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THE UNIVERSITY AND THE PUBLIC GOOD

Craig Calhoun

ABSTRACT Universities have flourished in the modern era as central public institutions and bases for critical thought. They are currently challenged by a variety of social forces and undergoing a deep transformation in both their internal structure and their relationship to the rest of society. Critical theorists need to assess this both in order to grasp adequately the social conditions of their own work and because the transformation of universities is central to a more general intensification of social inequality, privatization of public institutions, and reorganization of the relation of access to knowledge. This is also a pivotal instance for asking basic questions about the senses in which the university is or may be 'public': (1) where does its money come from? (2) who governs? (3) who benefits? and (4) how is knowledge produced and circulated?

KEYWORDS critical theory • privatization • public good • public interest • university

The materialist doctrine concerning the changing of circumstances and upbringing forgets that circumstances are changed by men and that it is essential to educate the educator himself.
(Karl Marx, *Third Thesis on Feuerbach*)

Public education was one of the widespread demands of workers in Marx's day. Recognizing both that human beings are shaped by the circumstances of their development and that knowledge is power, socialists and others called for open access to schooling, for press freedom to carry on the education of public opinion, and for the development of institutions that would harness scientific knowledge to the public good. They developed critical theory precisely to address the ways in which knowledge mattered for social change, even while it was shaped by social contexts. Their calls came largely from outside universities, which remained in the mid-19th

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century mostly conservative, clerical institutions. Science itself had not yet been brought inside most universities, though Kantian critical theory was an academic project. The calls for public knowledge concerned primary and secondary schooling, the achievement of literacy as much as scientific competence. And yet, there was a strong tradition of artisan-intellectual life which promoted high aspirations. William Blake and Tom Paine were not products of universities, even if more of their German counterparts were.

Yet today, the works of Blake and Paine are taught and remembered mainly in universities. This is perhaps true of Marx as well. And this has profound implications for both the public sphere and the place of universities in it. Critical social theory, which grew up largely outside academia until the early 20th century, is now overwhelmingly contained by academia – and thus the question of how well or poorly academics relate to broader publics is basic. Marx's 11th thesis on Feuerbach, which gives this journal its name, suggests that 'the philosophers have only interpreted the world in various ways; the point is to change it'. This mission demands that critical theory sustain its public connections.

The development of academic disciplines and interdisciplinary fields, the professionalization of academic work, the improved resource base for scholarship and science, and the opening of universities to students from working class backgrounds, women and ethnic minorities have all brought important advances in knowledge and in the capacity of universities to fulfill their public missions. Yet they have also brought ambiguity about just what those public missions are. The question is made more urgent by dramatic changes now underway in universities and broader systems of higher education.

Two tacit Enlightenment premises have underwritten much thinking about the public roles of science and scholarship, teaching and research. They are that knowledge can be at once authoritative and democratic and can simultaneously inform expert instrumental use and public debate. Nineteenth and 20th-century developments were shaped by this joint project, but the two dimensions could readily come into tension or even contradiction. In the present article, I do not propose to offer an ideal resolution to the tension, but to argue that it has become acute, and especially that intensified inequalities and new patterns of instrumental evaluation of universities as providers of private goods are making the integration of the two ideals all but unsustainable.

Universities are becoming much more unequal at the same time that higher education and research are being organized, funded, and marketed in more integrated ways and on larger scales – nationally, regionally, and globally. Even for those who accept that the pursuit of excellence always entails inequality in achieving it, this raises questions. First, have the mechanisms for nurturing, recognizing, and rewarding excellence turned into systems that distort academic investments and produce inequality far in excess of actual differences in performance (or in excess of optimal incentives for

improvement)? Second, have the various qualitative differences among institutions, intellectual approaches, and the human pursuits that education might inform been reduced to a single hierarchy (in which positional competition mainly rewards a narrow range of potential values or achievements)? Put bluntly, have markets and ranking systems gone beyond spurring productivity to narrowing its scope, and beyond facilitating choice to forcing institutions to invest in a competition that has become an end in itself? And if so, what does this mean for the notion that universities work for the public benefit or in essentially public ways?

I will describe a central issue as the intensified tension between excellence and accessibility. Both terms are ideological. 'Excellence', as Bill Readings (1996: ch. 2) has described, is the characteristic term universities – like many other contemporary corporations – use to make nonreferentially specific claims of quality or merit. This terminological vogue became pronounced at the end of the 20th century as universities embarked on new public relations and marketing campaigns, management structures, and competition in rankings. Readings describes a new 'university of excellence' succeeding the older ideal of a 'university of culture' (1996: xx). There is something to this, but I think ideals of excellence and access – quality and openness – had long contended in higher education. The rhetoric of excellence underwent a transformation which evacuated much specific meaning (and especially Aristotelian heritage) from the notion of 'excellence', treating it as a term of commensuration, like price, rather than the quality of doing well in very different and largely incommensurable dimensions of life. But the theme that came to the fore was not altogether new: it was the pursuit of recognition and especially the positional good of being seen to be better than others.

Likewise, 'accessibility' is an ideological shorthand for the transformations demanded of older forms of elite and often sequestered universities as they became central institutions in modern and increasingly democratic societies. It allows for the appropriation of established prestige by what are in fact new or transformed institutions. It also allows for the coexistence of two different senses of access: making the hoard of knowledge produced or preserved within universities available to society more broadly, and opening the university to participation by previously excluded or under-represented groups. While knowledge is not diminished by sharing, credentials are another matter, and in modern societies, credentialing elites has been a central function of universities. Expanded access may imply more open and meritocratic distribution of the existing credentials, but of course it actually produces an inflation in credentials and a new emphasis on prestige differentiations among apparently identical credentials (see Collins, 1979, 2002). Expanded scale or 'massification' has changed the university system in many ways.

For most of the 20th century, higher education systems expanded based on growing state funding. In many settings, this growth has ended or even

been reversed. Pursuit of private funds has intensified. Sources include student fees, endowments and other gifts, investments from business corporations, and the licensing of technologies created by university researchers. At the same time, both the proportionate investment in research and the costs of research have been driven up by status competition, as well as the pursuit of the public good and private returns for investors. Education itself focuses more and more on professional expertise – understood as the provision of private benefits, rather than the essentially public good of informed citizens.

It is a crucial task for critical theory to ask about the institutional organization of knowledge and the public sphere, and an obligation of critical theory to ask reflexively about the institution that underpins it.

FOUR SENSES OF ‘PUBLIC’

Universities are almost everywhere understood to have public missions. They offer education that equips citizens for occupations traditionally centered on public service – the model of the learned professions – or at least in principle needed by the public for economic development or other purposes. They advance social mobility (although whether this is producing net mobility or merely certifying movement into the middle class is an open question). They produce new technologies and other innovations. They contribute to both the continuity and creativity of culture. They directly inform the public sphere and also prepare citizens to participate in it. Indeed, so pervasive is the understanding of the university as a public institution that Gerard Delanty (2005: 530) writes that ‘the university can be seen as the paradigmatic institution of the public sphere and of modernity more generally’.

It behooves us then to ask about four senses of ‘public’: (1) where does the money come from? (2) who governs? (3) who benefits? and (4) how is knowledge produced and circulated?

First, does the funding that sustains academic work and institutions come from governments, or from philanthropies accorded special tax exemptions or other subsidies, or from fees paid by students, or contracts with corporations? In much of the world, the notion that universities contribute to the public good is the basis for direct governmental financing and governance of universities and often also indirect financing such as grants to students and exemptions from taxes and indirect governance through accreditation and other regulatory systems. Where universities are structured as private corporations – perhaps most prominently in the United States – they have typically been organized on a nonprofit basis as projects of churches, or charities, or simply independent organizations. Nonprofit universities are commonly accorded favorable tax treatment in recognition of their public mission, as well as a variety of governmental subsidies. Even for-profit universities have widely received indirect public support.¹

Yet, universities are also important distributors of private goods, including notably labor market advantages for their graduates, as well as employment and various privileges for their faculty and staff and opportunities for tax-exempt influence for their benefactors. For-profit universities may also, of course, make profits. But even ostensibly public and nonprofit universities are often involved in the pursuit of private gain. Indeed, in recent years this pursuit has intensified as some universities have derived huge incomes from commercial ventures, notably but not only in biotechnology and information technology. Only a few have really benefited in a major way from licenses, joint ventures and other such commercial arrangements, but their riches have inspired a much wider range of universities to reorganize themselves to try to benefit from the commercial potential of scientific and technological research.² Though this trend seems most advanced in the United States, it is hardly lacking elsewhere. It is, for example, a pronounced feature of European higher education policy (despite, so far, much less success). And throughout the world, universities are expected to enhance economic competitiveness, at both local and national levels, and through contributions of both skilled labor and intellectual property.

