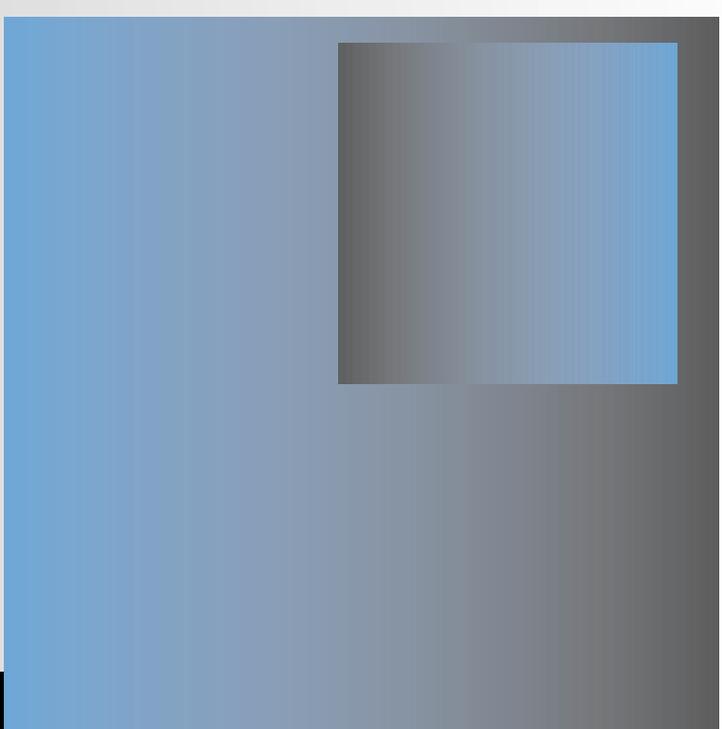




**Journal of the Programme
on Institutional Management
in Higher Education**

Higher Education Management

EDUCATION AND SKILLS



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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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- to promote, through research, training and information exchange, greater professionalism in the management of institutions of higher education; and
- to facilitate a wider dissemination of practical management methods and approaches.



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Table of Contents

The Entrepreneurial University: New Foundations for Collegiality, Autonomy, and Achievement <i>Burton Clark</i>	9
The Emergence of Entrepreneurial Cultures in European Universities <i>John L. Davies</i>	25
Promoting Academic Expertise and Authority in an Entrepreneurial Culture <i>Craig McInnis</i>	45
Breaking Down Structural Barriers to Innovation in Traditional Universities <i>José-Ginés Mora and Enrique Villarreal</i>	57
Enterprise Culture and University Culture <i>Pierre Daumard</i>	67
Responding to Changing Student Expectations <i>Peter Coaldrake</i>	75
Changing Patterns of Diversity in Europe: Lessons from an OECD Study Tour <i>John Pratt</i>	93
Tertiary Education in the 21st Century: Challenges and Opportunities <i>Jamil Salmi</i>	105

The Entrepreneurial University: New Foundations for Collegiality, Autonomy, and Achievement

Burton Clark

University of California, Los Angeles, United States

ABSTRACT

This paper reproduces the text of the address which the author delivered during the opening session of the 2000 IMHE General Conference, in Paris.

INTRODUCTION

I am enormously pleased that the IMHE Programme, led by Peter West and Richard Yelland, has dedicated this Year 2000 Conference to the topic of "Beyond the Entrepreneurial University: Global Challenges and Institutional Responses." This focus is holistic and integrative; it is forward-looking; and it is down-to-earth. The many demands and challenges of the day in themselves are not going to determine the fate of universities. Rather, how universities respond to and shape the many forces that play upon them becomes the heart of the matter. The conference properly drives home this point.

And of course I could not be more pleased that the organisers of the conference have picked up on my slim 1998 book, *Creating Entrepreneurial Universities*,¹ to set categories for panel discussions, group sessions, and case reports from diverse institutions around the world. Rare is the book in the social sciences, and especially in educational research, that receives, just two years after publication, such a concentrated international effort to critically review the ideas set forth to see whether they can be put to work. Such organized critical attention has never happened to me before in a half-century of scholarly writing, and it will surely never happen to me again. I am grateful, and I am deeply indebted.

What can I do at this point and on this occasion to move the conversation along? I want to try to improve upon my 1998 formulation and especially to spell

out some implications of my findings for university life in the decades immediately ahead. I begin by picking up on the general problem of university transformation, as described in the book; I then review several leading ideas generated in the research, particularly to encourage others to improve upon my formulations as they put the ideas to the test of practical usefulness. If those formulations are to continue to be useful, they cannot be frozen. They need to be broken down, extended, and more clearly stated.

Then, I want to press on to two large topics that can extend our understanding of the significant outcomes of entrepreneurialism in universities. I wish to stress that when we do it right, such purposive transformation can significantly strengthen university collegiality, university autonomy, and university educational achievement. Entrepreneurial character in universities does not stifle the collegial spirit; it does not make universities handmaidens of industry; and it does not commercialize universities and turn them into all-purpose shopping malls. On all three counts it moves in the opposite direction.

Finally, I want to stress the growing importance of an entrepreneurial narrative, toward which many participants in this conference can contribute – a convincing story that depicts to university patrons and the general public what progressive universities are like as they combine the new and the old in a revised form of organisation. This narrative is much needed as a counter-narrative, one that challenges both the simplistic understanding of the university as a business, about which we hear so much these days, and the simplistic depiction of universities as passive and helpless instrumentalities whose fate is determined by irresistible external demands. Not so. Universities are much more than a business. They have unique genetic features, and they have developmental trajectories projected by their own generic trends and societal commitments. And proactive universities shape their environments as much as they are shaped by them. Using common terms, they are self-initiating, self-steering, self-regulating, self-reliant, progressive. A well-rounded entrepreneurial narrative spells out the defining characteristics, and especially the advantages, of a type of modern university that stands on its own feet in order to adapt, on its own terms, to a highly complex and highly uncertain world.

