

ON COST-SHARING, TUITION FEES AND INCOME CONTINGENT LOANS FOR UNIVERSAL
HIGHER EDUCATION: A NEW CONTRACT BETWEEN UNIVERSITY, STUDENT AND STATE?

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Abstract

In the search for a viable 21st century cost-sharing contract between university, student and state, the issues of rising participation and student demand, functional differentiation, institutional competition and stratification and social inequality are systematically discussed. The argument develops through, firstly, a critical appraisal of the genre of elite, mass and universal higher education; secondly, a discussion of the consequences of US institutional stratification; and, thirdly, an assessment of national tuition fee systems as a way of sponsoring mass and universal participation. The Ivy League and the California Master Plan as well as the tuition fee systems in Australia, New Zealand and England have addressed rising participation and relative declining state funding (per FTE tertiary student) while seeking to preserve and enhance quality by mobilising and concentrating resources. Yet, the accumulated unintended consequences of these systems are undermining their very foundations, making none of these a suitable candidate for emulation in the 21st century. Moreover, the conceptual distinction between, elite, mass and universal higher education is flawed and not suitable for guiding further reform initiatives. Consequently, it is submitted that the financing of state funded undergraduate degrees (BA) be decoupled from postgraduate degrees (MA, PhD). The rise of the European Higher Education Area with 46 member states, and more expected to join, serves as a vantage point from which to critique the legacy of the 20th century and develop preliminary policy recommendations for the 21st century.

Keywords

Higher Education funding; tuition fees; cost-sharing; income contingent loans; elite, mass and universal higher education; participation rates; Ivy League; California Master Plan; Australian Higher Education Contribution Scheme (HECS); European Higher Education Area; Bologna process

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1. The university as a higher education provider: on participation and funding after World War II

The university has become a higher education provider.¹ The function of higher education continues to attract patronage from the state. Universities may complain about under-funding, but they do not wish to go without state monies. Ever since citizens have been entitled to enrol once they have obtained the necessary qualifications, participation has been on the rise (in terms of the age grade that enrolls after completing secondary education, the adult population as a whole and the number of professionals opting for recurrent higher education). Whereas participation was miniscule at less than 1% of the age grade until the early 20th century, during the 21st century participation rates will rise above 50%, 60% or even 70% of the age grade, plus recurring enrolment for new and further degrees over a lifetime.

Thinking about participation and access has been promoted and curtailed by the distinction of elite, mass and universal higher education. The connotation is elite university, mass higher education and universal tertiary education. The elite university is home to a select and distinct minority. Higher education is conceptualised as a continuation of primary and secondary education, but it preserves a whiff of distinction. However, mass higher education has pejorative connotations and, characteristically, entails the spread of state-sponsored non-university institutions that are cheaper to run. Universal higher education sounds democratic, and the sculptors of the distinction between elite, mass and universal higher education may have imagined that they were merely clarifying what great sociologists described as the overriding trend towards rationalisation, specialisation and democratisation, but universal higher education is envisioned as little more than a continuation of secondary education, linked to labour market specialisation.

Proponents of the distinction of elite, mass and universal higher education are concerned to preserve elite universities. Two assumed ideal solutions exist: California and the Ivy League. California, in 1960, codified a tri-partite division between the elite University of California, the mass California State University and universal access through community colleges. The divisions are absolute. While students and academics may move between institutions, the institutions themselves cannot alter their fate. Only the University of California awards doctorates and, hence, research monies are pumped into this select group. The Ivy League embodies the ideal of the private elite university. Yet, while their status has much to do with high tuition fees and large donations, these institutions would be nothing without federal research and student aid programmes. However, the ensuing stratification of the Ivy League has become so marked that the wealthiest universities are on their own, residing in a league that fellow Ivy League institutions cannot enter into of their own accord. While fully recognising merit and success, this paper will show that neither California nor the Ivy League is a model for the 21st century.

Table I - Universal higher education with a participation rate above 60%: overall expenditure on institutions, cost sharing and indirect funding

	Net entry rate for tertiary education Type A (USA All)	Expenditure as a percentage of GDP – Type A and All (where available)	Percentage of private, non-subsidised expenditure – All tertiary education	Indirect public transfers and payments to the private sector for all tertiary education (as percentage of total public expenditure on institutions, public or private)
Australia	77 M 70 / F 84	1.4% (A) (1.5% All)	47.8%	32.9 %
Sweden	75 M 59 / F 92	1.7% (All)	12.3%	30.1%
Finland	71 M 62 / F 82	1.7% (All)	3.5%	19.0%
Poland	70 N/a	N/a	N/a	N/a
New Zealand	66 M 54 / F 78	N/a	N/a	47.7%
USA	64 (All) M 60 / F 68	2.7% (All)	66.0%*	37.4%

Source: OECD (2004) Education at a Glance, data from 2001 or 2002.

Elite higher education has always presupposed personal wealth or a substitute such as scholarships or credit. Resources must not only be sufficient to devote all time to study and university life, but also to participate in the exchanges, excursions and dinner parties that are essential to elite education. Once the nation-state discovered the university as an institution for manpower planning and industrial innovation, more monies flowed from the state to the universities. National systems of higher education emerged. However, once participation rose substantially, national systems became increasingly expensive. Cost-sharing gained currency. National systems of higher education are premised on the notion of education as investment that brings return. While warring nation-states may be fixated on manpower planning, economically competitive nation-states find it opportune and rational to limit the direct funding of higher education. Instead of raising taxes, governments charge tuition fees. The late 20th century saw the rise of a discourse on the societal versus the individual return to higher education. This facilitated and justified the idea that students ought to be charged tuition fees in accordance with the private return that accrued to them over and above any social return.