Second, asking who governs must include asking what obligations different sorts of funding entail. Universities have long claimed high levels of autonomy. Even as religious institutions in the Middle Ages, they relied on private patronage and sometimes support of political leaders to mitigate control by the church hierarchy. As modernizing institutions linked closely to the nation-state in 19th and 20th-century Europe, they developed strong ideologies of academic freedom, arguing that without it they could not deliver the knowledge or cultural legitimacy sought by state funders. From medieval roots universities claimed the right to be self-governing. This often meant the distinctive approach to participatory decision-making by an internal elite (the professoriate) that Weber classified as 'collegial'. But self-governing universities were also pioneers of the corporate form of organization that would later be appropriated by capitalist businesses. Indeed, some accumulated considerable economic (as well as cultural) capital, aided by the longevity of the institution compared to human owners. Collegial governance faded (though without disappearing) as boards of directors and similar institutional mechanisms took fiduciary responsibility for this capital.³ As state funding grew, governments typically relied on boards of directors or trustees, but reserved the right to have these named by political authorities.⁴ The demand for autonomy remains strong as faculties face new pressures from states and markets, but the self-governance apparatus of universities has generally grown weak.⁵

Third, there are the various 'outputs' of universities, which may be judged more or less valuable to 'the public' and be distributed in more or less egalitarian, open, or just ways. In this regard, there is a crucial difference between outputs that are directly public (like an informed citizenry, or

better public health) and those outputs that will be appropriated as private goods (like credentials leading to high-paying jobs, or marketable technologies).⁶ While the latter may be useful, because they have a clear market rationale, it is less clear why the public should pay for them. Indeed, the public arguably pays for them twice: first through subsidized higher education and second through high remuneration for professional services. Over time, universities themselves have come increasingly to emphasize both the extent to which they deliver private goods and the extent to which the public goods they offer are economic in nature: new technologies, for example, and contributions to local industries. In other words, they focus on more instrumental justifications rather than either value-rational claims about the inherent virtues of knowledge, culture, or religious inquiry or non-economic accounts of public contributions, such as individual self-development or improved citizenship.

Fourth, there is the extent to which universities – and scientists and others in universities – conduct their work in public ways. That is, is there a free and open debate among researchers that can drive forward critical inquiry, correct errors, and ensure that ideas gain support from their intellectual quality – mainly on the bases of logic and evidence – as distinct from their social bases, pedigrees, or institutional and political backing?⁷ And does this intra-scientific and intra-scholarly public communication have reasonable overlap and interconnection with a broader public sphere beyond the university? Does academic work effectively inform both broad public discourse and more specialized policy-making and is it informed in turn by these? Universities have in recent decades played pivotal roles bringing knowledge and critical acumen and sometimes critical distance to public arguments. This is important, not least, for projects like a more public social science, for this depends not only on commitments to bridge academic and broader uses of knowledge, but on better critical analysis of both universities and publics.⁸

These different senses of ‘public’ do not correlate precisely with each other. All are important, but much discussion of universities either confuses them or forgets some. Indeed one of the problems faced by universities is the generally weak articulation of the nature and rationale for public expenditure and public governance in pursuit of public goods – a problem that extends well beyond universities (though one might think they have an interest in addressing it). How universities understand themselves and address these questions of their ‘public’ nature and role, however, cannot be separated from how they manage the tensions between excellence and accessibility.

ACADEMIC EXPANSION AND STRUCTURAL TRANSFORMATION

It needs to be made clear, against some academic presumptions, that the university is not the only possible support for the generation of knowledge for the public good or for critical intellectual analysis; both modern science and critical social theory arose as much outside Europe's universities in the early modern era as inside them (though the humanities have deeper but not exclusive roots in universities). And of course universities were created and nurtured with many goals other than free critical or scientific inquiry, and with many restrictions on it. Nonetheless, even medieval universities were important centers for more or less independent thought, for an intellectual life with at least partial autonomy from relatively central political and religious authorities (if only because they could occasionally play them off against each other; see Hallpike, 2004). Despite the resistance of many ancient universities to new kinds of knowledge and inquiry, and despite the extent to which the early modern scientific revolution was an extra-academic affair, universities expanded to include both.

Since the late 18th century, universities have played a more and more central role in mediating both the production of knowledge for public purposes and public access to knowledge. In Britain, the process gathered steam with transformations of Glasgow and Edinburgh universities in the Scottish Enlightenment; they were not only centers of learning and scholarly inquiry but institutions that bridged such pursuits with public life and debate. This continued with development of the University of London and the provincial universities in the 19th century, slightly slower transformations of the ancient universities, creation of new universities in the mid-20th century, redefinition of the university sector to include former 'polytechnics' and other institutions, and further expansion continuing at the beginning of the 21st century. In the United States, colonial universities founded on purely religious bases played a public role early on (training for the ministry being considered training for public service) and gradually expanded the subjects they taught; state universities such as Virginia, North Carolina, and Georgia were founded from the beginning of the new republic with more clearly public missions and financing; the Morrill Act of 1862 led to the creation of 'land grant' universities with greatly expanded practical missions as well as public service agendas; and the postwar boom brought an enormous wave of expansion, especially in state universities. In Australia, the universities of Sydney and Melbourne were created in the 1850s with curricula divided between classical subjects and science and commitments – like contemporary British universities – to 'useful knowledge'. Expansion continued at a moderate pace with combinations of religious sponsorship, private philanthropy and state support. Universities grew in different state capitals, some created anew by legislative charter, some amalgamating older mechanics'

institutes and other predecessors. There was a boom in the construction of new universities in the 1950s and 1960s, and more recently a wave of consolidation and mergers that produced a number of multi-campus conglomerate universities. In all these cases, the transformation of universities combined addressing new subjects, a growing role for research and publication, and more open access to higher education for students (and teachers) of non-elite social backgrounds. Expansion that opened up non-elite access was primarily a matter of creating new institutions; older elite ones restructured as they became the apex of a larger system, rather than unique exemplars of the institutional form.

If there is a single factor most basic to the structural transformation of higher education and research it is simply growth in scale. Let me just evoke this quickly. Fewer than 3 percent of Americans at the close of the 19th century had ever attended college, let alone graduated. By the 1930s, there were 1.5 million students in American colleges and universities. In 1947, there were 2.3 million, by 1994 the number was 14.2 million, and today it is 17.3 million. More than two-thirds of young people attend college or university today, yet over half the colleges and universities operating in the US did not even exist before the Second World War (see Lucas, 1996: 12; National Center for Education Statistics, 2005; US Bureau of the Census, 1976, 2004). Well over a million bachelor's degrees are granted in the US each year. In Britain, the number of students in full-time higher education rose from 25,000 at the beginning of the century, to more than twice as many between the wars, and then to 216,000 in 1962–3. It doubled again to 453,000 by 1972–3. By 1997–8 there were 1.2 million students enrolled on full-time higher education courses (UK Office of National Statistics, STATBASE). A roughly similar expansion has been characteristic of most of the world's richer countries, albeit with variations in timing.

To offer these higher levels of education, the number of professors in the US grew from 246,000 in 1949–50 to nearly a million today. Graduate education grew commensurately. As late as 1920, only 615 PhDs were awarded in the US. Today more than 43,000 are awarded each year (National Center for Educational Statistics, 1996, 1997; US Bureau of the Census, 2004). But here too there has been both opportunity and inequality. A wide range of new intellectuals gained academic employment, but conditions of academic labor were dramatically different at different levels of the hierarchy (and the difference became more severe when the recession of the 1970s forced cost-cutting measures). The common title of professor came to mean fundamentally different things in different settings.

At several stages, especially in the early 20th century and during the postwar boom, public universities expanded enormously. They were still elite institutions, at first, at least in the social positions for which they prepared graduates. They greatly opened opportunities for higher education to children of the working and middle classes, as well as to women and

minorities, and some of them became exceptionally strong intellectual centers. In the US, and for that matter in Britain, the newer universities played disproportionately large roles in the growth of applied science and technology, and indeed in sociology and some other social sciences. The postwar expansion reflected a baby boom and economic growth, as well as explicit government policies to open higher education to a larger percentage of the population. It is not clear how much mobility this occasioned; much of the increase can be seen as 'credential inflation' (Collins, 1979, 2002). Far from simply producing greater equality, the expansion internalized a new inequality among higher education institutions. If previously simply going to university marked elite status, the question increasingly became *which* university. This, however, had the effect of masking stratification, because the extent of difference among institutions was generally not apparent to students and their parents. A trade-off between excellence and accessibility was being exacerbated.

In Britain, similarly, the apparent leveling implied in the expansion of the university sector with 'upgrading' of former polytechnics created a new competitive arena. Only a few of the new universities were able to compete effectively for funds doled out through the research assessment exercise, yet all were encouraged to adopt a broadly isomorphic institutional structure. This may actually have impeded some from identifying and investing in more specific niches neglected by the traditional research elite. At the same time, the new competitive pressures increased the significance of relative position in the hierarchy for the upper tier of established universities. Only a small number of these are able, for example, to market themselves effectively to fee-paying international students (and only a few are able to contemplate increasing their reliance on fees rather than government as a domestic strategy). There is increasing competition for students in a national market, and for private gifts. These have fueled a new and highly consequential enthusiasm for rankings and league tables. Australia faces similar questions. In 2002 a new Australian Minister of Education, Brendan Nelson, set off a small debate by arguing that Australia needed a 'world-class university' along the lines of Harvard and that too many Australians were going to university, thus exacerbating a culture of mediocrity. Challengers included the former Vice-Chancellor of the University of Canberra, Don Aitkin (2002), who questioned the shibboleth of 'world-class', and the notion of academic competitions on the lines of cricket matches. He argued that Australia did not need a few world-class universities, it needed several 'pretty good' ones. This clash between different organizing ideals for higher education is played out in countries around the world. It involves both oppositions between virtues previously thought compatible and between high ideals and what are held to be practical necessities.⁹

