Eyes Wide Shut: university, state and society

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ABSTRACT The article seeks to explain why the ties between industry and university are reacted to in different ways across the Atlantic. The modal European response is one of concern while the modal response in the United States of America is more optimistic. Some sociological explanations emphasize how differences in historical legacies explain persisting differences in what constitutes universities and why these differences in turn explain differences in sensibilities toward university industry links. These explanations indicate that the historical legacy of greater social embeddedness makes American universities more open to multiple external influences, including those rooted in industry. An alternative sociological perspective suggests that the weight of historical legacies is increasingly offset by the authority of a common world frame that defines what constitutes a university. More broadly, world models of progress and justice and their enactment to attain viability and probity as universities leads to common university blueprints. These blueprints become a core feature of the transnational organizational environment within which universities are increasingly situated. The first set of explanations seeks to make sense of persistent differences between European and American universities; the second focuses on growing commonalities.

Introduction

This article seeks to explain why the ties between industry and university are reacted to in different ways across the Atlantic. I start from the premise that the modal European response is one of concern while the modal response in the United States is more optimistic. By modal response I have in mind the response of both administrators and academics, a discursive as well as a practical response. Of course, there is much within region variation, but in general the European response involves a sense of risks and costs and an opportunities and benefits frame is more likely to characterize the American response. This contrast is especially evident when we look at European
countries where the German model of the university prevails. This article does not pretend to ascertain which general response makes better sense, but rather, seeks to explain differences in sensibilities. To explain these differences, one set of sociological explanations invites us to think about differences in historical legacies and ‘thick’ local cultures and the extent to which organizational age and path dependency accounts of university differences are implicitly contingent on the power of historical legacies and ‘thick’ local cultures. The latter explain persisting differences in what constitutes universities and these differences in turn explain differences in sensibilities toward university industry links.

A key argument in this article is that American universities are more likely to historically develop as universities embedded in civil society while European ones are more likely to be buffered from society and linked to the state. The greater level of social embeddedness involves greater ties with industry but also with other sectors and groups in society. These differences in historical legacies correspond to differences in the organizational paths universities undertake. Taken as a whole these differences explain why university industry ties are more likely to horrify European academics while their American counterparts worry more about state controls over higher education.

But, if in fact universities differ less so than they did historically and if the differences in sensibilities likewise decline, an alternative set of explanations is required, one that suggests that the weight of different historical legacies and organizational paths is offset by the authority of a globalized common frame that defines what constitutes a university. Instead of organizational age and path dependencies as explanatory tools, one is inclined to think in terms of common organizational environments and pressures toward institutional isomorphism. World society theory postulates that nation-states and educational organizations are attuned to common world models of progress and justice and the organizations and experts that carry and articulate these models. Their enactment to attain probity as nation-states or as universities results in an unprecedented level of political and educational isomorphism (Meyer et al, 1997) These common models or blueprints become a core feature of the transnational organizational environment within which universities are increasingly situated.

A second key argument is that universities increasingly operate within a transnational environment and this environment influences changes in universities. Attuned to the rationalizing pressures that stem from world models of progress and justice, universities undergo similar changes in their enactment of the modern university. Much of this is discussed within the limited lens of economic globalization. But a much broader rationalization is in motion, one that emphasizes science for progress and equality cum justice. It is this broader rationalization that influences what constitutes a university. Net of other factors, the older and more prestigious European universities are more likely to symbolically resist change even as they organizationally
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transform themselves in similar ways. The first argument seeks to make sense of persistent differences; the second accounts for growing commonalities.