THE PROBLEM OF UNIVERSITY TRANSFORMATION

In the last chapter of my book, I posited a growing imbalance between demands made upon universities and their capacity to respond if they remain in their traditional form. The demand-response imbalance, of course, is not characteristic of all universities, but it does appear, in societies around the world, especially in public universities supported mainly by a national or regional ministry of education or education and science. The capacity to respond is limited by underfunding

and by rigidified internal structures that were constructed in the simpler days of elite higher education. Without exploring the imbalance here any further, we can simply characterize it as a growing institutional insufficiency, attended by a growing sense of institutional inability to cope.

In attempting to bring this imbalance under control, system wide changes can be helpful. One national system after another these days is trying to lighten the burden of state regulation. Movement toward decentralization, from state to university, has increased, giving universities greater freedom to make their own way. But such change encounters much resistance. It offends the values of national uniformity and institutional equity. The old ways often come bouncing back in new forms of oversight that seek conformity to central visions and common blueprints. Examples would be new central “quality control” agencies and new assessment exercises that punish as well as reward individual universities according to how they currently score on simple indicators of teaching and research competence. Interests inside and outside of government strongly resist a much-needed differentiation; instead they want a national system to remain a system of ostensibly common universities. Unfortunately, the homogenizing, unifying approach that severely limits experimentation and risk taking causes overloaded and underfunded universities simply to become more overloaded and impaled on a base of fading funds.

In short, national systems are blunt instruments for reform. The state or other main sponsors cannot do the job of reform for the universities. Only universities themselves can take the essential actions. In a particularly sharp and acute observation made in the early 1990s, Clark Kerr stressed that:

“For the first time, a really international world of learning, highly competitive, is emerging. If you want to get into that orbit, you have to do so on merit. You cannot rely on politics or anything else. You have to give a good deal of autonomy to institutions for them to be dynamic and to move fast in international competition. You have to develop entrepreneurial leadership to go along with institutional autonomy”.²

What I call “the entrepreneurial response” has become a growing necessity for all those universities that want to be a viable, competitive part of the rapidly emerging international world of learning.

CONCEPTUALIZING THE PATHWAYS OF TRANSFORMATION

Easy to say, but hard to do. The critical question becomes how. If the state and other outside patrons cannot exercise the required local institution-by-institution initiative, how can universities shift to a more active mode? Here we have to become organisational analysts and look for measures pursued over a number of years that change core structures and overall cultures. This is what I was attempting to do in

my study – to identify some major steps taken inside universities that added up to a major transformation. I focused not on small changes in teaching and research programs that become isolated enclaves, but on changes in structure and culture that added up to a substantially revised, even new, overall organisational character.

Here my challenge was to conceptualize some perceived important steps at a middle range of generalization: neither too specific or too narrow, nor too general or too broad. The five categories I introduced as pathways of transformation ideally had to be specific enough to be readily recognized by knowledgeable participants and at the same time general enough to leave behind the singularities of each institution; they should be applicable to a wide assortment of cases – first across my five cases and then potentially to other unexamined universities. I wanted to avoid generalizations that are too elegant and abstract, to shun the cloudy rhetoric, for example, of open and closed systems, resource dependency, and bureaucratic and charismatic leadership. At the same time I had to have categories that do generalize at one or two levels above the gritty, messy details of each university's complex reality. The hard decision was made to offer an explanatory framework that contained only a parsimonious five features, rather than to seek ten or twenty that would cover more ground more precisely. The laundry lists of possible explanations found at the end of so many research reports do not advance our understanding. It is better to be crisp than soggy, and to assert that a certain few things are more important than all the others.

My categories, then, were somewhat broad. One way we can improve upon their formulation is to break them down into more specific parts. I will illustrate by offering a breakdown of two of the five categories: first, the diversified funding base; and second, the strengthened steering core.

The diversified funding base

To keep things simple in discussing the financial underpinnings of the entrepreneurial university, I mainly referred to three streams or sources of income: mainline institutional support from a governmental ministry; funds from governmental research councils; and all other sources lumped together as “third-stream income.” A three-fold breakdown was clear and effective in showing a shift from the first alone to all three together, where more money can be raised and increased local discretion in how to spend it is present. Such diversification of income seems essential for entrepreneurial character. A university can move ahead on desired initiatives without waiting for systemwide enactments that come slowly, with standardizing rules attached. A university can better roll with the punches, replacing a loss here with a gain there. And as a general rule it is better to have more money rather than less, provided it is raised by means widely approved as legitimate.

But my third-stream category has many different types of sources within it. I offer three substreams based on general types of sources:

1. *Other governmental sources.* These include other departments at the same level of government as the main sponsor, for example, departments of agriculture, forestry, technology, economic development; also departments at other levels of government, for example, departments of regional and city governments. Such sources of university income offer numerous possibilities and have multiplied.
2. *Private organized sources.* These include three major sub-categories. First, industrial firms, with many sectors thereof, and important differences between large and small companies. Second, professional and civic associations that promote continuing education for their members. And third, philanthropic foundations that offer both specific funds and unearmarked funds; they range from small “mom-and-pop” foundations willing to endow a fellowship or two, or a specific room in a specific building, to giant foundations, such as the Wellcome Trust in Britain, which in some areas of research can match or exceed the grants from research councils.
3. *University-generated income.* Here the possibilities include: income from endowment and investments; earned income from campus services, ranging from the hospital to the bookstore; student tuition and fees; alumni fundraising; and royalty income from patented intellectual property in which the university and specific faculty members share as co-holders.