Borrowing the term from Jurgen Habermas's (1989) study of the public sphere, I would suggest that universities (and higher education systems more

generally) are undergoing a 'structural transformation'. Habermas establishes the development of a distinctive orientation to politically significant public communication in the 18th century, one in which disinterested argument about the public good was distinctively valued. Both openness and rational-critical discourse were important to this public sphere. More of each seemed to mark an advance in democracy. However, according to Habermas, openness and rational-critical discourse proved to be in tension. As the public sphere expanded in scale, the quality of its discourse was debased and it became more vulnerable to mass opinion management through advertising, emotional appeals and the like. The puzzle he posed to democrats was how to reclaim the kind of communication that underpinned the notion of reasoned collective choice by informed citizens without confining that to a narrow elite.¹⁰ Habermas's analysis focuses on a tension familiar to academics as one between excellence and accessibility.¹¹

Today's transformations of higher education and science, and their relationship to governments, philanthropy and other sources of financial support, turn on similar issues. The vision of the university that developed over hundreds of years was importantly recast in the late 19th and early 20th centuries. The roles of scholarship (cultivation of accumulated knowledge) and education (teaching students) were harnessed to a new vision of the production of knowledge as basic to social progress, economic growth, and the mitigation of human suffering. In many ways, this academic vision was linked to the rise of the nation-state – which was the unit of 'progress', which needed the 'learned professions', which competed economically and technologically with other nation-states, and which was in principle united by a common culture over which the university presided.¹² It was in this era that many of the basic organizational features of universities were laid down in the United States (and in varying degrees around the world, partly because this was also the era in which America began exporting its educational model, as for example in the Harvard-Yenching venture that founded what became Beijing University). This is the period, for example, in which the PhD degree became widespread as a qualification for faculty positions, and in which the undergraduate major was invented as a complement to the specialization of research disciplines (it was also the period in which most disciplinary associations were founded). During this period the typical tripartite organization of humanities, social sciences, and natural and physical sciences was developed.¹³ This was also the period in which professional schools that had often been formed separately from universities (e.g. schools of law) were brought into the fold of a newly more complex institutional structure. Universities became important as foci of both local urban or civic and national ambitions and public discourse.

This wave of structural transformations set much of the enduring form and self-understanding of the American university. There was, however, another important wave of reshaping as well as growth in the postwar

period. This was the era when Clark Kerr (2002 [1963]) coined the term 'multiversity', noting not only scale but the increasing extent to which universities bundled together a range of distinct functions and activities. They ran hospitals, for example, and agricultural extension services (although these were in fact invented during the earlier wave of innovations). They operated satellite campuses and many states created multi-campus systems, often integrating distinct types of schools from community (two year) colleges through to research universities.¹⁴ The cost of university libraries expanded greatly, and they were often presented as public resources. Computational facilities based at universities supported not only scientific research but a variety of outside users. Because all of America's research universities (and many others) are at least in part residential campuses, expansion brought a boom in housing construction and made universities major landowners. Perhaps most importantly, this was the period in which research was redefined in many fields from a part-time activity of individual faculty employed largely as teachers into a large-scale, high-cost, externally funded undertaking, often requiring complex organizational structures. The process continued so dramatically that we might perhaps replace Kerr's term 'multiversity' with *megaversity*. Emphatically, though, the same trends made it harder to be a *university*.

The late-19th and early-20th-century structural transformation in higher education started a process of making research a more and more central concern (and budget component) for universities – at least for those seeking national and international recognition. Gradually, and with more speed during the postwar period, research was redefined in the sciences from a part-time activity of individual faculty employed largely as teachers into a large-scale, high-cost, externally funded undertaking, often requiring complex organizational structures. This happened to some extent in the social sciences, but less in the humanities. Accordingly, research became concentrated in an elite of 'research universities' distinguished from the rest, though only in a vague manner that encouraged aspiration to higher status within a common model rather than clear differentiation of mission. Research productivity is a central way in which institutions compete for distinction from each other in the prestige hierarchy, and they demand it of their faculties even where they make minimal time and facilities available for such research (see Geiger, 2004).

There has been a huge increase in the cost and funding of research, especially in certain branches of science and technology. This is harder to measure, partly because there are so many sources ranging from the federal government through philanthropic foundations to business corporations. Even within the government, the National Science Foundation's \$5.5 billion budget is dwarfed by the \$28 billion of the National Institutes of Health – not to mention the Defense Department – and the list could be extended with agriculture, education, and law enforcement and other programs.

Indeed, diversity of funding sources is one of the most distinctive features of American science and academia. But around the world, research (and the training of advanced research students) has grown dramatically in both institutional centrality and cost. Since both prominence and cost are greater in some fields – like science, medicine, and engineering – this has changed the internal organizational balance of universities.

The contemporary university, thus, reflects ancient, medieval, and early modern ideals of knowledge, the 17th- and 18th-century revolutions in science, the 19th-century transformation of higher education pioneered by Humboldt in Germany, the development of the university as a research institution there and especially in the English language countries, massive 20th-century growth, consequent internal differentiation, and transformations in finance. Versions of the same influences have shaped universities in most rich and some other countries.¹⁵ As American economic and political power have grown, there has been more or less explicit export of an American model. This may indeed have grown stronger recently, precisely because it has seemed well-adapted to the context of neoliberal globalization. Although it is a model in which private funding looms large, it would be a mistake to take this out of context by neglecting public funding, or the public purposes which legitimate tax concessions for even private universities.¹⁶

With variations in national models, the university became central to modern societies, especially during the 20th century.¹⁷ This reflected of course the centrality of knowledge in modern societies, especially as deployed in bureaucracies, markets, technologies, and democratic politics. In this brief article I can't explore the complexities of just what 'knowledge' means in these different contexts, or how ideas of 'knowledge society' relate to other characterizations such as 'capitalist' or 'industrial' society. But I want to call attention to the extent to which knowledge figures on each side of certain basic social tensions, not simply as an unequally distributed resource, but as a 'good' understood differently. It is this which places universities, as 'knowledge institutions' (or 'cities of intellect' in Clark Kerr's phrase) in central but contradictory positions.

STRUCTURAL TENSIONS

Both the late 19th/early 20th century and the postwar transformations are important, and I think we have fully come to terms with neither. Through both, however, most leaders of higher education suggested that several virtues could be combined which seem today increasingly prone not just to be sundered but to be posed as alternatives. Each of these earlier transformations, in other words, was aggregative, it brought together more functions into the package of a university, while maintaining a more or less consistent commitment to the twin virtues of excellence and accessibility and the double notion of knowledge as both applicable in deterministic ways and

valuable for informing personal and public choices. The new structural transformation is now shaking the idea that these virtues can be achieved simultaneously. They are not being disaggregated everywhere, but which universities can or should maintain which functions is now a subject of policy debates with considerable implications. Beyond public or academic policy, this is a question of commercial investment: if business finances research at universities, it can also decide to internalize research instead of 'outsourcing' it to universities. Despite the prominence of academic and publicly funded research in the origins of each field, much life science and information technology research today is organized inside private firms and independent research centers. University-based research remains of central importance and enormous cost, though arguments about its relationship to teaching and other university purposes are prominent, as are changes in funding sources and distributions among fields.

The prominence of research is closely related to the tension between excellence and access. On the one hand, modern societies value pursuit of the highest 'quality' of knowledge, whether understood in humanistic terms as the distilled wisdom of the ages, more scientifically as breakthroughs in new knowledge, or more commercially as the basis for technology and other 'applications'. The faith is that this will improve human society, and improve it more insofar as it is perfected, even if this means that only a narrow elite can master it. In this conception, knowledge may be in the public interest without itself being very widely disseminated to the public. Indeed, it is a striking characteristic of universities that their excellence is often measured in terms of their exclusivity. The most 'selective' institutions are understood to be the best both because selectivity is an indicator – students choose them on this basis and, because it is a cause, having outstanding students enables better performance.¹⁸ On the other hand, public support of universities is based largely on the effort to educate citizens in general, to share knowledge, to distribute it as widely as possible, and to produce it in accord with publicly articulated purposes (as well as on the assumption of eventual public benefit). This is especially pronounced as one of the guiding principles of democracy, which is held to depend on an educated citizenry, but also of economic development, especially insofar as this requires technical expertise and general education of participants.

The first set of ideals – about the excellence of knowledge – is more closely tied to the research mission of the university and the second set – about access to knowledge – more closely tied to the teaching mission. But this is not a perfect correlation. Universities vary in the extent to which they restrict student admissions in order to raise the intellectual standards of their teaching. And universities have a variety of different means for making the knowledge they produce (and reproduce, verify, and store) available to broader publics. Moreover, universities try to instill in their students the ability to appraise knowledge claims critically, entering into the project of

challenge and verification basic to science and scholarship but also extending it to public and professional life. Excellence and access are each goals for both research and teaching, if perhaps in different proportions. Beyond this, the different goals suggest different substantive emphases: we accept a pursuit of excellence in theoretical physics and mathematics that is relatively esoteric and almost by definition inaccessible. We want specialists to do the best possible work *on behalf of the rest of us* and we do not typically see accessibility as a significant question (of course this may be a reason why we – at least in the US – suffer a deficit of strong teaching of physics or mathematics in secondary schools and to non-specialist university students). Conversely, when it comes to knowledge of electoral politics or social welfare institutions, we are apt to think that esoteric specialization is a fault and accessibility is a virtue, because the point of such knowledge is to inform citizens.