The master narrative was provided by human capital theory. Within its framework, the overall rates of return, and their rise and fall, could be measured and debated. The relative rates of private versus social returns could be gauged and disputed. Depending on the classification and interpretation of data, a case could be made for, or against, tuition fees of a certain amount. A preferred solution for cost sharing emerged: The deferred payment of tuition charges, based on income-contingent loans. The history of such experiments (e.g. Australia, New Zealand) shows that tuition fees, and rising tuition fees, may be

accompanied by rising participation and even by rapidly rising participation. Cost-sharing by means of a national tuition fee system takes away constraints on demand, easing the expansion of higher education beyond 30%, 40% and 50% of the age grade. With reference to the distinction between elite, mass and universal higher education, tuition fee advocates call for differential charging (based on an assumed market for higher education or, at least, market-like mechanisms). Differential charging is seen as both efficient and equitable since those that may be presumed to reap a higher private return are paying higher fees. Yet, this paper will show that once participation increases significantly, the universal tuition fee, because of recurrent higher education with consecutive and multiple postgraduate degrees, becomes a sub-optimal solution.

Beyond national systems and elite institutions: for a new contract between university, student and state

Private higher education institutions must charge tuition fees but unless they receive public research monies (e.g. USA, Canada), they are financially disadvantaged by comparison to the state-sponsored research university. Moreover, when states govern universities, they often withhold the appellation 'university' from non-state institutions (e.g. Japan, Korea and Poland). Non-elite private higher education spreads only if student demand exceeds state supply. While student demand may be satisfied, the combination of heavily subsidised state higher education and private mass and universal higher education is inequitable and inefficient.

A welfare state may endeavour to sponsor widened access and recurrent participation without charging tuition fees, possibly even subsidising living expenses by a grant and credit scheme with income contingent repayment. Yet such a state inevitably curtails demand (e.g. Denmark, Sweden) and often sacrifices quality too (e.g. Austria, France, Germany and Italy). Supply shortages and high staff-to-student ratios are known to disadvantage the so-called non-traditional students with regard to access and degree completion. A supplementary contribution (e.g. Austria, some German Länder) does little to alter the situation.

Significant initiatives to widen access and improve quality by cost-sharing have only been undertaken in countries with public-autonomous or historically mixed private and public higher education. In national systems, the parliament may pass laws establishing substantial tuition fee charges (Australia 1989) and may, additionally, mandate (New Zealand 1991) or allow (England 2005) differential charging. As students have access to loans, with deferred and income-contingent repayment, living costs may also be covered. These national systems were designed by economists, policy advisors and labour politicians to satisfy the criteria of efficiency and equality. Economists are supportive of the schemes, save that some call for diminished state control, the inducement of more institutional competition and the attachment of public subsidies to the student's choice (cf. Jacobs and Ploeg 2005). While fully recognising merit and success, this paper will show that national tuition fee systems are not the preferred cost-sharing model for the 21st century.

The intention of this paper is to shift research and debate away from the focus on state-governed and –funded higher education by suggesting that a new set of contracts between university, student and state is emerging. This is the long-term consequence of, firstly, rapidly rising participation in under- and postgraduate education coupled with declining state funding measured in resources available per student, and, secondly, of increasing international student mobility, which makes tax-funded higher education problematic. Rising participation and internationalisation increasingly have a ‘qualitative’ consequence in fostering the rise of institutional autonomy. Universities compete for tuition fees and talent, while states seek to reduce their commitments to fund and govern higher education. Given the interrelation between declining state commitment and the increasing diversification of university income, one may expect the trend towards institutional autonomy to be self-reinforcing and long-term.

If this assumption is true, then the following issues become salient:

- State planned participation versus student demand: Whereas the state planned for the expansion of higher education after World War II, the 21st century will see universities responding to student demand.
- State induced stratification versus institutional competition: Whereas institutional stratification has been induced by the state (so-called ‘historic funding’) after World War II, the 21st century will see states regulating for fair competition between universities by ensuring equal legal and financial status.
- State regulated cost sharing versus the value of teaching and learning: Whereas state have been seeking to share costs by introducing tuition fees, autonomous universities of the 21st century will seek to capture the value of their higher education.

Higher education is on the way to becoming a set of contracts between university and student. It is a set of contracts because it does not only comprise teaching and learning (as higher education is traditionally defined) but also encompasses finance, fellow students and alumni association. The state may be a partner in this set of contracts. The state’s main mission will be to guarantee needs-blind admission, it’s obligation will to be regulate for fair competition and insofar as the state directly funds institutional study places or student living costs, it is likely to do so according to output and performance criteria.

The paper seizes on the Bologna process as an opportunity to advance a critique of 20th century solutions while offering a vision of how rising participation and internationalisation might lead to a new set of higher education contracts, more efficient and equitable, and a new finance regime, that recognises and supports institutional autonomy. The argument proceeds by offering a comprehensive strategic, historic and situational critique of the current regime of national systems, elite institutions and tuition fees. A sketch of a possible alternative regime for the European Higher Education Area follows. The critique constitutes the main part of the argument because the present regime is entrenched and, although faulty, is not bound not collapse. The sketch of the alternative regime follows from assumption (above) and critique

(below) and is itself strategic, historical and situational. Though it addresses the European Higher Education Area, it may be realised independently by any country, region or university.

2. Strategic critique: participation rates and the genre of elite, mass and universal higher education

The genre of elite, mass and universal higher education was elaborated during the 1960s, chiefly at Berkeley and the Berkeley Center for Studies in Higher Education (established in 1956). The defining moment in its ascendancy and internationalisation was the 1973 OECD Conference on Future Structures of Post-Secondary Education. The list of participants equated to the 'Who's Who?' of Western higher education planning, research and management (OECD 1974: 175-186). Martin Trow had written on this issue during the 1960s and Daedalus published the first widely influential article *Reflections on the Transition from Mass to Universal Higher Education* (Trow 1970). At the OECD conference, he delivered the keynote address, *Problems in the Transition from Elite to Mass Higher Education* (Trow 1974). Thirty years later, he provided a summary reflection on the era that he had had a hand in shaping, *Reflections on the Transition from Elite to Mass to Universal Access: Forms and Phases of Higher Education in Modern Societies since WWII* (Trow 2006).

The strategic critique concerns the slippage from description to prescription (cf. Bourdieu 1991: 134-5; Fairclough 2005: 6) that occurs when advertising the University of California and the Ivy League as an ideal solution. Moreover, the stylisation of elite, mass and universal higher education as ideal types is not warranted. Consequently, the explanatory and interpretive claims made with regard to higher education participation, funding and access must critically be reassessed.