Such different third-stream sources clearly bring different problems and opportunities and different degrees of expenditure discretion. Industrial firms want something for their money, and that something is often quite specific; university-industry collaborations involve tough bargaining over contracts, and compromises over whose interest has priority. Government departments, in turn, may offer generous, relatively unearmarked grants, or they may insist on segmental budgeting and tight accounting. But the large category here called “university-generated income” is generally the one with the fewest strings attached. Think of the high degree of discretion that attaches to endowment income. The hard decision to squirrel away some surplus income as endowment, rather than spend it next year, is a strategic decision of the first order, mirroring the choice that individuals and families have to make between saving for the future and spending now. Professionally managed income from endowment offers compound growth for years to come. Another example – turning graduates into “alumni,” who contribute financially to the university year by year as well as during special fund-raising drives – is a source that offers high discretion in expenditure. Here alumni may contribute to a general fund or to specific projects that the university nominates as special needs.

The main point is that there is no limit to the possibilities of third-stream income in its many substreams. Witness the growing contribution to universities made by regional and city governments in some nationalized systems, and the contribution of systematic alumni support now appearing in numerous universities around the world. As they used to say in American politics, a million here and a million there and soon it adds up to real money. Now, for the richest private universities, and some flagship public universities, it is a case of a billion here and a billion there. Self-reliant universities can move toward virtuous circles of income generation, replacing the vicious circles of decline in unit-cost support – provided that the government at least has the good sense not to take away yearly surpluses and punish universities for any financial success they achieve.

Let us be clear: a high degree of financial dependence on a single mainline source is a flawed way to construct a self-reliant university. The interests of government multiply and change; the support of universities can readily slide down the government's list of priorities. As in individual investment, diversification of sources is the name of the game. Why keep betting on one horse, particularly when time and again it has come up lame? Or why keep depending on one stock, particularly when it has repeatedly proved to be a “dog”? Self-reliant universities know better.

The strengthened steering core

The important element – a steering core – also contains a host of subtypes. It can take quite different shapes, but whatever its shape, it has to embrace central managerial groups *and* academic departments. It has to operationally reconcile new managerial values with traditional academic ones. All easier said than done. Among the five institutions I studied, some had stressed internal decentralization as the main road to strengthened steering: the University of Joensuu in Finland had gone a long way toward giving all power to the departments, to liberate their energies and exact responsibility very close to operations. Others stressed centralization: Warwick, with a small set of central interconnected committees that took responsibility for dividing up new and old resources; Strathclyde, with a clear-cut central University Management Group placed squarely in the driver's seat. But then the broad terms “centralized” and “decentralized” can obscure as much as they reveal. Central management at Joensuu had to learn new ways to co-ordinate independent departments; and at Warwick and Strathclyde faculty in departments learned well how to vigorously represent their own interests as they negotiated with the central groups. There is always a dialectic underway between central persons and groups representing the interests of the total university versus faculty and departmental individuals and groups responsible for the welfare of a part of the whole. We need to know much more about how enterprising universities

work out the dialectic to give them more forward thrust and enhance their educational achievement.

The other sub-element that runs all through my conception of a strengthened steering core is the dimension that stretches from highly personal leadership to highly collective or group-based leadership. A university steering capacity can be strengthened, and often is, by strengthening particular line authority positions, those of rector (vice-chancellor, president), faculty dean, and department chair, for example. The steering core can also be enhanced, and at same time as the line positions, by strengthening the authority of groups, at the center and alongside the dean and the department head. The “I” becomes “we,” as faculty interfuse with administrators. Nothing is more important than getting the authority structure working reasonably well in a proactive fashion. And nothing is more difficult than working out such a structure, keeping it on an even keel, and improving it.

What is clear is that extremely personalized forms of leadership – the dictator, the tyrant, the authoritarian figure – do not endure in universities and cannot be a permanent feature in entrepreneurial universities. Unlike traditional business firms and traditional governmental departments, the collegial forms must function strongly around personal forms of governance and generally come to be seen as dominating them, particularly at the center. Given the clout of faculty – based upon their professional expertise and disciplinary competence – the “we” has to dominate the “I.” Entrepreneurialism in universities has to be seen as collegial entrepreneurialism.

We need to learn more about the precise ways that different proactive universities combine strong central direction with strong faculty and departmental steerage, and the precise ways that personal and collegial forms are combined all along the line. The “pathway” I have named as a strengthened steering core covers a multitude of subtle relationships. Those relationships are best revealed in specific case studies. We should expect the patterns to vary considerably by national and local contexts, worked out differently in The Netherlands than in Britain, for example, and differently in a relatively new, small university in rural Holland than in an ancient large university in one of the dominating cities of the country.

Similar clarification and reformulation ought to be applied also to the other three pathways I offered in the book: the extended developmental periphery, in all of its grand profusion of new forms and relationships; the stimulated academic heartland, with its well-rooted but quite varied departments that have to join the overall transformation or else it probably will not occur; and the integrated entrepreneurial culture, voiced with pride and passion, where a new point of view becomes characteristic of the entire university. About such matters we can learn from one another by examining case-study research and listening to case-by-case presentations by practitioners. At this conference, participants can move us forward

by setting forth specific results that can be both situated in broad categories that clear the mind and suggest leads for new more complicated rounds of investigation.