Here we begin to see the implications of the second dimension of tension over the nature of knowledge and universities. On the one hand, higher education and research produce esoteric knowledge to be deployed by experts. On the other hand, they produce accessible knowledge to inform public discussion. We do not, typically, think accessibility is a good that can trump excellence or quality – ‘bad knowledge for all citizens’ is not a widely proposed motto. But, for example, we do have different expectations for what physicists will tell NASA about heat resistance on the space shuttle and what anthropologists will tell the WTO or World Bank about the intellectual property rights of indigenous peoples. It is not simply that one involves more esoteric knowledge, nor even simply that accessibility to a broader public seems more important in the second case. It is also that we believe – I assert – that the purpose of some knowledge is to provide decisive expert advice to policy-makers while the purpose of some other knowledge is to provide understanding helpful to citizens in public debates about essentially contested questions. The key point is as much decisiveness versus inevitable contestation as it is anything about the quality or accessibility of knowledge as such. Obviously there is a large middle area where the two purposes combine. The ‘learned professions’, for example, are widely thought ideally to combine a high level of technical competence with broader general education that informs judgment and makes professionals useful as citizens beyond their specialized technical competence.

What I am calling ‘expert’ knowledge is not limited to advice offered to policy-makers. It is embedded in technology and medicine, for example, as fields of expert practice and fields in which technical innovations are evaluated largely on criteria of whether they work (and at what cost). Obviously not all that passes for knowledge in these fields is sound, and not all sound knowledge is explicit. Technology and medicine also depend on tacit knowledge embedded in the practical orientations and skills of practitioners. Nonetheless, demand for knowledge from physicians and producers of

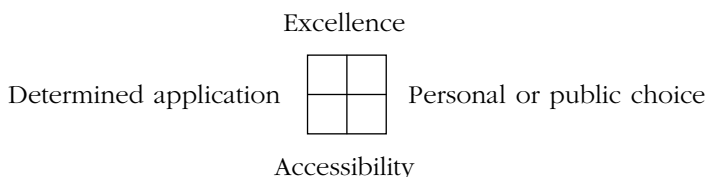
technology is largely demand for definite functional outcomes. While management gurus in business schools sometimes adopt the rhetoric of scientific precision, and while those who buy their books may want clear indications of what actions will pay off for them, the gurus' nostrums are often much less clearly testable (or tested). They inform executives' thinking and provide them help making decisions, perhaps, but relatively seldom in the form of precise and deterministic rules for action. And historians or English professors may have extremely precise and reliable empirical knowledge – genuine expertise – and acquiring this expertise may be central to their careers and recognition among fellow specialists. But the demand for their work is largely not to provide definite functional outcomes, but to inform personal and public thinking about matters not entirely resolvable into deterministic rules. An ability to draw analogs to previous historical periods or events, an ability to situate the present in relation to history, or an ability to grasp subtleties in the meaning of works of literature or their relationship to the contexts of their production depends on real knowledge. But those who seek such abilities, creating the demand for historical and literary studies, more commonly (and I would suggest more wisely) see them as informing but not determining the decisions they will make as individuals and citizens.¹⁹

This second dimension thus has some correlation with different fields of study, though not a perfect one. Policy-makers are more apt to seek technical expertise from engineers and historians are more likely to write books that reach broad readerships and inform public debate. But two limits on this generalization need to be kept in mind. First, I am speaking here of the *demand* for different sorts of knowledge and expectations funders and others – like 'clients' – may have of specialists in those fields. This may translate more or less into the ethos of a specific field, shaping its internal styles of debate and professional values more or less. Historians, for example, may be valued by the public for broad, accessible historical narratives but nonetheless (as was true for much of the late 20th century) internally value the discovery of new archivally demonstrable facts, analyses of highly specific events, and arguments over competing causal claims. Second, while it is possible to differentiate fields in terms of the preponderant patterns of demand (and internal emphases), it is also the case that the same distinctions operate inside each field. There are physicians, thus, who emphasize 'evidence-based medicine' and correct application of deterministic rules for treatment, and physicians who emphasize bedside manner, empathic communication with patients, and the broad public dissemination of knowledge on matters of health. And there are external funders of academic medicine – say, insurance companies and individual patients – who express differential demand for one or the other of these approaches. So too there are funders (and administrators acting on their behalf) who want English professors to stick more closely to expert knowledge – the dates of Byron's

birth and death or the meters used in his verse – and others more interested in explorations of how literature reflects or shapes changing norms of gender or sexuality.²⁰

Shifts in the extent to which funding for (or leadership in) universities comes with one sort of expectation or the other, thus, will tend to affect fields differently and to shift proportionate support for different lines of academic work both across and within fields. From the 19th century, ‘useful knowledge’ was already defined largely in terms of technology and expertise. Increasingly, this takes the character of either knowledge that can be marketed as intellectual property, or that provides for practice of a more or less exclusive profession. These have clear rationales for private investment. Whether public funds should subsidize either is a distinct question, though certainly there may be public needs for certain kinds of technical knowledge or professional expertise that are not met on a private market basis. But left out of this understanding of what is useful are many of the virtues of public knowledge – knowledge that is shared rather than rendered as the basis for exclusive property rights or professional monopolies. Such public knowledge has been one of the reasons for public investment in universities. Not only states but other citizens who demanded access thought it good that more rather than fewer citizens should share knowledge of their country’s history and institutions, of world literature and world religion, of economic globalization, of individual psychology, and of contemporary social problems.

Before we move on to consider funding, and the different senses of publicness, let me sum up briefly. Universities have been valued, and funded, and are central to modern societies because they produce and share knowledge. They are valued for both the excellence and the accessibility of their knowledge – that is, their quality and their openness – and they are valued for both the deterministic applications to which some knowledge can be put and the ways in which knowledge informs nondeterministic personal or public choices. The extent to which these different values are in tension, the extent to which any such tension is explicitly acknowledged, and the implications of such a tension have varied over time.



These two dimensions shape much of the organization of the academic field today. There is conflict over the ‘stakes’ of the field: the kinds and quality of knowledge produced, the extent to which it is shared, and the rewards allocated to different participants. There is also competition within the field as universities (and academics) seek better positions either by

mobility or, more rarely, by struggles to change the field itself.²¹ But part of what makes higher education a field is a common investment in authoritative knowledge. Those who would emphasize accessibility thus still need to embrace excellence. If the field has no authoritative knowledge, it has nothing valuable to share.²² Of course the meaning of ‘authority’ may itself be contested – not least along the dimension differentiating deterministic, technical knowledge from practical knowledge that informs public or personal judgment. The former implies that authority lies in more or less ‘positivist’ proofs, the latter that it lies in critical public evaluation. But again, there is a common investment in the field. The most deterministic scientific claim depends on critical evaluation by other experts; the most public arguments about essentially contested knowledge still involve truth-claims.

A key question is whether the extent of inequality and the changing prioritization and funding of different kinds of knowledge pursuits will undermine the common investment of university-based intellectuals – researchers and teachers – in the field as a whole. And a second equally important question is whether the boundaries of the field are organized to achieve a reasonable balance between internal critical evaluation of knowledge-claims by well-trained scientists and scholars and engagements with external publics that can help academics set appropriate agendas, and see both practical and other problems with the results of their work, as well as share knowledge. Collapsing the boundaries in favor of the broader public would undermine the capacity to produce authoritative knowledge. Enforcing overly strong boundaries would limit the extent to which research can be informed and challenged by practical problems, the extent to which knowledge is effectively communicated, and the likely support of the broader public for academic work.

FUNDING AND RESEARCH

The first sense of ‘public’ I described above focuses on the funding of universities. It is hard to avoid usage that equates ‘government’ with ‘public’, but it is important to keep in mind that there are multiple meanings to the latter term. These include openness and accessibility to the broadest public, and government funding does not always secure academic openness. Obviously this is true of specific research areas, like fields tied to national security in which ‘public’ funding comes with restrictions on making results ‘public’. Or more generally, while the most elite universities in the United States are private, and the most open are mainly public, this pattern is reversed in many other countries where state universities favor the upper and middle class graduates of selective secondary schools and private, sometimes for-profit, universities offer options to the rest of the public. In any case, throughout the world there are pressures limiting or reducing state support for research universities. In varying degrees, universities make cutbacks or find other

sources of revenue. Some nominally 'public' universities – like, say, the University of Michigan in the United States – now receive the vast majority of their revenues from non-state sources.²³

The first of these sources is fees paid by students and their families. American state universities now charge substantial fees even to local students and much more to those coming from out of state. While public universities seldom demand anything like the \$30,000 or more charged by the most elite private universities, they do commonly demand as much as \$15,000 per year. And state-funded universities around the world are levying comparable charges, and sometimes – as in Britain – the most elite are considering breaking free from the regulations and limits that come with some forms of state funding and charging even higher fees.

For the most part, relying more and more on student fees amounts to distributing higher education on the basis of ability to pay (wealth and income) and is thus inegalitarian. There is some evidence that student populations at public universities become more exclusively middle and upper class as the schools raise tuition charges. But there is much to complicate this picture. Most importantly, there is a great deal of difference between official costs – 'list price' – and the amounts students actually pay. Seventy-three percent of students receive some level of financial aid (National Center for Education Statistics, 2005).²⁴ Private universities in the US have over several decades come to rely more and more on a 'high cost, high aid' strategy, in which substantial subsidies are offered to students. As public universities raise fees, they also engage in a similar strategy. It is important to recognize, though, that the subsidies are not necessarily allocated on the basis of economic need. Universities use complex formulae to optimize their admissions and financial aid allocations. The richest, like Princeton, can make maximizing student 'quality' (however they judge it) their only goal. Others in varying degrees must also seek to balance student quality with expected revenues. In effect, they must 'discount' their fees not simply on the basis of student or parental need, but on a projection of willingness and ability to pay. Because universities compete with each other for the best students (and for rankings based on their selectivity and attractiveness among such students), they use discounts to attract those with strong records that will sustain or improve their standing (and they extract larger fees from others).²⁵ This means that some poorer and middle class students may be exempted from the effects of high prices. Moreover, the low prices previously charged by state universities were partially a subsidy to middle class and well-off students and the availability of fee-based higher education is in many cases a source of openness or accessibility in the system as a whole: witness the rapid growth in for-profit higher education. At least as big a distributional question as how much tuition students pay is which students benefit most from public funding or tax-exempt private funding. But of course the questions are not all distributional. That is, they concern what public

purposes are being advanced, not only fairness in allocation of private benefits.