In exploring the logic of historical legacies, I rely in part on a reading of Ben-David & Zloczower’s paper, ‘Universities and Academic Systems in Modern Societies’ (1962). An equally idiosyncratic reading of DiMaggio & Powell’s ‘iron cage’ paper in part guides the articulation of the logic of institutionalization. Much of my own comparative work on education has emphasized the degree to which nation-states, which vary enormously with respect to economy, demography, polity, religion, and other endogenous characteristics, increasingly march to the beat of the same transnational drummer and look similar to each other with respect to education (see Ramirez & Ventresca, 1992 for a depiction of world trends; Ramirez, 1997 for an update and Meyer & Ramirez, 2000 for the most recent statement of the world institutionalization of education perspective). Throughout much of this work though, it is acknowledged that one should expect to find greater isomorphism with respect to mass schooling and less with respect to higher education. That is the case, I have argued, because mass schooling emerged as a nation-state project and not prior to the rise of the nation-state, while some universities in some countries predate the rise of the nation-state by centuries. More precisely, some universities emerged in geopolitical spaces that were not constituted as nation-states in an era that was not characterized by homogenizing nationalism (see Rashdall, 1964 on medieval universities).

So, while I do not launch this study with a theoretical blank slate and I do expect to find growing commonalities, some persistent differences are also to be expected. Later, I shall argue that these differences are most likely with respect to the older and more prestigious European universities, Oxford, for example. However, even these universities undergo some changes that will make them look more like other universities. Lastly, I assume that we shall observe more changes in the formal organization of these universities than in their institutional charters (Meyer, 1971) and sagas (Clark, 1970). The persistence of the latter partially accounts for persistence in sensibilities; modernization and its discontents at Oxford shall briefly be discussed later to illustrate the gap between organizational and institutional change. The modernization of Oxford and Oxford sensibilities toward links between university and industry is contrasted with the situation at Stanford and its outlook toward university industry links.

Though I shall limit this article to university industry ties, it is misleading to maintain so narrow a focus. American universities, I contend, are and have always been more open to industry for the same reason that they are and have always been more open to other influences from civil society. The crucial dimension is university openness to all non-state influences rather than just the degree of business influence over universities. Non-state and non-business influences stem from local associations of all sorts and from local and broader ethnic and religious groups as well as from foundations, and more recently, from women, ethnic groups, environmentalists, etc. Both Ben-David &
Zloczower (1962) and Flexner (1930) recognize the socially embedded character of American universities in contrast to the socially buffered nature of their European (especially German) counterparts. In both assessments the issue is not solely the detection of where the funds come from but also what constitutes valid university teaching, research, and related activities. What constitutes a legitimate body of university generated or transmitted knowledge is as much an axis of differentiation between European and American universities (see Stichweh, 1999) as is the question of who underwrote the research or scholarship that gave rise to the knowledge. Curricular and funding issues are thus both relevant to this inquiry. So is the question of whether the public goals of universities are compatible with private funds and non-state influences. The debates often highlight issues of organizational autonomy, disinterested scholarship, and public service.

Universities, the voice of moderation whispers, are both historical creatures and contemporary enactors of world blueprints. The general research question is thus to ascertain the degree to which historical legacies and distinctive traditions prevail relative to the homogenizing influence of common models of what constitutes a university. But it is not fair to raise this question without candidly recognizing that one set of homogenizing dynamics are well underway. I refer to the worldwide expansion of higher education, a striking empirical phenomena.
Figure A traces the growth of tertiary enrollments as a percent of the appropriate age cohort between 1965 and 1995, for all the Western countries (N=21) for which there is information on this variable as well as for all non-Western countries (N=64). For both sets of countries the pattern is one of growth. In the West the national average tertiary enrollment ratio soars from 10 to nearly 45% in three decades. In this Figure 'The West' includes Western European countries and the United States, Canada, Australia, and New Zealand. The similar trend for non-Western countries involves an increase from a national average tertiary enrollment ratio of less than 5 to nearly 15 percent. The gap between the Western and non-Western countries increases during these three decades. However, to put these trends in perspective, note that by 1995 the non-Western world has surpassed the Western world of 1965 as far as the level of tertiary enrollments is concerned. Debates about what constitutes a university and what is the appropriate response to university links to industry take place within the broader world context of accelerated entry into higher education institutions including universities. Universities themselves grow during this period and in the West the growth is from a national average of 20 to 31 universities. (The United States is not included in this comparison because it is an outlier and its inclusion would inflate the Western national average.) For the rest of the world universities grow from a national average of 6 to 11 universities during the same period. The pivotal character of higher education degrees in a broad range of stratificational outcomes in Western Europe and in the United States (and elsewhere) is well-established (Blossfeld & Shavit, 1992). All sorts of life chances are contingent on obtaining a higher education degree. The certificational society has become a reality in much of the world and it is a highly legitimated reality as well as a source of legitimacy itself. That is, there is less contentiousness over occupational allocation based on educational certification than the uses of alternative allocation mechanisms such as family background and occupational inheritance or party membership and political appointments.