THE ENTREPRENEURIAL REINVENTION OF UNIVERSITY COLLEGIALLY, AUTONOMY, AND ACADEMIC ACHIEVEMENT

The historic and well-known Harvard Business School is currently in the midst of an all-encompassing effort to center itself on entrepreneurship. The new understanding there is that entrepreneurship is not a personality type, nor is it a stage in the life cycle of an organisation. Rather, it is a way of managing, where one pursues opportunities beyond means that are currently available.³As part of its own transformation, the school is undertaking major risky steps: first, it has beefed up its own entrepreneurship curriculum from one or two courses offered in the mid-1980s to some 18 courses taught by 28 professors today. A required first-year class for all of its 800 students has been changed from general management to entrepreneurial management; this highlights the point that “the concepts of leadership that are important now, and are going to be important in the future, spring out of an understanding of entrepreneurship.”

Second, and most interesting, the school, entirely located for a century in Cambridge, Massachusetts just across the river from the main Harvard campus, has physically opened up in effect a branch campus in the form of a research center in Silicon Valley, the heart of the new economy in the United States. Three thousand miles away, in California, the new center is planned as a place where professors will come to write up their case studies of start-ups and other entrepreneurial firms, and a place where students from Harvard as well as from the immediate region can do some short courses and engage in job-hunting.

The broad change undertaken in the school is risky. It emphasizes the preparation of students for small and middle-size firms rather than large ones, many located in the old economy, on which the school has traditionally based itself. But perhaps the risk is not so great. As put by one professor at the school, Rosabeth M. Kanter, “Big companies are dying to behave like start-ups.” And setting up shop in the midst of Silicon Valley also means head-on competition with Stanford University, the intellectual godfather of the valley, which has been there since day one and has long established relationships with its many firms, large and small.

Of course, a business school is finally only a business school, not a total university: Harvard University, in all its bewildering complexity, is much more difficult to change. And the business school is a very rich school, with resources available for a major experiment open to only a few other places. So there are no lessons to be drawn straight on from that particular context to other very different ones. But I bring in this information about transformation in a powerful, successful business school to point up how much this particular academic enterprise, no matter how

successful by traditional criteria, senses it has become stodgy, an institution that despite its power could soon be seen as an old place doing old things, while others are doing new things that are more adaptive. It is also interesting that the school felt it had to come up with a short, crisp definition of entrepreneurship – “the pursuit of opportunities beyond means that are currently available” – that played down personality type and emphasized a socially constructed, organisational effort. A decent definition, I would say, as good as any other currently available. But then we immediately ask: how? How can we, in our setting, position our organisation to best pursue opportunities? And keep, we might add, the underlying values that characterize universities.

The question of how first of all has to be answered with the cold realization that the creation of an entrepreneurial university is not a stage that can be passed through once and forever. It is a process without end. Its creation is likely to happen not as a big bang, but in an incremental, evolutionary fashion, as a flexible organisational character that can adjust and readjust with better responses to rapidly changing demands. Even in the best of circumstances, university transformation requires ongoing hard work in which demonstrable results often do not show up next year but rather in five or ten years; systematic efforts to turn graduates into supportive “alumni,” for example – a good example of risk taking – may show positive results rather than deficit financing several years down the road, if it ever does.

As I have stressed, we also have to be sensitive to differences in context. Each university has to find its own specific pathways, its own specific configuration of how to bring about change. The past and the present go on shaping the future, conditioning the development of new response capabilities; no one way, no one rate of change, applies to all. It does seem that the development of entrepreneurial character is somewhat easier on the average in small universities (15 000 students or less) than in mega universities (50 000 students and over). Specialized universities are likely to find such change easier than comprehensive ones. The specialized places already have a focus and are often characterized by an engineering or business-type rationality that eases the contradictions – the conflicts – of the old and the new. But in the final analysis, all university contexts for change are local; they have to be individually figured out and responded to. If university transformation means a great deal of hard work, with uncertain outcomes, and especially with the hard work extending indefinitely into the future, then why pursue entrepreneurial action? Why set out to pursue opportunities that are beyond current resources, current means? Some universities will choose to simply remain traditional, to be old places that do old things well, whatever the ups and downs of their resource base. A few universities are blessed with money: they will try to live well until rich donors fade away or the oil money runs out. Or, short of resources, some universities will still prefer to wait for the golden goose to lay more golden eggs and pass them around. Surely (so goes the refrain) “the government” will

have to come to its senses, realize that the universities must always have first priority, and send full funding for all the things we want and need to do. But stand-pat postures are clearly an unattractive alternative for an increasing number of universities who have learned the hard way that no one else is going to save them and give them the many capabilities they will need to prosper in the environments currently unfolding. Like democracy, university entrepreneurship can be unattractive until you consider the alternatives. Doing nothing poses very large risks.

Fortunately, a positive case can be put quite strongly. The kind of progressive, self-reliant university we are defining at this conference is not, in so many cases, merely a road to survival and viability, but it is also a way to reinvent university collegiality and university autonomy, and finally to enhance university achievement. What follows is a brief look at these three highly desirable outcomes.

The reinvention of university collegiality

Let us not fool ourselves about the glories of collegiality in traditional universities. Traditional universities have, for a long time now, been multiversities, even conglomerate gatherings or holding companies, of large stand-alone faculties in such disparate areas as law, medicine, science and technology, humanities, arts, pedagogy, architecture. These faculties, because they have grown very large, do not pull together to operate as a *university*. They offer their own programs, hire their own faculty, and go their own ways. The so-called university is then a united place in name only: it has little material integration.

And those who claim that traditional universities are characterized by a collegial spirit that is disappearing in entrepreneurial universities have made collegiality into a defensive ideology, one that is biased in favor of the status quo, even the status quo ante. Oh how warm were the relations of faculty with faculty, students with students, and faculty with students in the good old days when there were just the few of us! But if those days ever existed, they have disappeared as universities have grown enormously. The growth I speak of came from both student expansion and knowledge growth.