The ability to charge high tuition is linked to prestige, thus, though not every student pays the 'list' price. There is a feedback loop in which prestige underwrites selectivity which reinforces (perceived or actual) quality which secures increased revenues as well as more prestige, more applications and thus more selectivity.²⁶ The market for higher education is thus a 'positional' market in which relative standing in a hierarchy is crucial.²⁷ A higher position enables an institution to extract greater revenues. This may well be net of any value added, but that is hard to measure. What is clear is that prior high standing rather than any specific policy or performance is the best predictor of continued high standing. But of course reputations are affected by performance, even if the effects are hard to trace. And it would appear that elite universities regard the best sort of performance by which to enhance reputation to be research. Research (and graduate education which is closely related to it) has grown dramatically throughout the last 70 years, and especially since the 1960s. Research has the added advantage that it can bring in additional resources directly, but it is also crucial to improving institutional prestige. Research shapes some surveys – like the influential annual *US News and World Report* ratings – in indirect ways, mainly as reflected in prestige. It shapes others more directly, including the more formal and systematic National Research Council evaluations in the US and the British Research Assessment Exercises. Research, often measured in narrow and arbitrary ways, is also central to the newly popular set of international rankings.²⁸

This sets up its own tensions, not least between demands for research productivity and for attention to undergraduate instruction. It is a key source of the recurrent complaints of consumerist students and concerned legislators about the relative neglect of the students whom, it is suggested, should be thought of as universities' primary 'customers'.²⁹ It is also one reason for the overproduction of well-trained PhDs relative to at least the academic job market. And it is a reason for ever more hierarchical distinction between elite universities understood to offer academic excellence and more accessible universities that (whatever their actual academic merits) provide fewer job market advantages to their graduates.

At only a few American universities is admission very selective. Most of these are private. Some public universities, like Berkeley, Michigan, and North Carolina, have high enough standing to be able to sell prestige – cultural capital – at a subsidized rate (mainly to upper and middle class students and families). These have an incentive to compete for top researchers and provide them with considerable support and freedom, partly because they must take a very long-term view so that they are still attractive to their alumni and other potential donors years in the future. As one moves down the hierarchy, both the level of support and the long-term view decline, and with them interest in giving researchers high levels of freedom.

Since most universities sell more generic credentials – university education as a qualification rather than a status good – they have less incentive to pay extra for distinctive faculty strengths. Even while some institutions engage in bidding wars for stars, thus, much academic work is proletarianized – with increased workloads and losses in security of employment, freedom in setting one's own agenda, and autonomy from direct workplace controls.

The key here is the hierarchy, and the way the excellence/accessibility trade-offs are built into it. Need-based financial aid makes top tier institutions accessible to some students based on ability rather than class background. But capacity to offer it actually exacerbates the winner-take-all quality of the overall hierarchical system. For the richest research universities to retain their dominance in this system, they require other sources of money besides student fees. This is where private gifts and revenues from research itself come in.

Research has become a far bigger and far more costly part of universities over the last 50 years. Biomedical research facilities widely dwarf arts faculties, social sciences, and humanities. At many universities so do physical sciences and geography. Big science means expensive investments in laboratories and other infrastructure as well as large numbers of researchers. The government pays for much of this. US government support is enormously skewed towards health sciences. The National Institutes of Health alone contribute 57 percent of federal support for university-based research. By contrast, the National Science Foundation pays for 15 percent and the Department of Defense pays for 10 percent. Though much of this funding arguably goes for basic research, one conclusion to draw up front is that the rise in investment by private corporations does not mark a simple shift from 'pure' to 'applied' science. 'Application' already dominated, though the problems may have differed. Likewise, support from private foundations and even individual donors is not always simply dedicated to enabling scientists to pursue their curiosity or the leading questions of their fields. Much of it is an attempt to purchase fairly specific products for practical purposes. This is not a bad thing. It is not antithetical to theoretical or other advances, but it is a condition and a constraint.

Direct ties to profit-seeking businesses have gotten the most publicity (see, e.g., Washburn, 2005). Licensing fees for inventions and discoveries of campus scientists bring tens of millions of dollars of annual revenue to perhaps two dozen universities. While a small number gain amounts upward of a hundred million dollars, the striking fact is that so many play this game without significant returns and sometimes at considerable cost. No doubt most dream of striking it rich with a big invention, though most won't. But what keeps the game going are the facts that research also brings prestige, and that it brings in money in other ways. One of those other ways is corporate subventions and partnerships to develop new research and products – which may or may not ever be brought to market and generate licensing

revenue. The most famous such deal brought the University of California at Berkeley into partnership with the Novartis Corporation – an agribusiness giant. Novartis bought first rights to research at Berkeley's agriculture school for a sum in the hundreds of millions of dollars.³⁰ While that deal was unusually large and controversial, many more mostly smaller ones are signed continuously.

It is worth noting that Berkeley is a public, state-funded institution. The controversy about the Novartis deal turned in part on whether Berkeley was violating its public mission by committing all research to a private corporation – as well as whether the public was adequately sharing in compensation, since most of the new money went into research, not into reimbursing the state's prior investments. A similar question arises in starker terms with much federally-financed research: should this belong to the public or be sold to private firms? The prevailing legal regime allows universities (and researchers) to patent and license their products and retain the income, even when the federal government paid them for their research in the first place. This arrangement is the result not simply of self-interested lobbying (though certainly of that) but also of Congressional desire to ensure that scientific productivity is quickly and effectively harnessed for practical purposes – and belief that the market is the most effective mechanism for doing that (see Mowery et al., 2004; see also Washburn, 2005).

The key issue here, in other words, is not either of the first two senses of public – who pays or who governs? It is the third sense – who benefits and how? Producing innovations that lead to new consumer and industrial products or new medical treatments are ways in which universities benefit the public. Whether the system for bringing the products of academic science to market is ideal is another question, and one that involves both maximizing the direct public benefits and minimizing the negative effects of having more and more academic research driven by the pursuit of pecuniary gain.

I am not simply speaking about whether we value ancient history or English literature. Even in the sciences, academic investments and the very ethos of science are changed by operating with a pervasive orientation towards intellectual property rights. This shapes the topics students study and the questions researchers pose. It also affects whether they share their knowledge readily and submit their findings to peer review and critical discussion, since many licensing agreements preclude such disclosure and investigators often have a business interest in potentially patentable science.

We should be careful, however, not to leap to the assumption that this is all new. Academic researchers have been seeking ever larger subventions for a century. Philanthropic foundations have been distinctively important to American higher education (and their role is increasing internationally). One should bear in mind that philanthropy and profit-making activities are not entirely distinct. One way of looking at the Rockefeller or Ford foundations is as enterprises that invest large amounts of capital in ideally profit-making

ways so that they may then invest 5 percent or more of that capital a year in activities designed to advance humanity. Some part of this institutional love of humanity – that is, philanthropy – is turned toward the support of university-based research. In general, the newer foundations – like Gates – emphasize research less than the older ones, and the older ones less than they used to (see Katz, 2001).

Foundation support constitutes a highly valued part of the financial basis of universities because it is relatively flexible and can be used to start exciting new programs. Private foundation support is thus pivotal to the high level of dynamism of American universities. Foundations are at their best encouraging innovation, and innovation is both important and very much in fashion. It is worth noting, though, that the inertia commonly condemned in universities is not all bad. One of the things the public might reasonably expect from higher education is some preservation of knowledge and reproduction of learning. And a perennial problem for deans and others is that foundation funding that launches new activities is seldom available to continue them.

Foundation contributions to university research budgets are matched – or sometimes far outmatched – by the donations of private individuals, often in the form of endowment gifts. Aided by tax benefits, professionalized fundraising, and the loyalty of former undergraduates to universities that had helped to cement their own social standing, elite private universities were among the most prominent beneficiaries of the new concentration of wealth in the United States. Universities like Harvard, Duke, and Stanford have all added billions of dollars to their endowments. Former Princeton President Harold Shapiro has called this ‘affective philanthropy’ (by contrast to Carnegie’s notion of ‘scientific philanthropy’).³¹ It expresses love of humanity by seeking to advance the goals or perpetuate the existence of particular institutions of higher education. This is different from philanthropy defined not by care for institutions but by material products in open markets or the public good as such. The scale is enormous, one of the most massive transfers of capital on record. The massive new wealth is extraordinarily unequally distributed – with Harvard University receiving enough to drive its endowment well over \$25 billion, double that of the Ford Foundation – while most colleges and universities receive little or none. The endowment earns each year about half the budget of the National Science Foundation and pays a third of Harvard’s operating costs. And this is all tax-free: the original gifts create exemptions for donors, the endowment funds pay no income tax, and most university operations are free of sales tax.