Historically, US higher education is credited with being first in the transition from elite to mass higher education with participation rising above 15% after WWII. US higher education was also first in the transition to universal higher education, by 1970, with participation reaching 50%. By comparison, earlier historical role models such as England, France and Germany were struggling to raise and fund participation beyond 15%. In 2000, about 2/3 of US higher education expenditure came from private sources but very much less in France and Germany, where virtually no private income was provided for state higher education institutions. In the USA, private resources and the federal largesse in research-funding and student aid programmes supported the rise of the private elite research university and the public flagship research university. By 2000/1, the federal government gave out US\$ 37bn in student loans and US\$ 8bn in Pell grants - non-governmental sources made up less than 20% of roughly US\$ 75bn in student aid (Johnstone 2002).

From elite to mass to universal higher education and back again: on historical phases, functional differentiation and academic stratification

Martin Trow believes that the distinction between elite, mass and universal higher education is valid and useful in both a diachronic and synchronic dimension. Diachronically, Trow analyses the transition from elite to mass to universal higher education as three distinct phases. Synchronically he assumes a functional differentiation whereby elite higher education is maintained as, first, mass and, then, universal participation sets in. Elite higher education is then both the historic origin and contemporary pinnacle of academia.

To serve diachronic and synchronic analysis, Trow developed the notions of elite, mass and universal higher education as ideal types (1974: 73). He posits a logical interrelation of social and cultural elements, which would allow any observer to reconstruct rationally the transition from one phase to the next as well as the subsequent embedding of any national system and individual institution. In a definite summary of the scheme, Trow (2006) approvingly cites and utilises a table by Brennan (2004) that, in turn, was extrapolated from the paper delivered to the OECD (Trow 1974).

In terms of principle, the identification of key elements as complementary would allow the observer to explain both compatibility and strain with reference to the ideal types. Ideal types would facilitate comparison between nation-states just as among and inside institutions. Comparative explanation would be possible if the Trowian distinctions did rationally reconstruct historical phases as well as functional differentiation - but they do not. Trow abstracts participation rates, functional differentiation, institutional stratification and the question of social in/equality in one set of ideal types. In doing so, he conflates;

- participation with class, thereby assuming that the origin and destiny of higher education is the elite university for the ruling class;
- differentiation with stratification, thereby advocating a segmented hierarchy in which institutional mobility is pre-empted.

Table II - Trow's conception of elite, mass and universal higher education

	Elite (0-15%)	Mass (16-50%)	Universal (over 50%)
Attitudes to access	A privilege of birth or talent or both	A right for those with certain qualifications	An obligation for the middle and upper classes
Functions of higher education	Shaping mind and character of ruling class; Preparation for elite roles	Transmission of skills; preparation for broader range of technical and economic elite roles	Adoption of 'whole population' to rapid social and technological change
Curriculum and forms of instruction	Highly structured in terms of academic or professional conceptions of knowledge	Modular, flexible and semi-structured sequence of courses	Boundaries and sequences break down; distinctions between learning and life break down

The student 'career'	'Sponsored' after secondary school; works uninterrupted until gains degree	Increasing numbers delay entry and more drop out	Much postponing of entry; softening of boundaries between formal education and other aspects of life; term-time working
Institutional characteristics	Homogenous with high and common standards; small residential communities; clear and impermeable boundaries	Comprehensive with more diverse standards; 'Cities of intellect', mixed residential/commuting; boundaries fuzzy and permeable	Great diversity with no common standards; aggregates of people enrolled some of whom are rarely or never on campus; Boundaries weak or non-existent
Locus of power and decision making	'The Athenaeum' of small elite group with shared values and assumptions	Ordinary political processes of interest groups and party programs	'Mass publics' question special privileges and immunities of the academy
Academic standards	Broadly shared and relatively high (in meritocratic phase)	Variable; system/ institution ' becomes holding company for quite different kinds of academic enterprises'	Criterion shifts from 'standards' to 'value added'
Access and selection	Meritocratic achievement based on school performance	Meritocratic plus 'compensatory programs' to achieve equality of opportunity	Open, emphasis on 'equality of group achievement' (class, ethnic)
Forms of academic administration	Part-time academics who are 'amateurs at administration' and elected or appointed for limited periods	Former academics now full-time administrators plus large and growing bureaucracy	More specialised full-time professionals; managerial techniques imported from outside the academy
Internal governance	Senior professors	Professors and junior staff with increasing influence from students	Breakdown of consensus making institutional governance insoluble; decision-making flows into hands of political authority

Source: Trow (2006) and Brennan (2004), layout modified.

Trow has never acknowledged this conflation, but instead imputed a bias for status and class to European higher education. When in the late 1970s European participation rates were lagging behind US rates, Trow did re-examine his ideal types (1978) but concluded that the transition to mass higher education was delayed because European societies were so much more class-

based. However, 'elite' higher education is a construct that exists only in contrast to other strata; hence, the Trowian distinction has only two meanings: Either it refers to;

- a distinction among universities or university departments according to status, based on prestige, wealth and rank; or, else;
- the existence or capture of institutions to which the sons and daughters of elite strata are sent.

One would expect that, over time, the two coincide.

Moreover, Brennan's reconstructions of Trow's distinctions show that Trowians have no understanding of universal participation beyond the notion that this ends any meaningful form of higher education. Mass participation is acceptable to Trowians in the sense that at mass institutions knowledge may be transmitted in modules to a diverse population that will go on to serve the functional reproduction of society as managers; lawyers; engineers; doctors; teachers; and so on. Nevertheless, universal higher education is envisioned as the antithesis of the elite university. If the elite university is a homogenous community that is in residence then, by contrast, universal higher education is for anybody that intermittently attends class, preferably only virtually. Consequently, instead of intensive and informal face-to-face interaction based on shared and high academic standards, universal higher education is unstructured, conducted at a distance, subject to the vagaries of mass public opinion and only worth anything if it 'adds value'. In this nightmare scenario of universal participation, the elite university would seem to be well-advised to seek exclusivity and seal itself off from 'pollution' by universal participation.