The task before us is to rebuild a collegial spirit within departments and faculties, and especially in the university generally. We must put it to work in the service of making hard choices. Here the joint participation of faculty and administrators in a strengthened steering core is crucial. Collegiality looks to the future and becomes biased in favor of change to the extent that faculty are involved in institutional transformation. Collegiality then promotes a collective sense in the faculty that "we" are responsible for the choices made and the achievements realized. The campus culture becomes integrated around a sense of joint effort. As that culture deepens, it exudes passionate attachment to the institution. An inclusive belief can even become an organisational saga, an embellished account of successful

striving. When the University of Warwick can speak proudly of “the Warwick Way,” and faculty there tell of how pleased they were to leave their former stodgy universities where nothing got done – and morale was very low – to come to a place where problems are turned into opportunities” and the whole institution has a sense of self-directed forward motion, then collegiality favors change, not the status quo or status quo ante.

That type of forward-looking spirit was also evident at the other institutions I studied: at Strathclyde, in the publicly asserted “Strathclyde phenomenon”; at Twente, in a multisided public definition of the Twente difference; at Chalmers in Sweden in an assertive definition that it was unique, different in character from all other Swedish universities, and proud of it; and at Joensuu, in a deep sense that the place both had to hang together and also to exploit several competitive advantages if it were to prosper. The importance of a rebuilt collegiality in the process of university transformation cannot be overestimated.

The reinvention of university autonomy

The last half-century of university development has been hard on university autonomy. Under the steady pounding of student expansion and knowledge growth, higher education has become many times more expensive; it has become a big-ticket item in government allocations. Government officials and the general public have become more concerned about getting something in return for all that money. Everywhere, the idea of holding universities accountable has come to the fore, and one central mechanism after another has been created in the name of enforced accountability; this puts a very large dent in university autonomy. But since top-down close surveillance does not work very well around universities – it is full of unanticipated and undesired effects, and boomerangs quite readily – many governments have in the last decade begun to back away, and have even encouraged universities to adopt somewhat more autonomous postures.

But how do we handle autonomy? A university can become formally more autonomous but in a passive fashion. How sweet it is now that government is more willing to leave us alone! Let’s continue to do what we traditionally have been doing. I would rather recall the Kerr formulation mentioned earlier; it seems much the more appropriate one. Universities need autonomy but they also need to develop entrepreneurial leadership to put that autonomy to effective use. Active autonomy is very different from the passive type. Do not plead for autonomy unless you intend to exploit it to make your university a much better educational institution.

The five pathways I identified contribute to the building of proactive autonomy, from the diversified funding base to the gradual development of a wrap-around entrepreneurial culture. The mechanisms that build self-reliance and a

collective awareness of forward-looking character are means of reinventing that active autonomy. The university that is able to substantially stand on its own feet and to steadily make hard choices that determine its own future is truly an autonomous university. How much better to go this route, with all the hard work involved, than to remain a non-autonomous state dependency or a university only capable of sitting in a passive autonomous position, missing out on new opportunities and drifting with the changing tides of societal interest, and waiting for directions to finally come from others.

The entrepreneurial reinvention of university achievement

Collegiality and autonomy are finally means, not ends in themselves – means to the end of building a university capable of greater achievement. What, finally, would be the kind of educational returns we might expect?

Certainly, universities enhance their educational returns by developing the capacity to do basic research *and* applied research *and* applications-generated research. The old line between basic and applied research has been blurring in recent decades; the one contributes to the other on a two-way street. So many new research centers in the developing periphery add additional connecting competencies that brings in outside definitions of important research problems not primarily discipline-driven. In this third form of research orientation, the transfer of knowledge turns out to be a fruitful two-way street from outside firm or non-profit lab to the university faculty as well as from the university to the outside world. Adaptive universities are busy forming new “knowledge coalitions” with other centers of knowledge in society. Entrepreneurial universities structure themselves to enhance research achievement.

Second, these praiseworthy institutions contribute strongly to achievement in teaching and student learning. If to be up-to-date in biology or chemistry – or in a host of interdisciplinary fields – a change in the department curriculum is needed every two or three years, the self-steering university has the will and the mechanisms to make such changes. Universities have a terrible problem of keeping up with rapid change in knowledge in one field after another. Beyond awareness of the need to change what is taught must lie the organisational steering capacity to make the desired changes come about. Organizational sleepiness becomes more costly: snooze away for a decade and you become an outmoded institution. Entrepreneurial universities know this and do not allow it to happen. They make the changes, department by department, that mean up-to-date teaching and up-to-date student learning.

Again, all this is easy to say but hard to do. For there are old bundles of knowledge that need to be carried forward, even as new bundles and new approaches are brought in and given effective homes. Especially in comprehensive

universities, ones that reach from science and technology to humanities and fine arts, collegial organisational units have to decide how much history, classics, literature, political science, and sociology are to be maintained, strengthened, and projected into the future. Some of the fields poor in revenue, such as history and classics, have to be subsidized by heavy teaching loads for their faculties or cross-subsidized from institutional resources brought in by the resource-rich fields – or usually some combination of the two. The maintenance of key traditional fields, with a judicious blending of new and old ones, is so difficult that it tests the limits of collegiality. But it is absolutely necessary that it be done, lest a good part of the intellectual heritage of a university be allowed to fall by the wayside, more by neglect than by plan. The university that builds strong mechanisms for making hard choices, and makes them stick, is highly advantaged in having an overall capacity to show universitywide achievement.