The richest universities, in short, are increasingly able to set academic agendas independent of both the government and foundations (though they also get large amounts from each). It should be noted that endowment gifts seldom come without strings attached. Those who made money in business have tended to give money for the study of business, or sometimes diseases.

They have not tended to give equal amounts of money for research on social inequality or social movements. To the extent that privatization proceeds apace everywhere, these endowments give top US universities an edge relative not only to other US universities but to counterparts abroad.

The research-funding picture is quite different in other countries. In most, it is far more centralized in multiple senses. First, national governments predominate. In the US, by far the most important public sector support for academic research has come through state (not federal) funding of universities. This is commonly neglected, since it doesn't necessarily appear specifically under the label of research funding, but is included in salaries, facilities, and other general costs. Most state funding of course goes to state universities, but state support for private universities is also significant. Second, in many countries research funds come overwhelmingly from central government agencies, with lesser roles for private foundations, university endowments, and corporate partnerships (though in many countries efforts are being made to increase all three). Third, many governments choose more than the US does to support universities indirectly through financial assistance to students seeking higher education. This changes the relationship between selectivity and popularity (though not necessarily fundamentally) and the prospects for tuition-discounting as a recruitment strategy. Of course such programs also exist in the US, and are sometimes preferred by legislatures. But the tendency in the US is for financial assistance to be administered more at the university level (as evidenced by the tendency in recent years for elite universities to offer all entering graduate students multi-year financial assistance packages). While universities do employ graduate students as teachers, they are generally motivated less by simple cost savings (for which they could turn to adjuncts – and indeed, the casualization of academic labor is considerable). Graduate students are funded more (especially at private universities) as part of the institutions' overall investment in research and the pursuit of prestige. When the costs of teaching graduate students are considered, they are actually relatively expensive labor.³²

If one counted other costs of maintaining universities, their physical facilities, and their campuses, the proportion of the research costs borne by universities themselves would be much greater. But here 'universities themselves' means mainly in some combination the accumulated wealth left in trust by previous generations, the tuition payments of current students, or other forms of government funding that are not specific to research (usually, state rather than federal funding). It is also true that the figures cited refer only to research support recorded specifically as financial payments for research. They don't address the ways in which universities support literary scholars or historians, whose research depends not on new cash transfers but on access to a good library.

Finally, and not trivially, faculty members and graduate students also pay for research costs. They do so both directly from their pockets and by

foregoing opportunities for other and potentially better-compensated uses of their time. To what extent they receive material rewards for this in the long-run is unclear, but for the most part the conduct of research and the writing of academic books and articles are recompensed at considerably less than the minimum wage – except where these are bases for promotion or pay rises.

Five points about who pays for research are crucial to remember: (1) The federal government is still by far the largest direct funder, though its support has declined proportionately, and is very heavily skewed towards a few kinds of work. (2) For-profit private investment is still relatively small, though growing, and is mostly concentrated in a few fields. (3) Foundation support is significant, but not large enough to be determinant for the pattern as a whole; it can, however, make a big difference when it goes to lines of work not supported by the government. (4) Faculty members and graduate students pay for a significant portion of their own research activities. (5) Universities themselves pay for a large proportion of research costs, and the university resources so used must come from somewhere (whether gifts from individuals, income on assets, state budgets or tuition paid by students).

PUBLIC INTERESTS

Now, what does the discussion of who pays for research tell us about who *should* benefit from university-based research? First and foremost, the answer must be ‘the public’. The public pays the biggest part of the costs directly through government transfers, and significantly more in indirect ways such as tax exemptions. The public pays the cost, moreover, not only of public institutions but also of most of the research (and a good part of the other expenses) of private ones. In addition to government funding, many of the privately administered sources of funding operate as public trusts. Tax exemption is one crucial way, for example, in which private foundations take on a public obligation. Not least of all, when private firms contract for university-based research they often do so at a discount compared with internalizing such research, since they aren’t usually charged for the cost of the university itself, but only for additional research expenses, and they aren’t obliged to maintain long-term employment for the researchers.

But the main question is ‘how does the public benefit?’ It is easy to say that because the public bears so much of the cost of university research – and of the existence of research universities – it should benefit. It is considerably harder to say how this should happen and especially to adjudicating competing claims. Tax laws typically specify only that to be exempt a nonprofit organization (foundation or university) must serve the public good and operate in ways not primarily for the benefit of its own members. They don’t specify whether the public must be broad or narrow, or be served just a little or in fundamental ways. Universities need to ask these questions.

The public benefits first of all through a generalized interest in knowledge. Call this the Enlightenment promise: real knowledge is eventually, somehow, good for humanity as a whole. I believe this, but I think the 'eventually' qualification is severe, and in the meantime the benefits to knowledge can be extremely unequally distributed. As beneficiaries of the public trust, universities have an obligation to limit this inequality.

There is a tension in the behavior and self-understanding of research university faculty in this regard. On the one hand, we are constantly engaged in sharing as well as producing knowledge. We share in our teaching, in collegial conversation, in publication. On the other hand, we also engage in hoarding and accumulation. We store knowledge in inaccessible academic journal articles written for the approbation of a handful of colleagues or simply for a line on a vita. We treat our opportunities to do research not as a public trust but as a reward for success in previous studies, and we treat the research itself too often more as a new examination to pass in order to enjoy additional career benefits than as an opportunity to benefit others. We rely on vague notions of the 'accumulation' of knowledge to justify research that often lacks much point (beyond its place in individual careers or institutional prestige) and we denigrate research oriented to practical social problems or current public discourse as less than 'pure'. Too often we invest heavily in the autonomy of disciplines at the expense of both the advance of knowledge in interdisciplinary projects and the circulation of knowledge more widely.³³ In any case, too much research is undertaken for purposes of advancing or reproducing prestige and standing – of universities as well as individuals – rather than for more beneficent purposes.

We should be clear about this – that our motives are not quite pure – before we react with outrage to incursions of for-profit funding or for-profit organization of academic work. Indeed, the sociologists Walter Powell and Jason Owen-Smith observed that scientists in university labs were more prone to 'hoarding' equipment and expertise than scientists in industrial labs (Owen-Smith and Powell, 2001; Powell and Owen-Smith, 2002).³⁴ This gets in the way of both individual and collective productivity (this is a field in which articles may cite dozens of authors – making them hard for individuals to 'own' in the way university tenure committees like). The difference could be due to such simple facts as the incentives stock options gave those in industrial labs for the success of the whole, but even so it ought to give defenders of universities pause. Surely, after all, the academic scientists also share a commitment to the advancement of scientific knowledge in general and their universities in particular (don't they?).

The problem here is not that university-based researchers are singularly selfish or greedy. It is that research and the rewards for research are deeply tied up with the production of an academic hierarchy – not just with the advance of knowledge for all. This hierarchy is important not only in individual careers but in the relative standing of institutions. It is tied

moreover to the rewards students will receive in return for their tuition dollars and degrees earned. The reputation of research universities translates into prestige for their graduates and this cultural capital can often be traded in for jobs and financial returns. But, these are distributed on the basis of selective admissions, not only successful studies. Universities support research partly because it pays off by enabling them to attract more and 'better' applicants. Depending on admissions policies and scholarship aid, they may choose students in ways that open new opportunities for previously less well-educated groups, but they cannot simply be egalitarian. If this is true, though, surely it obliges this university-consecrated elite to take on still more obligations to the public? Yet the very ideology of individual achievement and meritocratic admission may undermine this, may encourage each member – faculty or student – to treat his or her access to special publicly supported resources as no more than his or her due. In fact, the very availability of this elite status is due in large part to the dramatic inequalities in funding available to institutions at different places in the academic hierarchy. In short, people get to be elites not just because they are good – even if they are – but because there is a system that offers those elite positions and preparation for them.³⁵

Nonetheless, scientific fields depend on their capacity to produce legitimate authority. This means on the one hand that they have incentive and reward systems which reward genuinely superior performance and on the other that they constitute critical public spheres in which truth-claims are examined and contested and data shared. Proprietary funding and concentration on potentially lucrative intellectual property rights challenge both the normative ethos and the practical operations of science and scholarship when they restrict or inhibit publication and sharing of evidence. In Robert Merton's words, 'The communism of the scientific ethos is incompatible with the definition of technology as "private property" in a capitalistic economy' (Merton, 1968: 612). Of course, there are also advantages to funding based on intellectual property rights, so this produces a tension within the system, not necessarily its collapse. And there are a range of other challenges to effective public communication – from escalating costs of journals and financial crises at university presses to slow institutionalization of effective quality control on the Internet. Likewise, calls for the public engagement of academics – and academic fields, as in 'public sociology' – need to confront the question of whether this is to come on the basis of genuine scholarly or scientific competence, and if so, how authority is achieved and assessed.

Central to any successful development of a scientific or scholarly field able to inform public affairs with knowledge is the development of field-specific processes of communication and critique – including what Merton called 'organized skepticism'. As philosophers of science from Peirce to Popper have argued, processes of refutation and correction are as important as confirmation. This is true for science as a whole, and for more specific

fields, and for the production and legitimation of both deterministic expertise and contributions to practical judgment. For effective public engagements to work, in other words, scientific fields need internal, self-correcting communication. And for these to work, the 'members' of universities – especially students and faculty – have important claims to control (and to share in the benefits of) their work. They have straightforward claims to the extent that they perform the research itself at some cost to themselves. They also have another and more complicated claim simply insofar as they are legitimate and fully participating members.