The broader context also reveals differences in the trajectories of different academic majors or fields of concentrations in higher education. Figure B reveals a pattern which shows growth in social science enrollments and decline in humanities enrollments as percentages of total tertiary enrollments. This pattern is strikingly similar for both the Western (N=21) and non-Western countries (N=64) for which there was data. The world context thus involves overall growth in enrollments, a general demystification of what was once an elite humanities enclave and the ascendancy of the social sciences. The latter includes business studies but also economics, sociology, political science, and a range of newer ventures such as women's studies. (Drori & Moon, 2002; see also Frank & Gabler, 2000 for similar trends regarding the faculty compositions of universities; their study shows the relative ascendance of the social sciences and the relative demise of the humanities faculty.) The ascendancy of the social sciences involves further demystification, that is the sociology (or pick your favorite social science
demystifier) of art, religion, law, culture, and knowledge itself. Much of this
demystification is celebrated as progress and justice in action in the United
States (but see Shills, 1971). I shall later clarify why the demystification as
progress and justice interpretation is more prevalent in the United States.

With few exceptions, American universities emerged not only as more socially
permeable organizations (the Ben-David and Zloczower thesis) and as less
under central political authority (again the Ben-David and Zloczower thesis),
but also as universities expected to be engaged in the business of society and its
upgrading. To be sure, American universities were more open to business
subjects earlier on but also to engineering, the social sciences, computer
science, women’s studies, ethnic studies, ecological studies, etc. On the
contrary, with few exceptions, European universities were expected to be
more distant from society and more linked to high centers of canonical
knowledge and value, to the institutions of Church and State, for instance.

Today, however, European universities increasingly hear and heed the
transnational drummer that favors the socially embedded university and move
in this direction as well. The declarations of 29 European secretaries of
education constitute the most recent embodiment of the transnational
drummer (see Lenhardt in this volume for a discussion of the Bologna
Declaration.) But an enormous amount of prior discourse favoring the socially
embedded and more open university has piled up in international
organizations and conferences, the carriers of world models of progress and
justice. Not surprisingly though, yesterday’s sensibilities are more likely to be
articulated with European accents protesting the Americanization associated with university/industry ties. From these sensibilities university/industry ties constitute a degenerative condition called academic capitalism (see Slaughter & Leslie, 1997; Press & Washburn, 2000 for American expositions of European sensibilities). From other sensibilities these specific outcomes are associated with broader dynamics which also generate higher educational expansion and its demystifying ramifications. Curricular innovations, whether approved or disapproved, are more likely when canonical authority declines or was never crystallized in the first place. Curricular innovations are more likely when choice of field of study is presumed to be a matter of individual taste.

In what follows I reflect on the general research question by considering the main themes in four books. I do not pretend to summarize or review these themes in depth. My more modest goal is to use aspects of these themes as these relate to the general research questions. These books are: Burton Clark (Creating Entrepreneurial University, 1993), Bill Readings (The Universities In Ruins, 1996), Joseph Soares (The Decline of Privilege: the modernization of Oxford University, 1999), Rebecca Lowen (Creating the Cold War University: the transformation of Stanford, 1997).

Entrepreneurial and Excellent?