Entrepreneurship, then, is not a management posture that serves only new ventures in science and technology; it operates throughout the university. Its remit includes the protection of traditional fields necessary for a high level of competence. Entrepreneurial transformation not only builds new foundations for collegiality and autonomy, but also new foundations for sustainable achievement across the many fields of research, teaching, and student learning that a particular university encompasses.

TOWARD AN ENTREPRENEURIAL NARRATIVE APPROPRIATE FOR THE UNIVERSITY WORLD

I mentioned at the outset that I wanted to conclude my remarks by stressing the importance of an entrepreneurial narrative – an affirming, convincing story that depicts to university patrons and the general public what modern progressive universities are like as they combine new and old practices in a revised, up-to-date form of organisation. We need this narrative to explain the difference between entrepreneurial and traditional universities. We need it as a counter-narrative to all the accounts that depict universities as helpless victims of irresistible external demands. And we can use it particularly to respond to all the accounts that basically liken the university to a business. We constantly hear calls to clarify the goals of a university by means of an initial simple mission statement that in a magical fashion will guide all subsequent actions; we constantly hear calls for the pursuit of economic rationality by means of efficiency and accountability under centralized management. All such calls are much modeled after simplistic conceptions of what business firms are like.

Toward the much needed entrepreneurial narrative, I want to offer a half-dozen thoughts that may serve as organizing ideas.

1. *Universities have a unique core.* Universities are based on fields of knowledge – disciplinary subjects, interdisciplinary subjects, transdisciplinary subjects. Each field is organized as a grouping of professionals that extends across many universities and proceeds as a self-regulating “going concern” in its own right, be it physics or economics or history. The university's disciplinary base shapes everything the university does. Traditional or entrepreneurial, old or new, the university is thereby turned uniquely into a bottom heavy form of organisation. The work does not get done unless the various local academic tribes do it. Chemistry in a given university is as the department of chemistry does; history is as history does. All research, teaching, and student learning is localized; it is not done in the amorphous university, but rather department by department, and in groupings thereof, by professional staff whose training, orientation, skills, practices and loyalties vary widely. The university is organized around “thought collectives”. It is dependent upon a range of “academic tribes” that uphold varied “academic territories”.⁴
2. *The unique core of the university requires substantial collegial participation.* Since groups of professionals are in charge of the basic units where the work is done, faculty expect to be in charge of decision making in departments, and in the larger faculties that group departments, and to have a significant voice in decision making at the center of the university. That expectation is rational in that the different clusters of faculty hold the expertise required for production. In traditional and progressive universities alike, how faculty participates in the authority structure is a fundamental consideration.
3. *The central characteristics of bottom heaviness and expected collegial influence have a strong downside in an age of great growth, multiplying demands, and a rapid rate of change.* As decisions become lost in a welter of committees and in ambiguous relations between levels of organisation, traditional universities become relatively slow moving, resistant to change, and devoted to the status quo. Patrons and other outsiders then have good reason to see universities as stodgy, as not sufficiently alert and adaptive, and ill-positioned for an age of fast change and high uncertainty.
4. *Some universities seek a new posture for responsiveness to changing demands.* They seek an overall capacity to more quickly make decisions and implement them, a capacity to better steer themselves. They move to become more progressive by becoming more self-reliant. As they seek to innovate, they adopt in effect a progressive manifesto. They even adopt in many cases the label of “entrepreneurial university” as a comprehensive concept for highlighting their difference from traditional universities unable to escape

the constraints of rigidified practices and the homogenizing effects of state planning.

5. *The concept of the entrepreneurial university becomes the umbrella idea under which we speak of the self-steering, self-reliant, progressive university.* This umbrella conception stresses a forward-looking orientation, a willingness to seek out the new frontiers of knowledge. It stresses that the university is engaged in the pursuit of opportunities beyond means that are currently available. It stresses that collegiality need not be limited to defense of the status quo, but that collegial as well as personal forms of authority and leadership can be sources of adaptive behavior and thereby linked to change.
6. *Under the concept of the entrepreneurial university, we stress the agency of those inside the university whose actions decide university responses.* We emphasize neither state nor market – neither state-led or market-led coordination of university affairs. Instead we stress professional coordination by faculty and administrators who operate with their own norms of responsibility and accountability. As a fleshed-out normative community, the entrepreneurial university becomes an organisational version of civic society, one that mediates between state and market rather than be dominated by either.
7. *Toward the effective exercising of that agency, the university learns anew how to build encompassing interests and encompassing capacities that underpin a strong university identity.* The entrepreneurial university cares deeply about its distinctiveness. It seeks a role of its own in regional, national, and international arenas. It learns that a unified identity and a unified public reputation are a priceless asset. It utilizes a rugged identity as a foundation for renewed trust between the individual university and society.

CONCLUSION

As the twenty-first century unfolds, the entrepreneurial university will increasingly fit the temper of the times. As it seeks opportunities beyond means currently available, it brings in new forms of knowledge, new types of students, new labor force connections, new problem-solving skills for government and the economy. At the same time, the entrepreneurial university maintains continuity with the past and present; it preserves and updates old fields of study at the core of the university heritage. Most of all, the entrepreneurial university provides new foundations for the rebuilding of internal collegiality and external autonomy. It finds ways to integrate its many disparate parts around the assertion of a distinctive character.

Progressive, self-reliant universities – the type this conference focuses on – Milton Keynes, England, will play a central role in competent national systems of higher education. They will add to the diversity of the system, its competitiveness,

its openness, and its adaptiveness. They will provide a way to simultaneously expand choice and enlarge merit. Let us learn from each other within our own countries, and also across national boundaries, how this particular type of university manages to turn its major problems into greater educational achievement.