What remains is not sociological analysis but political advocacy. Trowians are 'elitist reformers', convinced of the desirability of an institutional hierarchy. They assume that traditionalist strategies of preserving the elite university are not viable, especially not any that seeks to curtail participation (Trow 1974: 80; 1976, Kerr 1978: 273). In this scenario, rising participation and functional differentiation must be accommodated, preferably, by having the government legislate and fund a segmentation of institutions. Trowians view private elite higher education as exceptional, dependent on large private sources of support. If the insulation of the elite university were not possible, then the intermediary strategy of Trowians would be to sustain elite enclaves in institutions and push for highly selective graduate education.

The American Advantage? Reduced state funding, higher tuition fees and poorer public higher education institutions

US higher education is assumed to have a comparative advantage because of the greater diversity in institutional form, student body and income sources. This advantage is ascribed structurally to institutional autonomy, budget autonomy, strong leadership and a flat academic hierarchy. These structural components were in place by 1900 (Trow 2000: 12-19), enabling a smooth progression from elite to mass to universal higher education. By comparison, most European systems faltered in the transition from elite to mass higher education in the 1970s – and, like Germany, France and Italy, have not recovered.

US public higher education has led cost sharing with rising tuition fees and expanding credit programmes. From the mid-1970s to 2000, state appropriations for public institutions sank from 80% to 40% in real terms – though appropriations per student increased from US\$ 4,042 to 5,004 or by 23.8% (Ehrenberg 2003). Institutions diversified their income, with decreasing instructional budgets despite rising tuition fees (Leslie/Slaughter 1997). The overall trend for the years 1977 to 2001, including the 1990s, was for public institutions to suffer compounded losses (Rizzo 2003). Specifically, for all 50 states, on average:

- The share of the public education budget in the state budget fell by 4%.
- The share allocated to public higher education in the education budget fell by 6%.
- The share allocated directly to institutions (relative to indirect funding) fell by 4%.

Institutional appropriations dropped by US\$ 2,800 in real terms. Hence, even though on average tuition fees were raised by US\$ 1,700, public higher education institutions by 2001 received US\$ 1,100 less per FTE student in real terms (Rizzo 2003).

3. Historical critique: the stratification of US elite institutions

US higher education leads the world at the beginning of the 21st century. According to the OECD (2003), overall expenditure in 2000 at 2.7% GDP was the highest. Expenditure on institutions per student was also the highest on average at US\$ 20,358 for all tertiary students. Canada and Korea spent 2.6% GDP and Canada did spend US\$ 16,690 per student on average in 'Type A and advanced research institutions'. But quite a few US 'advanced research institutions' are able to spend more than US\$ 40,000 annually per student from their endowment income alone and some even above US\$ 80,000. The only country in which, on average, similar amounts per student were available to 'advanced research institutions', was Switzerland at US\$ 19,491. Switzerland spent US\$ 106,282 per student over the average duration of studies (5.5 years), which is 50% more than the other big spenders, Germany (US\$ 70,639 for 6.0 years) and Sweden (US\$ 69,561 for 4.7 years). Consequently, in the Times Higher Education Supplement (THES, 2004) world ranking six of the top ten universities are US private elite research universities. 8 US public flagship research universities make the top fifty. In the Shanghai Ranking (2005) 18 private elite research universities make the top fifty and 7 of these the top ten. 17 public flagship research universities make the top fifty, including all of the University of California, save Irvine (at fifty-five).

When rigid stratification ends competition: the recent financial history of the Ivy League

Faculty turnover, selectivity sweepstakes and university rankings are understood as indicating a competitive market. The Carnegie classification (first 1970, latest 2005) suggests that 'RU/VH' – research universities with a very high research activity - share a level playing field. 'RU/VH' are 96 of 4385 institutions (63 public, 33 private not-for-profit) enrolling approximately 2.4 of

17.5 million students. Yet, the recent financial history of the Ivy League suggests that stratification has become so rigid that

- an insurmountable gap has emerged, whereby public research universities are no longer able to match the financial resources of the private universities; and
- among the private universities, financial stratification has become so marked as to limit competition severely.

During the 1990s, the Ivy League endowment value rose on average by 261% (Ehrenberg/Smith 2001, the Consumer Price Index rose by 30.9%). While differences in research and tuition income may partly account for the diverging fortunes of US universities, it is the large difference in endowment values that turns the stratification of institutions into a rigid hierarchy. In the mid-1990s, faculty salaries at public research universities had already declined to less than 80% of the value at private research universities and were declining further (Ehrenberg 2003). Moreover, while in 1970/71 private institutions spent about US\$ 4,700 more than public institutions per FTE student, this had risen in real terms to over US\$ 8,000 by 1995/96.

Yet even among the Ivy League institutions fortunes began to diverge sharply - the differential in rising endowment value was between 181% for Columbia and 310% for Harvard. By 2000, the value of the endowment at Princeton, Harvard and Yale was more than US\$ 1 million per student, while at Brown, Dartmouth and Pennsylvania it was less than US\$ 200,000 (Ehrenberg/Smith 2001). As a cumulative effect, the top three universities annually may spend twice as much per FTE student (US\$ 80,000) than the bottom three. As regards the faculty to student ratio and institutional scholarships it seems that Brown, Dartmouth and Pennsylvania are no longer in a position to match the top three. Moreover, average faculty salaries have declined relatively from 95% to 80% of the value at the top three.

As regards admission to the top ten percent of higher education institutions, public or private, the over-representation of the children of affluent parents (top income quartile) had increased steadily to more than 120% by 2000, meaning that more than half of the freshmen and –women came from an affluent background, compounded if both parents had a college degree. By contrast, children from the two middle quartiles were under-represented by 36% and from the bottom quartile by 50% (Astin/Oseguera 2004).

When segmented stratification curtails ambition: the consequences of the California Master Plan

When the California legislature called for a Master Plan, Clark Kerr, then President of the University of California (UC), won a referral to the Joint Advisory Committee (JAC) of the Liaison Committee (of legislature and public higher education), which consisted of university chancellors, state college presidents and junior college representatives. Yet the initiative fell to the state college delegation, which launched the 'Love Plan' (Malcolm Love, San Diego State College President). Love proposed that the colleges become universities, offer liberal and professional undergraduate education and postgraduate

specialization, including the research doctorate. The University of California should concentrate on advanced research. To block this proposal and regain the initiative, Kerr had to replace all UC chancellors on JAC and shift the negotiations to a newly-created venue, the Master Plan Survey Team, which now included representatives of the private institutions (Douglass 2000: 265-75).