As government funding for universities decline, universities face a choice: exit or seek alternative sources of funding. This is the starting point of Clark’s description and celebration of the heroic efforts of five European universities to adapt to their changing fiscal environments. These efforts include revamping curricula, identifying programs of interest to industry (and the broader community), securing multiple sources of funding, and learning to manage resources with greater effectiveness. The internal organizational dynamics varied across these universities, but according to Clark, the common outcomes included a sense of revitalization, an expanded resource base, and less dependence on a single source of funding. Clark asserts that all of this was achieved while actually strengthening the academic heartland of the university. No zero-sum games are involved; no Faustian pacts are required to survive.

Whether this optimistic account squares with the evidence is not an issue this article addresses. I suspect country specialists will not be of one mind in assessing the merits or shortcomings of the entrepreneurial five: Warwick (England), Twente (Holland), Strathclyde (Scotland), Chalmers (Sweden), or Joensuu (Finland). But the optimistic account is not idiosyncratic. It is consistent with the opportunities and benefits frame that reflects the historical legacy of higher education in the United States. It is consistent with administrative discourse in American universities today (see Gumpart, 1997 for a critique). American administrators take for granted Clark’s observation that universities are expensive and that good universities are very expensive. Moreover and more importantly, some protestations to the contrary
notwithstanding, American administrators assume that the pursuit of the common good can be promoted through both public and private funding. Competition for both sources of funding characterizes higher education in the United States. To illustrate this point, note that the public University of California pursues local, national, and multi-national private sources of funding just as the private Stanford University seeks public funds from federal and state agencies as well as support from private sources. The European distinction between clean public and dirty private sources of funding for universities is mostly ignored in the United States.

Multiple sources of funding, Clark argues, should lead universities to be more autonomous since they will become less dependent on any one source of funding. (See Emerson, 1966 for an early formulation of this power/dependency idea.) For the same reason successful entrepreneurship will make the departments and other organizational sub-units within universities more autonomous as well. That is, these sub-units will not be dependent solely on university funds for their maintenance and development. Though Clark never advances his thesis as an American solution to European woes, it is not difficult to see that the entrepreneurial university could look alarmingly American to European eyes. This reaction has clear roots in European historical legacies which both situate universities outside civil society, assume public block funds as a right, equate the public character of universities with public or civil service status for professors, and view private funds as undermining organizational autonomy and thwarting academic freedom.

Academic freedom, of course, can be compromised by power as well as money. Fascist and Communist regimes can undercut academic freedom with at least as much efficacy as academic capitalism. Moreover, recent scholarship raises questions about whether academic freedom as an individual right of university professors was ever the ideal, much less the practice in German universities. Lenhardt (in this volume) argues that academic freedom was a right of the university professors functioning as an academic estate in Germany and that this estate was less than tolerant of individual expressions of academic freedom. There is of course much variation within Europe as regards academic freedom, as is also the case within the United States. One can even argue that historically individual academic freedom was more established in English than American universities (Ben-David & Collins, 1966).

My point is not that academic freedom flourished more so in the United States than in all of Western Europe, only that there are multiple sources of threat to academic freedom. These include the state as well as the market and the latter includes business as well as other interests. The entrepreneurial university shocks many Europeans; Americans are just as likely to be dismayed by the university as servant of the state (and in earlier eras, of state churches as well). But from a European perspective the link between university and state is given primacy, since from the nineteenth century onwards universities became the main laboratories of nationalism. Might not forces that sever this link
result in undermining the raison d'etat for the modern university? That is the question Readings addresses in his book.

