31, 2010, The Berkeley Blog, UC Berkeley Newscenter, http://blogs.berkeley.edu/2010/03/31/a-closer-look-at-the-tuition-free-golden-past-of-the-university-of-california-and-whos-financially-hurting-today/.
39. "California State University Officials Outline Enrollment Cuts and Preview 2010–2011 Budget," Public Affairs, The California State University, http://www.calstate.edu/PA/News/2009/enrollment-budget.shtml.
40. Colleen Moore and Nancy Shulock, "Divided We Fail: Improving Completion and Closing Racial Gaps in California's Community Colleges," http://www.csus.edu/ihelp/PDFs/R_Div_We_Fail_1010.pdf, 10.
41. "New Survey Reveals Twice as Many California Community College Students Are Closed Out of Courses than the National Average," March 28, 2011, Pearson Foundation, http://www.pearsonfoundation.org/pr/20110328-new-survey-twice-as-many-calif-community-coll-students-closed-out.html.
42. Some middle-income students may also be attracted to private universities, as their costs net of aid become roughly equivalent to UC's.
43. UC absorbed a proposed cut of $500 million in the governor's January budget but proceeded with tuition increases after the governor failed in his effort to get tax extensions and cut an additional $150 million in June.
44. Daron Acemoglu and James A. Robinson, *Economic Origins of Dictatorship and Democracy* (New York, 2006).
45. "Financial Options for Restoring Quality and Access to Public Higher Education in California," Keeping California's Promise, http://keepcaliforniaspromise.org/553/working-paper.
46. It is perhaps ironic that the more progressive state taxes are, the more volatile state revenues become—rising far faster than the economy in good times and falling more sharply than the economy during recessions. California's revenue volatility is the highest in the nation because it is one of the few states that taxes capital gains at the same rate as ordinary income and has a high top rate for ordinary income. (Capital gains tax revenues go up five times as fast as other state income sources during economic recoveries.) A further reason is that California became increasingly dependent on income taxation after 1978, when Proposition 13 indexed property taxes to acquisition, rather than market, value and capped property tax rates. Generally, state tax revenues are more than twice as volatile as gross state products—in California the ratio is much higher (three to four times as volatile) because of heavy reliance on income and capital gains taxes. Excessive revenue volatility (on the downside) is one reason that UC wishes to become less dependent on state funding, but it clearly hopes to benefit from state largesse in good budget years while locking in the tuition increases from bad budget years.

    For a thorough discussion of revenue volatility as a problem distinguishable from the size of state budgets see David Gamage, "Preventing State Budget Crises: Managing the Fiscal Volatility Problem," *California Law Review* 98 (June 2010): 749–811. For discussions of high property taxes as a damper on income tax volatility see Jack Citrin and Isaac William Martin, eds., *After the Tax Revolt: California's Proposition 13 Turns 30* (Berkeley, 2009).

47. There are broader issues related to the return of debt servitude (indentured labor) that have only recently been raised. See, e.g., Richard Dienst, *The Bonds of Debt: Borrowing Against the Common Good* (London, 2011) and Ross Perlin, *Intern Nation: How to Earn Nothing and Learn Little in the Brave New Economy* (London, 2011). For a broader perspective see David Graeber, *Debt: The First 5,000 Years* (Brooklyn, 2011).
48. Most student debt is nonperforming at some point during the repayment period—in 2009 alone repayment rates were only 54 percent at publics, 56 percent at private nonprofits, and 36 percent at for-profits. (See, e.g., Tamar Lewin, "Low Loan Repayment Is Seen at For-Profit Schools," Education, *New York Times*, August 13, 2010, http://www.nytimes.com/2010/08/14/education/14college.html.) A 2011 study by the Institute for Higher Education Policy shows that "within five years of leaving school . . . , 23% used deferment or forbearance at some point (7% of these were because they went back to school), 26% were delinquent on their loans, and 15% defaulted"; Erin Dillon, "Is College Worth the Risk," *The Quick & the Ed*, March 17, 2011, http://www.quickanded.com/2011/03/is-college-worth-the-risk.html. For the full report see, Alisa F. Cunningham and Gregory Kienzl, "Delinquency: The Untold Story of Student Loan Borrowing," Institute for Higher Education Policy, March 2010, http://www.ihep.org/assets/files/publications/a-f/Delinquency-The_Untold_Story_FINAL_March_2011.pdf.

    Because student loans have negative amortization provisions, many students end up repaying far more than they borrowed even if they qualify for deferments and forbearances that allow them to avoid the added penalties and collection fees charged for delinquency and default; Mark Kantrowitz, "Interest-Only and Negatively Amortized Loan Repayment Plans," November 2, 2010, http://www.finaid.org/educators/20101102interestonlyrepayment.pdf; Collinge, *Student Loan Scam*, esp. chaps. 1 and 3. The Obama administration's "income-based repayment" scheme is a genuine reform that should mitigate the effect of negative amortization on student debt incurred after 2011, but only for borrowers who manage to keep current in their payments. All others will still be subject to the collection abuses allowed since 1998, and documented by Collinge in *Student Loan Scam*.
49. Carmen Reinhardt and Kenneth Rogoff, *This Time Is Different* (Princeton, NJ, 2009).
50. Ibid.
51. Collinge, *Student Loan Scam*.
52. The Project on Student Debt collects and updates this data, State by State Data, http://projectonstudentdebt.org/state_by_state-data.php; http://projectonstudentdebt.org/files/pub/classof2009.pdf. For the most recent UC data, see http://www.ucop.edu/sas/sfs/docs/regents_0910.pdf.
53. UC had in fact promised bondholders that it could do this as early as 2004. This means that UC was not "forced" to raise tuition in response to state bud get cuts in 2008: it rather planned to raise tuition regardless of state funding and took the opportunity to do so more rapidly when state funds were drastically cut. UC's original and supplemental bond indentures, demonstrating this point, are posted at The Council for UC Faculty Associations, http://cucfa.org/archive/. My four articles interpreting these documents are posted at The Council for UC Faculty Associations, http://cucfa.org/news/.

54. Cf. "Final Report," University of California Commission on the Future, November 2010, 30, http://ucfuture.universityofcalifornia.edu/presentations/cotf_final_report.pdf.
55. Are students really paying to be *ranked* by the college admissions process and, then, for whatever additional sorting occurs while they are matriculated? For a mildly critical discussion of this possibility see Louis Menand, "Live and Learn: Why We Have College," *New Yorker*, June 6, 2011. See Wendy Brown's piece in this issue for a broader critique.