Kerr's vision prevailed. The segmentation of Californian public higher education was made law. UC alone is able to award doctorates. It fully controls education for law and medicine. It has access to the best 1/8 of high school graduates. Eventually, the state colleges were upgraded by name to California State University, but may award doctoral degrees only in conjunction with UC (or a comparable private institution). CSU has access to the best 1/3 of high school graduates. California's higher education researchers view the Master Plan as a success story, updated but never fundamentally altered in more than four decades. While from 1958 to 2002 the Californian population grew by 130%, the number of high school graduates rose by 299% and the number of BA/BS awarded by 439%. Equity had been addressed by having UC and CSU enrol students in a ratio of 40 juniors (Year 1 and 2) to 60 seniors (Year 3 and 4), thereby reserving places for deserving 'transfer' students that moved up the institutional ladder.

Yet, to preserve the core Master Plan tenet of high standards and quality at UC, California has had to sacrifice the other tenets of access, equity and affordability inside the public higher education system to an increasing extent. Surveys and data show that:

- UC has regulated admission by privileging high school students that have taken Advanced Placement Courses, but the expenses for these courses are borne more readily by high schools in well-to-do neighbourhoods.
- Transfers from Community Colleges to UC are likewise skewed in favour of wealthier neighbourhoods thereby mitigating against higher education careers of 'poor but bright' kids.
- Tuition fees at UC and CSU have been rising rapidly, mitigating against the nominal public funded universal access provision of the Master Plan.
- Joint doctorate schemes between UC and CSU are the exception, thus curtailing the institutional aspirations of CSU.

Clark Kerr himself called it a 'disgrace' (1999) that neither the transfer schemes between the segments nor admission to UC are equitable, but correlate heavily with class and consequently with ethnicity.

Conclusion: from government induced stratification to fair competition

The review of US higher education suggests that it is reasonable to worry about the anti-competitive effects of US institutional stratification. One would query the effect of the segmented and rigid stratification for the careers of students and faculty, of ideas and research programmes. Yet it does not follow, that the US elite university will fall. Rather, the US system of private elite and public flagships universities entails that the rich will continue to get richer. Open is

only, as institutional competition is stifled, whether US universities will continue to be the best and most original in higher education and research.

The strategic and historical critique demonstrates that there is a window of opportunity emerging for other countries and universities to create a more innovative, efficient and equitable system of encouraging participation and sharing costs for higher education. The impasse reached in the USA reveals by implication the two necessary pre-conditions:

- Universities and higher education institutions more generally must be granted legal and financial autonomy on equal terms so that competition ensues (instead of stratification by segmentation); and
- The state must regulate the competition to foster diversification and specialisation but dampen institutional stratification (to avoid that any stratification becomes rigid beyond a point of no return).

4. Situational critique: national cost sharing by tuition fees and income contingent loans

Human capital theory, launched in the 1960s, replaced manpower planning approaches to higher education. In this economic perspective on education and labour, higher education is something that states, parents and students invest in for the sake of a return. It is a staple of the OECD and the World Bank that the rate of return remains significant even with the onset of universal higher education. Students are seen as bearers of educational, cultural and social capital. Indeed, talk of social capital legitimises both the expansion of tertiary education and the exclusivity of elite university alumni networks. Moreover, critics of capitalist class society also buy into the notion of human capital, the idea of accumulation and the assumption of convertibility, only that they focus on the unequal rates of return and the perpetuation of class advantage.

Cost-sharing by means of tuition fees has had two defining moments. The first moment was the 1980s tuition fee hike of Ivy League universities and, more generally, of the US elite private and public research universities, based on high-tuition/high-aid policy and needs-blind admission. The second moment was the 1989 introduction of the Higher Education Contribution Scheme (HECS) in Australia, based on a national system with the option of deferred payment by an income-contingent loan, subsequently implemented with variations in New Zealand and England. Both models are seen as reinforcing academic quality while not per se reinforcing class advantage. However, data for US elite universities indicates that class advantage is reinforced. Moreover, it seems legitimate to worry that the effects of US institutional stratification principally threaten the quality of research and education. So, which are the effects of the Australian HECS and its emulation elsewhere?

Table III - Diversification of institutional income by cost sharing

Sources of income	Australia (2002)	Canada (1999)	United Kingdom (1999)	US Public (2001)
Government	40%	60%	44%	32%

Tuition fees	38%	22%	23%	18%
Other income	22%	18%	33%	50%

Source: Davis (2004)

Bruce Chapman (1988, 2001, 2006a,b) was influential in shaping the Australian HECS and has since evaluated and defended its implementation. Nicholas Barr (1993, 2004, 2005) was influential in shaping the reformed English system of top-up fees. Comparing tuition fee systems, he has most clearly articulated the rationale for universal, differential and deferred charging. The Ford Foundation has sponsored international research on higher education finance and accessibility at The Center for Comparative and Global Studies in Education, The State University of New York (Buffalo). The director, D. Bruce Johnstone, had first written on income contingent loans in 1972 (cf. Johnstone 1972, 1986, 2003).

The situational critique focuses on the introduction of universal tuition fees as a sub-optimal solution. Chapman, Barr, Johnstone and colleagues are mistaken about the logic of the situation (cf. Thomas & Thomas 1928: 572, Merton 1995). A national tuition fee system would have been adequate for advanced industrial nations that seek to push higher education beyond 20% and 30% - what the Trowians term the transition from elite to mass higher education. But, once universal and recurrent higher education sets in, the unintended consequences question the feasibility of national tuition fee systems in the medium-term, while undermining the efficiency and equity claimed for universal tuition fees already in the short term.

The move to tuition fees and income contingent loans since the mid-1970s

By the late 1970s, OECD countries had distinct patterns of higher education funding and state subsidies. Most countries had a single sector that was either statist, as in northern and western Europe, or public-autonomous but nevertheless state funded, as in Australia, New Zealand and the UK (Levy 1982). Dual sectors, public and private, prevailed in Belgium, Canada and the Netherlands, but both were mostly state-funded. One significant exception was the USA. Another significant exception was Japan, where the private universities had the majority of enrolments and were funded privately. Overall, OECD states funded all public higher education study places as well as offering students direct aid in the form of grants and subsidised loans, and indirect aid in the form of housing and subsidised transport and food as well as tax relief (Blaug and Woodhall 1978).