**Excellent and in Ruins?**

While Clark offers no explanation as to what forces lead universities to scramble for funding beyond the state, Readings (1996) emphasizes the detrimental character of globalization. Economic globalization increasingly makes the nation-state irrelevant insofar as the market knows no boundaries and increasingly all sorts of activities are geared to and structured by a world market. This leads to an erosion of national culture which in turn makes it problematic to affirm the historical mission of the university to preserve national culture. Left without a sense of their historical mission, universities suffer from an identity crisis which is not resolved by becoming organizationally viable through multiple sources of funding. On the contrary, the latter often involves juggling multiple goals with multiple and even contradictory identity implications. Elite, and subsequently, all universities affirm a commitment to excellence, but this is an excellence not guided by any sense of canonical knowledge or distinctive virtue associated with the university. Universities commit themselves to excellence in scholarship, teaching, counseling, administration, fundraising, athletics, etc. Readings cites examples of such varied commitments from Canadian and American universities, but he also laments the erosion of a distinctive central mission from German and English ones. The centrality of national philosophy in Germany and of national literature in England weakens as new subjects flourish and national identity becomes more tenuous. There is the implicit assumption in Readings that a nationally bounded culture is inconsistent with a triumphant transnationalism generated by globalization.

Readings acknowledges that American universities were never as tightly linked to a national culture via a literary or philosophical cannon as were their European counterparts. But he does not much delve into this distinction, proceeding instead as if one can treat the American case as European or English ‘lite’. Alternatively, one can recognize that the land grant universities were from the outset qualitatively different from their European counterparts with a more instrumental emphasis on practical subjects. This emphasis is evident in American universities founded in the later 19th century, Stanford for instance. However, this emphasis increasingly characterizes the older American universities as well. Ivy League universities such as the University of Pennsylvania and Harvard played a major role in legitimating graduate business education (the MBA) within universities. In more recent years, universities like Cornell were influential in promoting non-business related curricular innovations such as women’s studies. The sharp distinction between university disciplines and mere technical or applied subjects lasts longer in Western Europe, but here too the dividing line gets blurred. Subjects once taught only in non-university institutes now find their place within
universities; note the rise of the study of business at the University of Frankfurt. To be sure this is more evident in the newer universities, but as the next section will make clear, even venerable bastions of higher learning are not immune to change. The change results in less differences in curricular emphasis between older and newer universities as well as between more and less elite ones. The change also results in more similarities between universities situated within different nation-states, as national canons are weakened and national practices are subjected to rationalization processes, for example, the call for greater transparency in how faculty manage their time, the assessment of student demands for courses, the quantification of research activities and scholarly output, competitive merit raises for faculty, etc. However, as noted earlier, these increased similarities are more evident at the organizational level and less so with respect to institutionalized charters and identities. The expected differences should be more pronounced when focusing on more elite universities with more distinctive reputations.

From Oxford to Stanford

No two ‘world class’ universities would appear to look more different from each other than Oxford and Stanford. The former emerged in the 12th century and is both blessed and burdened by the dignity bequeathed by antiquity; the latter is a late 19th century innovation that barely has a historical legacy in comparison. Think Oxford and one thinks of excellence in the study of the humanities, elite reproduction via strong links to the nobility and the clergy, public service and government funding, and highly autonomous colleges. Think Stanford and one thinks of excellence in the study of the natural sciences and engineering, meritocracy and career orientation, Silicon Valley, and strong university presidential leadership and strong alumni gift giving ties to the university. Some of these thoughts correctly reflect on-going differences between these universities, but others are derived from a no longer warranted reputational lore. In what follows I first note some changes in the organization of Oxford, changes highlighted by Soares. Next, I identify some crucial elements in the making of Stanford, elements emphasized by Lowen. Lastly, I reflect on the influence of common models on what constitutes a university on common organizational outcomes, even as differences in historical legacies continue to influence sensibilities regarding university industry linkages in these two universities. These differences and commonalities invite this preliminary comparison.

Soares argues that there was a serious disconnect between the popular perception of Oxford as an unchanging and elitist bastion of humanities study and the ongoing modernization of Oxford. Furthermore he asserts that this popular perception was effectively exploited by the Thatcher administration in its attack on Oxford as an anti-science university allegedly responsible for England’s industrial woes in the 1970s. Lastly, Soares contends that the elitist historical legacy and decentralized organizational structure of Oxford made it
more difficult for the university to act coherently and successfully defend itself. Oxford, Soares concludes, was changing before Thatcher and changing to become less elitist and more science oriented.