Notes

1. Clark, B.R. (1998), *Creating Entrepreneurial Universities: Organizational Pathways of Transformation*, International Association of Universities and Elsevier Science, Paris and Oxford. See also B.R. Clark, "The entrepreneurial university: demand and response", *Tertiary Education and Management* (1998), Vol. 4, No. 1, pp. 5-16; and B.R. Clark, "Collegial entrepreneurialism in proactive universities: lessons from Europe", *Change* (2000), January-February, pp. 10-19.
2. Clark, K. (1993), "Universal issues in the development of higher education", in J.B. Balderston and F.E. Balderston (eds), *Higher Education in Indonesia: Evolution and Reform*, Center for Studies in Higher Education, University of California, Berkeley, pp. 19-35.
3. "California Dreamin': Harvard Business School adds Silicon Valley to its syllabus", *The New York Times*, June 18 2000, Section 3, pp. 1-16.
4. Becher, T. (1989), *Academic Tribes and Territories: Intellectual Enquiry and the Culture of Disciplines*, The Society for Research into Higher Education and Open University Press, Milton Keynes, England.

The Emergence of Entrepreneurial Cultures in European Universities

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ABSTRACT

This article considers the development of the phenomenon of entrepreneurialism in European universities in terms of cultural transformation and the problems associated therewith. It draws on some initial propositions deriving from the IMHE study "The Entrepreneurial University" in 1987, and elaborates these in the context of more recent projects undertaken by the author. The article outlines the constituent elements of the emerging entrepreneurial culture in universities; analyses issues of sustainability in culture development in terms of various domains of institutional life; considers a range of strategies for culture change; and examines the ramifications for university leadership and national government.

PREAMBLE

For reasons explained later, it has become evident that in the last two decades, European universities have developed significant capabilities in fields of activity rather different from conventional or traditional mainstream academic research and education. This has included industry related research and development, consultancy, technology transfer, continuing education and lifelong learning in various forms, a considerable influx of non national students to the campuses, substantial overseas delivery of education through offshore campuses, franchise arrangements, and e-learning, and the commercialisation of physical campus assets like halls of residence and sports facilities for external use. The volume and scope of this will vary significantly across universities and countries, and the commercial advantage to a university even more so. We also see the experiences gained by universities in

these domains transferred back into mainstream activities which thus may change as a consequence in substance, technique, and in market orientation.

Whilst many of these developments commence in *ad hoc* manner and individually inspired, over time there emerges a set of institutional beliefs which are commonly espoused across a wide range of members and external reference groups. As Clark (1998) indicates, an unifying identity of associated behavioural patterns coalesce which give practical operating effect to the beliefs, and which harden and may be subject to post hoc rationalisation, if success is demonstrable. This article explores the nature of a so-called entrepreneurial culture, using evidence derived from numerous Strategic Audit exercises undertaken for CRE and for CRE-IMHE-ACA (the International Quality Review), and substantial case study based projects undertaken for UNESCO-CRE, the CRE-EU-ERT (European Round Table of Industrialists), and the UK Committee of Vice Chancellors and Higher Education Funding Council for England, as indicated in the text and references. The particular focus of the article is the means by which such cultures may be developed and sustained. It is recognised at the outset that different emphases and approaches would be needed for different institutional settings, and that the imperatives to develop such a culture may also vary widely.

CONSTITUENT ELEMENTS OF AN ENTREPRENEURIAL CULTURE

Pre-entrepreneurial culture

Any consideration of the evolution of an entrepreneurial culture needs to recognise the nature of pre-entrepreneurial university cultures. Whilst it would be rash to infer universally common characteristics across a whole range of European university types and systems, the following may nonetheless be immediately recognisable. There is normally a low corporate/central identity and presence, with a tendency to be non-interventionist in most areas of university life. The culture is highly individualistic and very respectful of individual autonomy, which often means isolation, defensiveness and a denial of the need for overarching strategies either at faculty or university levels. Response to external opportunities will tend to be individualistic, and the norms of the academic market place will be distrusted. The culture is predominantly kind, non-threatening and safe, and personal or group accountability tends to be low in terms of internal processes. There may be a reluctance to confront problems – often interpreted mistakenly as a sort of consensus, and the regulations dominate non-academic matters, especially in systems where the state administrative ethos is strong. Conventionally, the institution as a whole will have limited time horizons, and its goals will be ambiguous, imprecise, and sometimes unconnected to precise instruments of change. Major policy decisions will tend to be very slow,

given the checks and balances of various kinds. The dominant norms would be those of the collegium and bureaucracy.

Factors which may destabilise the central status quo

It is not the main purpose of this article to trace the factors which may cause a shift from the cultural characteristics described above. However, they would certainly include:

- Reductions in public financial support for universities which create an imperative for new and diversified financial sources.
- Continuing pressure on universities from governments and the industrial sector to develop applied research and make available education in forms of delivery congenial to companies and public sector organisations (Gibbons, 1998).
- The lifelong learning movement (Ojala, 1998).
- Globalisation of higher education in its various forms and the opportunities offered by the information/knowledge society revolution (Duderstadt, 2000; Scott, 1999).

These factors would certainly pose significant questions against the ability of universities to respond coherently in terms of existing processes, norms and traditions. Hence their destabilising effect on conventional university cultures.