Since then, the trend has been to introduce and raise tuition fees and switch from grants to loans. Economists provided the diagnosis that higher education is under-funded, student support inadequate and access inequitable. They also advised that differential tuition fees should be introduced and income contingent loans supplied to cover tuition fees and living costs. Economists want more 'market', envisioning universities as sellers and students as buyers. Yet, they also perceive a 'market failure' for student borrowing. Hence they advocate

government intervention to create price signals by tuition fees backed by a scheme for income contingent loans that are collected by the tax office.

Income-contingent loan schemes provide default protection and consumption smoothing. 'Income contingency' is a superior solution when compared to a graduate tax or an investment loan (e.g. for business start-ups or to buy property). A graduate tax is not compatible with the internationalisation of higher education as it may be collected only with great difficulty from graduates that leave the state. The investment loan is inefficient, inequitable and unethical. It is inefficient because the absence of collateral makes the loan expensive. It is inequitable as lenders must wish to restrict lending to cohorts that are presumed to have a low default risk, leading to even higher interest rates for others as well socially sub-optimal levels of investment in higher education. Moreover, the commercial bank becomes the owner of the labour power and this is morally repugnant as it threatens a relegation to the poor house in the case of low income or default.

In income-contingent loan schemes the risk might be pooled among the creditors or, else, shared with the state or the university. Risk-pooling requires a mandatory scheme across universities. Otherwise adverse selection and moral hazard will defeat the scheme, as Yale University learned in the 1970s (Nerlove 1975, Chapman 2005). Adverse selection means that universities and students with the greatest financial resources would opt out of any voluntary scheme, making it more expensive. Moral hazard means that those in need of the scheme have an incentive to minimise their declared income after study by, for example, seeking benefits in kind from employers. Risk-pooling among students would require government regulation in favour of a compulsory scheme.

Risk-sharing income-contingent loan schemes do not require compulsion. Economists point out that these provide insurance against uncertain outcomes. The greater a student's uncertainty as regards future income and the greater the risk aversion, the more optimal becomes a risk-sharing income-contingent loan scheme. Economists also point to model calculations that show that these schemes increase welfare not only as compared to commercial bank loans but also to up-front fees. There are incentives for all, including the children of affluent parents, to join the scheme. Economists think that income-contingent loan schemes are currently the best instrument to break the nexus between the socio-economic standing of the parents and the life chances of the children, leading to greater equality of opportunity in times when the income gap is increasing between those with higher education and those without.

The national system: design, alterations and consequences of tuition fees with income contingent loan schemes

In Australia, the Higher Education Contribution Scheme (HECS) began in 1989 with a flat fee of AUS\$ 1,800 with no real rate of interest, indexed to the Consumer Price Index. Payment was deferred on an income-contingent basis until after graduation and subject to a threshold below which no payment was required. Age cohort participation increased from 24% in 1988 to 38% in 1999. Chapman (2001) and colleagues (Chapman and Ryan 2005) have collected

data to show that HECS had no adverse effect on access. Relatively, children from low-income families were as likely or unlikely to go to university as before. Indubitably, more went because of the overall rise in participation. Moreover, HECS enabled choice - as indicated by the doubling of women's participation to more than 40% of the age cohort. Likewise, the effect on internal rates of return was estimated to be no larger than a decrease of 1.5% (Borland 2001, Chapman and Ryan 2002), with representative rates of return still above 12.5% for women and 13% for men. Economists hold that this decrease is not substantial enough to deter prospective students as income advantages are still substantial, but that tuition fees are progressive because the general tax payer pays less and the beneficiaries of higher education contribute to investment costs. In the face of government parsimony and a demographic bulge, HECS enabled a rapid, unprecedented and exemplary expansion of higher education. Simultaneously, the fee-charging Australian university established itself as a new and major international destination.

Table IV - Australian higher education expansion and internationalisation 1989 to 2002

	Student numbers		Sources of income			
	Home students	Overseas students	Government	HECS	Fees and charges (includes overseas students)	Other income
1989	441 074	21 112 (5%)	81.7%	-	5.9%	12.5%
2002	896 621	185 058 (21%)	44.1%	16.7%	21.2%	18%

Source: Davis (2004)

HECS provides default protection and consumption smoothing. Yet its history has been neither efficient nor equitable. Not only is interest subsidised to zero while studying, but in due course parliament also legislated that:

- Universities were entitled to charge whatever fee up-front to undergraduates not accepted into HECS and these places were capped, relative to HECS places, at 25% (1998) and then 35% (2003);
- Universities were entitled to charge whatever fee up-front for postgraduate degrees by teaching but not by research until the 1998 introduction of a Postgraduate Education Loan Scheme (PELS).

Parliament created a class system in which the students in the public class were subsidised twice over: By having their study place subsidised and receiving an interest subsidy on their loan. 'Public' students were paying roughly 1/3 of the cost of study, while the others had to pay 100%.

Moreover, parliament arbitrarily introduced changes such as;

- increasing charges by 40% in one year;
- lowering the threshold for repayment by 30% in one year; and
- switching from uniform charges to differential charging and assigning one course with low costs (law) into the highest band and one course with high costs into the lowest band (nursing).

Implementation of the economists' policy advice led to an inefficient and inequitable outcome. Economists tend to blame politicians, but the error is with

the economists' assumptions. Economists envision higher education as a market – if not existing, then to be created. Yet, economists also diagnose a market failure because the buyer wishing to invest in her or his human capital is short of funds and cannot find a source from which to lend – at least not at reasonable cost for lack of collateral and the associated uncertainty of future earnings and default risk. Hence economists call for government intervention in setting price signals and providing income-contingent loans. The mistaken assumptions are as follows:

1. Economists imagine the student only as buyer, consumer and creditor, but not as voter. Yet, if the loan scheme is successful, there rapidly will be an increasingly large number of creditors who are tax-paying graduates.
2. Economists' models show a market failure in providing funds, but it is unclear if there is a market failure and, even if there is one, whether this is a case for government intervention, either directly assuming the role of the bank or, else, securing the debts by shouldering the default risk.
3. Higher education is conceptualised as a market of sellers and buyers, whereas it is a set of contracts that involve the higher education institution, the student and the government – and possibly parents, alumni and other parties.