Proof that Oxford was becoming less elitist is in part reflected in three trends Soares identifies:

1. The percentage of Oxford and Cambridge students from hereditary aristocratic families declined from 50% before 1944 to 16% in the 1976-89.
2. Before World War II Oxford undergraduates were much more likely to have come from independent schools (62%) than from the state sector (19%). By 1990 parity has almost been achieved with students from independent schools constituting 48% and state schoolers 44.5% of Oxford undergraduates.
3. Shifting from class to gender as a stratificational principle, one finds that the composition of Oxford has changed in the direction of greater parity, with women moving from 18% in 1923 to 38% in 1990. By the end of the 20th century more than 4 out of ten undergraduates at Oxford were women. Along class and gender lines Oxford admissions has become more egalitarian.

Oxford has also become less humanities centered, less a Republic of Letters. On this point the trends are clearly inconsistent with the popular perception, whether one thinks in terms of faculty composition or broad areas of study. Between 1923 and 1974, with respect to faculty, there are increases in both the science and technology faculty, from 27 to 43% and in the social studies one, from 3 to 19%. During the same period the humanities faculty is nearly cut in half, from 70 to 38%. Between 1923 and 1991 a very similar pattern is found when we look at what undergraduates choose to study or read: increases in the social studies (from 0 to 23%) and in science and technology (from 20 to 39%) and a sharp decline in humanities, from 80 to 38%. These trends are similar to the ones reported in Figure B; as the world turns so does Oxford.

One could add to this that there is not only more science at Oxford but also more excellence in science, as illustrated by the awarding of the Nobel Prize to six Oxford scientists between 1945 and 1973. Not surprisingly Oxford has also excelled in obtaining science research grants; Tapper & Salter (1992) observe that the big winners at Oxford in the post World War II era were the fields of pre-clinical and clinical medicine and engineering studies.

But the victory of these fields at Oxford is not without critics, even among scientists. The nature of the criticism highlights distinctions and traditions which in turn reveal a marked ambivalence about universities and their potential or actual links to industry. Writing in the *Oxford Magazine* (2001) the scientist R.J.P. Williams bluntly states:

*First, if I am right that the education of the student in physics and chemistry is now a matter of rote learning and not joint enquiry with a tutor, then the University should look at these sciences again. It should ask, ‘Are there no intellectual questions related to such science? How should the subject be taught? Should teaching be in an industrial context?’ The last used to be the area for the
polytechnics. There is a solution. We all accept that the University needs money if it is to carry out studies at an intellectual level in many areas. We must get the money ultimately from scientific research. Let us then set up university research centers dedicated to finding useful things and bringing in money, and separate workers in them from intellectual college teaching. (p. 4)

To save Oxford the proposal is to draw a sharp line between the technical work undertaken in medical and engineering laboratories, work possibly having utility and market value, from the authentic pursuit of knowledge for its own sake, work identified with the humanities but also with pure science.

Writing in the 21st century, Mr. Williams recognizes that his views may mark him an intellectual snob. But his is not an idiosyncratic view in Oxbridge and of course this is a view quite consistent with the German model of the university, or at least with that part of the model which reserves for the university the pursuit of fundamental knowledge and assumes its applications, if any, belong in some other highly differentiated institutes. The scientization of Oxford continues with more and more science lectures and science reading opportunities emerging. So too is there an increase in linkages with the world of industry and commerce; the Said Business School in Oxford is open for business.

Resistance to change at Oxford does not reactivate yesterday’s dual admissions system – one for scholars and another for gentlemen. Resistance raises questions about institutional autonomy and disinterested scholarship and the degree to which an ascendant applied science undercut both. Resistance reaffirms an institutional charter designed to create national leaders without yesterday’s class and gender biases. Resistance also counts on the saga of the tutorial as a value laden pedagogical instrument. Resistance does not so much stop the organizational changes reflected in the several trends earlier identified, as it raises questions about the institutional price paid for modernization. These questions are also raised in Germany where there have been less changes and where the English pragmatism of Mr. Williams is perhaps less admired.