Universities exist in significant part as intellectual communities. Students contribute to these in ways that go beyond tuition payments, and faculty in ways that go beyond their teaching of or accomplishments in specialized fields. Both students and faculty members contribute by entering into processes of inquiry and intellectual engagement with each other. Discourse across the boundaries of disciplines and subfields is crucial, not least for challenging both intellectual and ethical blindspots. To support this, as well as their individual research, faculty and students have reasonable claims on core facilities, such as libraries and gathering places. They also have reasonable claims on each other – a classicist to be able to ask a question of a computer scientist, for example, or a biomedical researcher to ask a sociologist to help improve approaches to studying community level effects. The point is important, not least because this kind of intellectual sharing is a distinctive part of what it means to be a university and of the reason why universities are effective producers of high quality and high creativity research. Absent this kind of mutual engagement, universities lose a significant comparative advantage in relation to other kinds of research organizations.

Finally, investors and donors clearly have special claims on the benefits of research. However, these claims need to be mediated through attention to the public claims. By benefiting from what amounts to 'outsourcing' research to a tax-exempt and/or publicly supported institution, private investors take on a special obligation to make the benefits of that research reach a broader public than their own shareholders, managers, or employees. Something like this issue is raised with private donors when administrators tell them that their gifts are welcome only if they support the culture of inquiry characteristic of the university – and thus, for example, that they cannot narrowly dictate who will hold endowed chairs or what they will study. Where the right boundary falls for proprietary research is still being worked out. My point here is that the claims of investors – including corporate ones – are legitimate, but that they are not unqualified.

This takes us back to the ideal of the university as a kind of community. The ideal is often stated, and the realities generally run contrary to it. The scale and differentiation of universities, the cost of scientific research, the extent to which successful faculty careers require mobility, the power of disciplines over appointments, tenure, and rewards all militate against

intellectual community. While the coherence of universities depends on cross-subsidies and collaboration among their units, the logic of 'profit-centers' and autonomous appeals to private donors and markets for students militates against both financial and intellectual sharing. In fact, research can be one of the common interests able to draw members of modern, complex universities together – but this is most true when it is matched by intellectual discussion, when it reaches beyond narrow subspecialties, and when it is not narrowly harnessed to the production of specific products. Though this is possible, it is not the current trend. Rather, the internal differentiation of universities is deeply disuniting.

CONCLUSION

Professors tend to think universities exist naturally, or as a gift of history, in order to employ them. Somewhat paradoxically, this is at least as true of 'progressive' critics of the status quo as of conservatives anxious to restore an imagined golden age. And it has a significant part of its basis in a curious mixture of aristocratic notions of class privilege and meritocratic self-understandings of those who did well on exams. Most academics, in other words, believe they deserve their university jobs on the basis of their previously demonstrated merit. They may acknowledge that their capacity to demonstrate merit – to get good grades as children, top exam scores as youths, or write dissertations as young adults – is in fact partly the result of class privilege – from the cultural capital their parents provided them to their good fortune to live in countries or communities that afforded them access to strong secondary schools and universities to the economic position that afforded them the leisure – or at least freedom from immediate economic necessity – to pursue graduate study. But they – we, I am not exempt – are likely to acknowledge these in a vague critique of global inequality while understanding themselves mainly in more individualistic terms as those entitled to favor because they did well.

Those who pay the bills commonly have other ideas. Those other ideas have ranged from saving souls to illuminating the secrets of nature to supporting economic development and helping young people get better jobs. Obviously the agendas overlap. Professors too think universities are for education, research, and the public benefit. But, professors tend to think that by virtue of their previously demonstrated merit, they deserve a privileged and largely autonomous control of the agenda. And as it happens, I think it is important for professors to have partial autonomy and significant leadership in (if not quite control over) the academic agenda. But the reason is not simply 'merit'. It is that some such level of autonomy is necessary for the field of higher education to function well and deliver the products that make it valuable to society at large. Put another way, professors deserve their positions not so much because they got great exam scores as because they

do great work – and to the extent that they actually do such work. The privilege of academic careers is not a reward for prior achievements, it is an opportunity for future contributions. Prior achievements are relevant to the extent that they are good predictors of future contributions – which is no doubt considerable. But the rationale is important: it is the anticipated productivity which justifies the financial and other support.

This productivity, moreover, depends on the larger social institutions, not simply the brilliance or other merit of individuals. It depends on a variety of support systems, of course, and also on collaboration. It depends on historical continuity, which allows present generations not only to stand on the shoulders of giants, but to contribute to processes of incremental improvement in knowledge and to participate in the continual corrections of course that make the development of knowledge in many fields resemble a zig-zag as much as a straight line (whether or not punctuated by revolutionary breakthroughs). Not least of all, the productivity of academe depends on the extent to which it is internally organized as a public sphere – with a set of nested and sometimes overlapping public discussions providing for the continual critique and correction of new arguments and tentatively stabilized truths. Peirce famously described scientific truth as what qualified scientists believed after adequate publication and debate. The general idea holds for other fields, though, including the humanities and a large part of professional knowledge. A key question should be what enables these disciplinary, subdisciplinary and interdisciplinary public debates and that larger public sphere of academe to work.

The answer must lie in the organization of academic institutions and academic work in fields which provide plausible boundaries to these critical debates, but boundaries which never allow for more than partial autonomy. There must also be boundary-crossing: physicists must sometimes question chemists, sociologists must sometimes question economists. There are normative structures that govern the transactions within and across the boundaries. These include broad norms like disinterest but also more specific ones, like gaining the necessary technical and conceptual tools to enter intelligently into the relevant debates and mastering the existing literature well enough to avoid reinventing it. Fields and subfields that police their borders too well are apt to become stultifying and to imprison their members within established paradigms increasingly ripe for challenge. Conversely, fields with no borders are apt to be overrun, like farms invaded by unsought plants. And so too the university system as a whole: if its walls are too strong, it risks becoming irrelevant or having those who control its resources decide externally on how it should change. But if advice simply to break down all the walls is heeded, universities risk losing their capacity to organize long-term intellectual agendas instead of short-term responses to immediate questions, the possibility for academics to speak with authority within specific fields of competence, and the basis for the internal public discourse aimed

at the continual correction of errors and improvements of understanding that gives participants an incentive to put the pursuit of truth ahead of the mere desire to use knowledge in other enterprises.

Universities are widely caught between populist calls for access even at the expense of intellectual authority and self-interested pursuit of prestige, both as an end in itself and as a basis for privilege and profit. It is a serious question whether a way to balance excellence and access is available – given not only the tension between the two but the debased understanding of the former. Yet though hierarchy may be inevitable, it is being produced in excess and both driving up costs and distorting missions.

My point is not to castigate professors for the self-interested misrecognition common in their understanding of academic institutions. Nor is it to support all the claims of those who think universities should exist mainly to support only marginally intellectual ends from economic development to narrow job-skills training. Rather, what I want to suggest is that the academic self-understanding – the class consciousness of professors – has inhibited adequate recognition of major transformations in universities, higher education and the production of knowledge, and has stood in the way of focusing attention on the public purposes of universities – which are in fact those most likely to secure legitimate academic values for the future. In other words, it is neither the private goods claimed by students, employers and commercializers of intellectual property nor the private goods claimed by professors and researchers that legitimate the university enterprise.

The transformation currently underway cannot be explained simply as an ‘attack’ on universities by short sighted politicians (though this does happen). It is complex, and driven by a variety of social forces. It is not being steered by the government, though shifts in government funding, especially at the state level, occasion some of it. It is not being steered by business, though commercialization of research and application of business models to higher education are among its central components. It is not being steered by philanthropic foundations, though such philanthropy can play a role in making sense of it and developing good responses to it. No one is steering, though many have a stake in the institutions and some try to take advantage of the changes. And lack of steering doesn’t mean the change is directionless.

One direction of change seems clear, even if its causes are complex: public funding is playing a proportionately smaller role in elite research universities. Universities are not becoming cheaper, however, but rather still more expensive, not least because they compete with each other in an academic field in ways that reward investments in expensive research. Universities depend increasingly on private funds, and are organized to secure them in several different ways from student fees, endowment gifts, to corporate investments and marketing their own intellectual products. In this context, it remains clear that there are enormous public benefits to what universities do, but it is much less clear how to organize public investments

or academic practices to secure the greatest possible public benefit. It remains clear also that public communication among scientists and scholars is vital to their intellectual achievements and capacity to offer public benefits, and that this is needed both semi-autonomously within scientific fields and in much broader public forums. But the conditions for such communication are in upheaval with rising costs for print publications, slow institutionalization of quality standards on the Internet, and inhibitions from the pervasive pursuit of private intellectual property rights.

In short, for universities to be effective institutions for the public good, we need not merely a defense of old habits or an embrace of new trends. We need a stronger analysis of how universities can be public, how funding shapes possibilities, what kinds of benefits can be achieved, how they are distributed, and perhaps most basically, how this can be addressed reflexively, in public discussion both within universities and on national and international levels.