Economists have not been interested enough to investigate the unintended consequences of their prescription. As creditors and voters, students are interested in a subsidy. Interest rate subsidies are a case in point. Any economist, I suppose, would anticipate the following consequences: The interest subsidy means that the significant portion of the loan is not repaid, thus off-loading costs onto the general taxpayer. This redistribution benefits mainly successful mid-career professionals (those least in need). This impedes the quality of university education as the funds devoted to subsidising students restrict the state funds available for institutions. Moreover, the interest subsidy invites even those students who are not in need of a loan to take out this loan and invest it to make a profit. This directly exacerbates inequalities among students, as those who are sponsored by their parents may use the funds to augment their wealth. It also impedes access to higher education as loans become expensive and thus will be rationed and too small, thus forcing the financially most vulnerable students to work.

Conclusion: from government intervention to university self-organisation

The situational critique advanced here leads to the conclusion that there is no case for:

- Government intervention in supplying income-contingent loans, not even for living expenses.
- Taxpayer subsidies to income-contingent loan schemes, as the default risk may be shared by universities, banks and students and controlled by the admission procedure and interest rate.
- Political-bargaining and subsidising of interest, for the state would privilege only the already affluent while restricting the resources available for widening access to higher education and improving education more generally.

- Government setting of tuition fee levels, which is all the more problematic if there are capped fees for home students but free fee levels for overseas students as this is an incentive for universities to offer places first to overseas students who will pay a higher fee.

Logically and empirically the case for cost-sharing is compelling. Tuition fees backed by an income-contingent loan scheme will deliver an internally efficient and equitable outcome if higher education is understood as a contract between the institution, student and government. The negotiation of tuition fees and their payment should be left to the institution and student. Government must only regulate that student have access to income contingent loan schemes that cover 'out-of-pocket' costs fully and that payment is collected through the tax office. What will then emerge is not a market for higher education, but a market for education loans among lending institutions – a market regulated to provide default protection and consumption smoothing for students.

In Australia, New Zealand and England higher education participation increased late. Yet, cost-sharing has enabled them to become leaders in providing access. Universal tuition fees were easier to implement as three year undergraduate degrees were the norm. However, with the rise of knowledge society and culture, a new situational logic prevails, which finds expression in the global harmonisation of the degree structure as Bachelor, Master and Doctorate. The new parameters are:

1. More than 50% of the age grade transition to higher education.
2. More and more study five years and longer.
3. Recurrent enrolment for further professional and research degrees becomes the norm.

In the age of universal higher education there is a case for creating two divergent higher education financing regimes. For the European Higher Education Area such a dual regime, whereby the state funds access to undergraduate degrees but does not contribute to professional postgraduate degrees, is explored.

5. European opportunities in meeting demand for higher education

In Europe, higher education participation and quality have been sacrificed as states obstructed investment in higher education by not allowing student demand and choice to lead supply. Even if the state vows to raise and fund participation above 50% of the age grade while maintaining entrance exams and providing a generous mix of grants and loans to cover living expenses, demand, choice and quality are in jeopardy. In Sweden, a case that may serve as a benchmark, the state committed in 1993 to expanding participation to 50% on the basis of offering each student a combination of a fully-funded study place (with expenditure per student roughly double that of Australia, New Zealand and the UK) with an individual stipend and loan that covers living expenses for up to six years. However, this combination of state supply and selection had the following effects in the decade after the 1993 reform (Forneng 2003, Kim 2005):

- On average more than 1/3 of applicants were rejected at each round of admission, with a peak of more than 1/2 in 1997.

- Delayed entry and student accumulation strategies resulted increasing numbers of first-year students being over 25; eventually even more than 50%.
- Drop-outs, programme change and exit into the labour market before degree completion cumulatively depressed the completion rate to below 50%.

The Bologna process: Differentiating undergraduate from postgraduate education

In Europe, the funding and regulation of higher education is under discussion. Tuition fees are being introduced and the Bologna signatory states have committed to a new system of university degrees based on the Bachelor, Master and Doctorate. In the context of rising participation and recurrent higher education, a distinction may be drawn between universal higher education (1st cycle) and continuing and recurrent master education that provides professional qualifications or prepares for a research degree (2nd cycle). More than 75 000 doctorates (3rd cycle) are awarded annually, most of these are research doctorates but an increasing number are new, professional doctorates.

Table V - Participation, overall expenditure, cost sharing and indirect funding in the EU-6 (with the UK substituted for Luxembourg)

	Net entry rate for tertiary education Type A (only)	Expenditure as a percentage of GDP – Type A and All (where available)	Percentage of private, non-subsidised expenditure – All tertiary education	Indirect public transfers and payments to the private sector for all tertiary education (as percentage of total public expenditure on institutions, public or private)
Netherlands	53 M 50 / F 57	1.3% (A) (1.3% All)	19.8%	23.6%
Italy	50 M 44 / F 57	0.9% (A) (0.9% All)	18.3%	12.4%
United Kingdom	47 M 43 / F 51	1.1% (All)	27.2%	05.3%
France	37 M 30 / F 45	0.8% (A) (1.1% All)	12.1%	08.4%
Germany	35 M 35 / F 35	1.0% (A) (1.0% All)	08.7%	15.5%
Belgium	32 M 31 / F 33	1.4% (All)	11.8%	17.3%

Source: OECD (2004) Education at a Glance, data for 2001 or 2002.

For much of Europe participation and funding is too low, particularly in Austria; Belgium; the Czech Republic; France; Germany; Italy; and Switzerland. Economists and sociologists in the know about the emerging global knowledge society and culture, as well as the OECD secretariat and the European Commission, anticipate that low participation and lack of funds will have an

adverse effect on economic growth and life chances, innovation and social cohesion.