The Stanford experience radically differs from Oxford’s. From its inception in the late 19th century, Stanford was in several respects a modern university: co-educational, secular, research-oriented, and with professional schools of engineering and education early on. Its founding charter called for service to the children of California and service had an unashamedly practical tone. In her last address to the Board of Trustees in 1904 Jane Stanford proclaimed:

Let us not be afraid to outgrow old thoughts and ways, and dare to think on new lines as to the future of the work under our care. Let us not be poor copies of other universities. Let us be progressive. (Cited in the Message from the President in the 2001 Annual Report of Stanford University)

This was an extraordinary display of hubris, given that the university was financially struggling and situated in the periphery of what was then barely a
core national power. This perspective was shared by the first president of the university who insisted that undergraduates at Stanford would not be cloistered but instead would be exposed to the real world (Veysey, 1965). In its first decades of existence the real world for Stanford was addressed by university presidents with backgrounds in engineering, geology, and medicine. This was a world where Stanford could not effectively compete with its more prestigious and better funded neighbor, the University of California. This was also a world where Stanford was untouched by federal patronage and only lightly brushed by industry moneys.

The main goal of the Lowen book is to describe and interpret the transformation of Stanford into a ‘world class’ university with extensive public and private funding. The coming of World War II, and subsequently the Cold War, generated a federal government interest in university science and provided university administrators and scientists with patriotic grounds for forging university government ties. In the 1930s Stanford was more at ease with its modest courting of private support than with seeking federal grants. But from 1940 onwards the formation and expansion of links with government and with industry would increasingly characterize Stanford and other major American universities. With characteristic American optimism the influential Stanford provost, Frederick Terman, would refer to these ties as a ‘win-win-win’ situation (Lowen, 1999). The federal government interest would go beyond the natural sciences and their national defense applications to include the behavioral sciences and their ramifications. Securing funding for research across the university would become a way of life in American universities. It is now a commonplace for professors in many disciplines to cite their funded projects and their funding sources in their curriculum vita. The magnitude of the funding is optional.

Armed with multiple sources of funding the university is able to take care of those disciplines which are least likely to secure external funding. This is the standard response to the query ‘But what about the humanities or the arts?’ It is also the standard response to those who worry about undergraduate education and whether the teaching function of the university will be overshadowed by its research orientation (Cuban, 1999). Moreover, if additional funds are required or sought, campaigns to raise the moneys are also not unusual. A five year billion dollar Campaign for Undergraduate Education at Stanford is well underway. The William and Flora Hewlett Foundation has given a hundred million dollars for this campaign and an additional three hundred million to the School of Humanities and Sciences.

The standard response is not without critics. While multiple sources of funding may facilitate relative autonomy from any one source, the overall effect of extensive linkages with external funders has been criticized from both the left (Noble, 1982) and the right (Nisbet, 1971). However, Stanford and other universities are not deterred. There has been an increase in universities with research and development facilities, with patent offices, and with collaborations with industry in knowledge production and product
development. The latter is more evident in the USA than in Europe (Powell & Own-Smith, 1998; Krucken, 2001) and Stanford is clearly a leader in this development. The organizational changes that illustrate this development at Stanford do not encounter the sort of institutional resistance exhibited at Oxford. There is nothing in the Stanford charter (legally and symbolically) that gets undercut by these changes. There is nothing in the ruggedly Western and progress-oriented Stanford saga that appears to be out of sync with creating a multi-disciplinary Bio-X research center with megabucks from a computer entrepreneur who was formerly an assistant professor in the university.