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Notes

1. In the US, for-profit universities have argued with increasing success that they should be entitled to equal treatment with nonprofits, including in all federal aid programs. This is a key feature, for example, of House Resolution 609, which was pending as this article was written in 2005 but appeared likely to pass into law.
2. Commercial funding of academic research is getting more and more attention. For a sample of views see Bok (2003), Geiger (2004), Kirp (2003), Krinsky (2003) and Washburn (2005).
3. Indeed, the pivotal early 19th-century US Supreme Court case establishing limited liability for corporate board members was *Dartmouth College v. Woodward* in 1819.
4. On questions of who is in charge at modern universities, see Ehrenberg (2004).
5. This is not only a matter of heteronymous control, but of new, mostly hierarchical, internal managerial mechanisms. Jacques Barzun, Provost of Columbia University as the student protest movement grew, made an explicit call for reliance on professional administrators: 'If caught young, such men can become top civil-servants and be accepted as professionals without being scholars; they can enjoy a prestige of their own and share fully in the amenities that are widely believed to adorn campus life; and they can do more than any other agency, human or electronic, to render efficient the workings of the great machine' (Barzun, 1968: 19).
6. Some but not all of the former are public goods in the specific economic sense that consumption of them is difficult to restrict and/or easy to extend without diminution in value. There is no reason to think that goods that are public in this sense are the only goods the public seeks from institutions or markets.

7. This 'ethos of science' was classically evoked in Robert K. Merton (1968 [1942]).
8. There has recently been a wave of calls for more publicness in social science. These have been especially significant in anthropology, history, political science and sociology, and have involved the founding of new journals, attempts to make scientific reward structures respond better to achievements in public communication, and challenges to established disciplinary hierarchies. See my comment in Calhoun (2004). Perhaps the most developed advocacy has been Michael Burawoy's promotion of an agenda for public sociology. See his presidential address to the ASA (Burawoy, 2005). There has been an active discussion of this theme in the *British Journal of Sociology*, among other places, with a set of comments on Burawoy's agenda and the broader project in two 2005 issues.
9. As I indicated above, the oppositions are not always matters of material necessity; the seeming contradictions are sometimes false oppositions produced by faulty intellectual frames or the influence of other political purposes.
10. Critics ask whether rational-critical discourse and the vision of the informed citizen are adequate for understanding the role of the public sphere, and charge that Habermas neglected other aspects of public communication and citizenship that are important to democracy (see Calhoun, 1992; Schudson, 1996; Warner, 2001). Similar questions can be asked about centering an account of higher education on knowledge. Isn't it equally about adolescent socialization, for example? My own sense is that this is clearly important, in ways that vary across the institutions within the field, but also that it is not the basic principle on which the field is organized, the institutions related to each other, or the autonomy of the field defended. But of course it and other dimensions must be part of any full account of higher education.
11. In *The Structural Transformation of the Public Sphere*, Habermas does not take up the other tension I will describe below, between expert knowledge of deterministic processes and knowledge that informs personal or public choice, a complication which I think is significant in the public sphere at its broadest, as well as in academe. In later work, Habermas (e.g. 1971) does address the status of expert knowledge.
12. Readings (1996) sees a sharp transition from an earlier 'university of culture' closely allied to the state (but not simply one of its 'ideological apparatuses') to a 'university of excellence' operating as a business corporation. The decline of the nation-state in favor of capitalist globalization produces the transition. Readings' account is well-formulated to elucidate the changing situation of the humanities within universities, his primary object, save for an underestimation of the significance of religion in the 19th century and an overestimation of the fading of the nation-state in the late 20th century.
13. Sometimes fateful decisions were accordingly made as to what fields of study fit where. America underwent debates analogous to the more familiar German *methodenstreit* and similarly distinguished (I think misleadingly) particularizing from generalizing disciplines. An important American decision, for example, was to locate religion among the humanities on the grounds that it was a field of scholarship about the past, about morality, and about ostensible timeless truths, none of which could be verified with the methods of science. See Reuben (1995).

14. A different version of multi-campus integration developed more recently through consolidation of institutions in Australia. Just as plans for the University of California were tied to mid-20th-century agendas of growth for the state, so more recent redesign of Australian higher education has been closely linked to economic growth agendas (see Marginson and Considine, 2000).
15. One of the biggest differences among national patterns is that not all locate research comparably in universities. The Soviet model, still influential in several countries, thus approached universities mainly as teaching institutions and located research – and especially the most valued researchers – in separate academies. Non-university state-financed research institutions are important in varying degrees in Continental Europe and elsewhere.
16. The ‘Bologna process’ of constructing a European model for higher education thus shows substantial influence of the American model. But the ‘American model’ is an abstraction that often neglects some distinguishing features of American higher education – like the roles of sports, alumni giving, and on-campus residential experiences (see Calhoun, 2000).
17. Daniel Bell’s (1974) account is classic. See also Delanty’s review, which suggests that ‘in the terms of Castoriadis, the university is the “imaginary institution of society”’ (2005: 530). For extended consideration of this notion, see Hallpike (2004).
18. Performance itself can of course be measured in many ways. But selecting the most able students helps universities both by providing for positive ‘peer effects’ on other students and by providing the likelihood of stronger post-graduation achievement regardless of other factors. Both points are stressed by Geiger (2004). In addition, stronger students may indirectly support faculty research by allowing professors to teach at a higher level, closer to their research.
19. The distinction between expert knowledge of deterministic processes and practical knowledge to inform decisions is not the same as that drawn in the *methodenstreit* between nomothetic or universalizing and idiographic or particularizing disciplines, though it is not completely unrelated. For a discussion related specifically to sociology, and indicating why I think the terms of the *methodenstreit* are misleading, see Calhoun (1998).
20. With different contrasts in mind, Andrew Abbott (2001) has informatively analyzed the ‘fractal’ character of distinctions among and within academic disciplines.
21. My usage of the notion of ‘field’ is indebted to Pierre Bourdieu (1988, 1996). Bourdieu analyzes fields as relatively bounded structures of relations and practices (positions and position-takings) based on distinctive forms of capital including claims to authority of one kind or another.
22. This applies to specific fields within academe as well as to the university field as a whole. Calls for public sociology, thus, rightly distinguish mere dissemination of scientific findings from engagement in public issues that informs as well as being informed by sociology. But if sociology is only a style of argumentation or analysis or advocacy and not a field with some authoritative knowledge, then it offers less to the public. Sociologists are valuable in public discourse because the field sustains claims to knowledge, which means regarding some as better founded than others. This predisposes the field to

- hierarchy, though of course there may be excess hierarchy beyond any grounded in the actual work of the field. See brief discussion in Calhoun (2005).
23. This section is especially heavily influenced by trends in and examples from the United States; there is less comparative research than one might hope, but see Clark (1995).
 24. The data are for those institutions – the vast majority – whose students are eligible for federal financial aid.
 25. See the discussion and summary of the literature in Geiger (2004: ch. 3); studies by Caroline Hoxby, Morton Shapiro, and Michael McPherson are especially telling. See also Zemsky, Wegner and Massy (2005), and see Kirp (2003) for case studies of how the marketing of higher education works at different universities.
 26. See Hoxby (1997) and Winston (1999). For analysis of higher education markets in a different setting, where student fees are less pivotal, see Marginson (1997, 2004).
 27. Such markets are characteristic of what Frank and Cook (1995) have called ‘the winner-take-all society’.
 28. For example, the *Times Higher Education Supplement* World University Rankings and the rankings from the Institute of Higher Education at Shanghai Jiao Tong University. Both of these are heavily weighted towards the sciences, the latter extremely so.
 29. Such complaints often understand research as the pursuit by academics of their own interests (rather than the good of their students). They typically neglect the extent to which the entire system is oriented to produce ever-more research and demand it of academics as a condition of promotion or other rewards.
 30. It is also noteworthy that the Novartis investment did not pay off handsomely enough to save the firm from financial crisis – and that its rights to Berkeley research were sold on the open market to another firm. The Berkeley-Novartis story is told in both Washburn (2005) and Kirp (2003).
 31. Speech to the Emory University conference on ‘Philanthropy and the Research University,’ 15–16 April 2002.
 32. Specific financial arrangements vary; a typical pattern at elite private universities is for graduate students to be funded for four or five years, receiving stipends of \$12–\$25,000 and tuition waivers of \$20,000–\$35,000. They may be required to teach some or all of those years, usually one course (or half the load of a faculty member who would also have other responsibilities). This means a notional payment of \$16,000–\$30,000 per semester-length course. Universities do not necessarily place the students’ best interests uppermost in their decision-making – collectively they often admit more students than job markets will support – but what drives their investment in graduate students is competition with other universities for prestige.
 33. It is commonly noted – classically by Jencks and Riessman (1968) – that faculty members often identify with their disciplines more than their universities, partly because mobility and pay are based more on disciplinary recognition. Teaching excellence thus tends to be recognized only locally, if at all, while research prestige travels. In addition, I think faculty members experience disciplinary associations as affirming the value of their research investments in themselves and experience their employing universities as presenting constant demands for greater ‘usefulness’ in teaching, public service, or fundraising.

34. They also stress how intertwined the public and private dimensions of science now are.
35. See, though the French context is very different, the important work of Pierre Bourdieu (1988, 1996). A further question is whether 'knowledge for its own sake' ought to be the justification for all academic work. To a considerable degree, this is the necessary legitimation and pursuit of the scientific field. The internal standards of the scientific field are pre-eminent in establishing prestige for its members. But it is not clear that all the activities of even a research university should be organized on this basis. It may be appropriate, for example, for the education of teachers, lawyers or other professionals to be valued and organized in ways that reflect this criterion as only one of many. Their knowledge is important, but advancing it for its own stake ought presumably not to get in the way of other dimensions of professional preparation (including the distribution and reproduction of more 'basic' knowledge, including more or less tacit 'know-how').

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