Trowian corporate actors envision the European Higher Education Area (EHEA) as an opportunity to create a European 'Ivy League' or as a space in which a tripartite model as in California might be instituted. As regards 'Ivy League' aspirations one need look no further than the talk about the 'European Institute of Technology' and special funding measures in Germany to create 'elite' universities. As regards the imitation of California, the UK government, for example, has been pushing for institutional stratification with a combination of measures; such as evaluation-based funding that redirects monies to 'elite' departments; top-up fees that permit differential charging; and the vertical integration of further education colleges as feeder institutions (foundation degrees).

The new 'Europe of Knowledge' requires regulation, in the first instance, to foster the emergence of a 'playing field' between institutions, whatever their specific mix of research and teaching activities. It is too much to hope that this emerging European playing field will be level, given national legislation and regional disparities in wealth, but if a single playing field is to emerge at all, this requires the setting of field boundaries and playing rules that favour institutional competition for diversification and specialisation. However, to follow the Trowians would mean that Europe would be stuck with a rigid institutional stratification as in the USA but on a much lower level of funding and quality that will stifle institutional competition and dash the aspirations of both faculties and students.

Cost-sharing approaches are being adopted across Europe. In England, tuition fees of up to £3000 have been legalised. More typical is the situation in Austria and Germany where some public institutions are entitled to charge up to €1000, some are not (some German Länder) and some are subsidised so that they need or may not charge (some Austrian Fachhochschulen). The backdrop is a previous strong normative consensus that state education should be provided free of charge. However, as the state sector is under-funded and thus lacks capacity and quality, across much of central and eastern Europe a private tuition-charging sector has emerged – within or separate from public institutions. The appellation 'university' is normally withheld from private higher education institutions by the state and to earn their keep such institutions must focus on the subjects with the lowest teaching cost and highest potential postgraduate income, such as law and management.

In the new Europe of Knowledge, cost-sharing for higher education requires regulation. It would need to be equitable for the students and efficient in its incentives for universities. The outcome must be socially progressive and not disadvantageous for those with lower lifetime incomes. Moreover, the European Higher Education Area requires that any scheme encourage mobility. Further still, it should provide incentives for institutional competition and diversification within the European playing field.

Europe could allow demand to lead supply while raising the quality of higher education if more resources flow. However, if they were merely to flow into national systems as they are, the investment will most likely not pay off, at least not in the sense of contributing to the new Europe of Knowledge. However, the Bologna process enables a strategic decision to decouple postgraduate from undergraduate funding for;

- A. Universal, open and state funded undergraduate degree programmes (BA); and,
- B. Internationalised postgraduate education (MA, PhD) that universities conduct of their own accord and for which no direct state funding should be available.

This strategic recommendation for Europe is consonant with insights gained by the 'New Millennium Project on Higher Education Costs, Pricing, and Productivity', which updated the Carnegie Commission on Higher Education 1973 tuition policy framework for the USA (Wellman 2001). It is emphasised that not only institutional cost and nominal tuition fees matter, but also, for the student, the 'out-of-pocket' cost of studying as well as the foregone income. Public benefits are greatest at entry-level. Hence, there is a clear rationale not to charge tuition fees for the BA. Students would anyway be expected to cover their 'out-of-pocket' costs for which loan, grant and aid packages should be available that ensure that students may concentrate on their degree. Put another way, asking students to take out loans, even if income-contingent, to pay for tuition fees and living expenses across the 1st, 2nd and 3rd cycle would be to saddle graduates with disproportionate debt. As participation crosses the 50% threshold and continuing professional development spreads, charging from the first semester would be neither efficient nor equitable. In any student cohort it would disproportionately privilege 'rich kids' and for the society at large it would lead to sub-optimal levels of investment in higher education, especially in advanced degrees.

For Bologna signatory states a strategic decision to decouple undergraduate from postgraduate funding would be goal-rational in the following sense:

- C. Societies and their states may position themselves in the knowledge society by publicly funding wider access to undergraduate education (BA) to push participation rates above 50%.
- D. European universities, individually, obtain responsibility for the postgraduate education (MA, PhD) they conduct and are thus enabled to compete with the best universities in the world.

Such a strategic distinction would salvage and revitalise the best of the European university tradition, such as the commitment to a disciplinary and rigorous undergraduate education, the advanced research seminar that initiates postgraduate research careers and professional postgraduate education that exceeds the demands and expectations of employers.

Recommendations for financing postgraduate education and undergraduate studies

Professional higher education has become highly competitive. State, public and private universities that charge full tuition fees may recruit their students without capacity constraints. New providers are emerging - such as corporate universities and professional schools, supported by business, foundations and governments. Given the difference between academic and professional education and the rise of recurrent postgraduate education, the recommendations are as follows:

1. States should withdraw from any direct governance and funding of postgraduate education;
2. Universities must be free to set fees but also obliged to provide an income contingent loan;
3. Students must be able to draw on an income contingent loan that covers tuition and living expenses in full;
4. States should offer to collect the income-contingent loans through the tax office insofar as they offer default protection and consumption smoothing;
5. For postgraduate research degrees additional funding should be available from a diversity of sources such as research councils, foundations, benefactors and the university itself.
6. Any university should have available as additional financial instruments: the reverse generation contract, research fellowship, teaching fellowship, contract research and employer funding.

Undergraduate studies must increasingly be secured through a universal access provision. If for advanced countries it is desirable to have participation rates of 50% and higher, then there is a case for the state funding of study places. States should reconsider and commit to providing a fully funded study place to anyone who may benefit from higher education. While such a commitment is costly, it is suggested that, rather than curtail demand, states rather refrain from subsidising living expenses, which for undergraduates could be covered by income-contingent loan schemes too. Assuming a single and open space of higher education, the recommendations are the following:

1. Demand should be met and any barriers to the supply of study places and living expenses lifted;
2. Demand should be funded according to output with stringent external quality control of degree standards and results;
3. Output-funding should cover the costs of the study place fully while living expenses would be funded by income-contingent loans;
4. Governments should refrain from engaging in grant provision and merit aid for undergraduate living expenses, although third parties may wish and should be allowed to do so (e.g. foundations, trade unions, employers);
5. Student choice of institution and degree programme must be respected, thus the money must follow the student;
6. The money should follow the student.

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