**Historical Legacies and Common Frames**

Oxford dons and Stanford experts are emblematic of different historical legacies and organizational developments. Oxford dons reflect an era in a country where the university was a very distinctive knowledge conservation institution, reserved for a few good men chartered to become national leaders. Stanford experts reflect the university as a more rationalized and less differentiated site of knowledge production in the current world. The distinction between knowledge conservation and production goals is a matter of degree, but it is an important distinction. The pristine Oxford saga, that threatened by modernization, has student and tutor engaged in fundamental inquiry by confronting text, that is, by critically reading, thinking and writing. The fashionable Stanford way is to generate research opportunities for undergraduates to upgrade their learning experiences. To be sure, the latter involves reading, thinking, and writing but the goal is knowledge production via field work, interviews, surveys, and the like. A Stanford professor may receive a medal for ‘faculty excellence fostering undergraduate research.’ The medal is awarded in memory of a former professor of geophysics and dean of the school of earth sciences. The knowledge production imagery has a closer fit to the socially embedded university while the more socially buffered one is more likely to imagine itself as a conservatory of high knowledge.

The modernization of Oxford and the transformation of Stanford make both universities more organizationally similar to each other than they were before World War II. In both cases the threat of war and then war itself made the universities more relevant and gave the universities more opportunities to secure government and private funds. Both universities were in better financial shape by 1960 than beforehand. For Stanford the changes involved a reputational evolution from local to national to world renown, with the sciences and their applications leading the charge. A similar science driven charge was underway at Oxford, but while Stanford did not have ‘Stanford’ to contend with, Oxford had to deal with a world renown ‘Oxford’. The ongoing tensions between organizational modernization and institutional tradition at Oxford do not have an obvious analogue at Stanford.

But how should one explain the scientization of universities throughout much of the world? One answer focuses on economic globalization and its
demands on all institutions including universities. This perspective is incomplete and misleading. What has globalized are models of progress in which science and science for individual, organizational, and national development plays a major role. These models privilege a broader rationalization than that implied by most discussions of economic globalization. Under pressure to account for why they teach what they teach, universities undergo curricular changes to satisfy a range of constituencies. This opens the doors to business and engineering subjects but also to sociology and to interdisciplinary innovations many steps removed from the world economy. The authority of science in society, independent of its impact on wealth creation or military capability, has become a strong rationalizing force in the university (see Drori et al, 2003). Many curricular innovations invoke the authority of science to justify their place in the university, educational research and even teacher training, for example. Furthermore, models of justice have also globalized and these models emphasize equality and equality of opportunity for all individuals. The phenomenal growth of universities and university enrollments cannot be understood without coming to terms with how successful these models have been in their influence. They have led not only to changes in the social class and gender composition of universities but also to curricular changes. It will not do to vastly increase the numbers and the diversity of enrollees without altering what it means to be a university and what university knowledge can and or cannot be. Much feminist criticism of the university and of science is ironically facilitated by an increases in the numbers of women in both the university and in science enrollments therein (Bradley & Ramirez, 1996; Ramirez & Wotipka, 2001). Rationalized progress via science and rationalized justice via expanded inclusion undercut the mystique of the university.

More socially embedded universities have less mystique to start with and are more likely to aggressively pursue progress. These universities are sanguine with respect to university industry ties: costs can be managed through conflict of interest guidelines and the opportunities and benefits are limitless. On the contrary, these ties are viewed as problematic by the more socially buffered universities, even as they move in directions consistent with rationalized progress. Triumphant common frames of progress and justice inform common university models in an increasingly common certificational world society. Their successful articulation by an army of educational management consultants (progress) and by diverse social movements advocates (justice) accounts for why different universities move in similar organizational directions that could not be predicted by their varying institutional legacies. The latter are not irrelevant though, as they help us understand persisting differences in sensibilities toward similar organizational developments. An optimistic ‘win-win-win’ perspective makes university industry ties more sensible at Stanford; the celebration of ‘the home of lost causes’ at Oxford promotes more pessimistic sensibilities.
Eyes wide shut, universities reflect their national and institutional legacies while enacting world models of the progressive and egalitarian university. Much organizational change is difficult to comprehend independent of the influence of these models. Much of the ease or difficulty with which change is embraced requires coming to terms with varying legacies.

References


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