Entrepreneurial cultures

In the institutions analysed by Clark (1998), and by the author, quite different characteristics may be discerned to those described earlier. Whilst there is huge respect for the successful individual academic or group, there is normally an acceptance of the need for university level strategic thinking to set a policy framework in the light of internal and external assessments, and to prioritise and make choices systematically. There would be belief that decisions are best made openly and quickly, on the grounds that external relationships are likely to be more effective as a consequence. In contrast to the defensive individuality discussed earlier, the entrepreneurial culture will tend to be marked by more open communication and frankness; the ability to handle internal comparisons and competitiveness transparently; a collective ability to admit to weakness and act accordingly; a preparedness to confront problems; and a readiness to be accountable, academically and financially. One will generally observe mutually supportive and informal relations between individual, department and centre, and recognition that failures or successes in one area have negative or positive consequences for everyone else. The entrepreneurial culture is generally characterised not only by the willingness to take risks and to experiment with new things, but by the ability to evaluate those ventures, learn collectively from experience, and transfer the

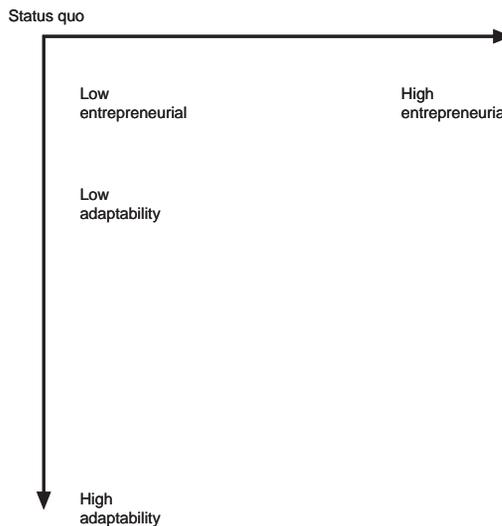
essence of experience across the university. There are clear links with the concept of the “learning organisation” and the manifestation of a so-called “quality culture”. Leadership will tend to be developmentally oriented at all levels [which, of course raises issues about the (s)election of leaders at all levels] and displays the ability to drop or change rules which inhibit development.

It was observed in the first IMHE study (Davies, 1987) that entrepreneurial universities are unlikely to be neat and tidy universities for these reasons. Subsequent studies confirm that a toleration of ambiguity and a certain messiness is a prime characteristic. The above characteristics would be set within the context of a firm policy framework, coupled with relatively loose operational control, to facilitate individual creativity, *i.e.* this would be an entrepreneurial rather than corporate ethos.

Dimensions of responsiveness

However, there is one signal difference in the two sets of characteristics which needs highlighting (see Figure 1). A university which, at whatever level, reveals itself to be competent at recognising external opportunities and threats, and devising policies and activities to meet these is not necessarily entrepreneurial, though it may be highly responsive and very adaptable. Entrepreneurialism is

Figure 1. **The entrepreneurial university: dimensions of responsiveness**



also about financial consciousness, the ability of the institution and its members to exploit commercially the opportunities presented, and to generate surpluses which may be used to invest in further development, or meet deficits incurred by government financial reductions or declining enrolments or other academic business. Indeed, it is no coincidence that entrepreneurial, as distinct from (or in addition to) adaptive responses, are often found in systems where financial reduction has destabilised institutional security. To the characteristics discussed, we much therefore add a consistently strong commercial and financial awareness. It does not follow that the non-commercially oriented university is bad – it simply means that it is not entrepreneurial according to this definition, and the commercial ethos is rather more restricted.

Figure 1 has therefore implications for university strategy: to expand too far on the vertical axis without compensating expansion on the horizontal axis can easily lead to over diversification and “over-trading” without the financial advantage which should accrue. To be overbalanced on the horizontal axis is likely to mean unhealthy attention to short term financial gain, without doing the necessary investment in diversified academic offerings.

CONCEPTUALISATION OF THE DIMENSIONS OF CULTURAL TRANSFORMATION

Assuming that an institution is attempting to move itself to an entrepreneurial mode, it is pertinent to consider how this implementation of entrepreneurial modes occurs. Looking across a wide range of institutions in different systems, it is apparent that two dimensions of this may be detected (Figure 2).

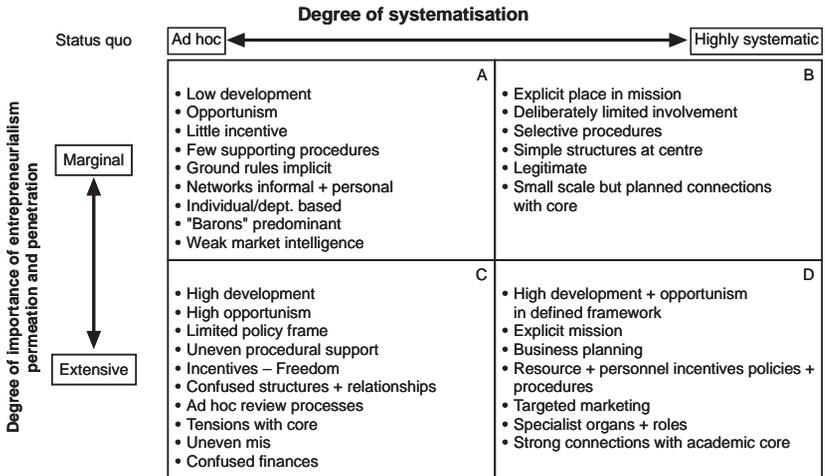
Degree of importance of entrepreneurialism

This relates to the nature and rate of expansion of entrepreneurial activity (continuing education, R and D, technology transfer, consultancy, etc.), and a spectrum may be observed from situations where this type of activity is really quite marginal to the institution, and has not permeated the culture to any significant degree, to situations where it is very extensive and part of the lifestyle. Logically, the larger the volume of such work, the greater the likelihood of a general shift in culture, though the expansion could be contained within particular parts of the institution, either in parts of Clark’s “heartland” or confined to the “developmental periphery”.

Degree of systematisation

It is conventional for such activities to start in localised pockets as a result of personal and often private initiatives, and where it would be unusual to find any supporting or consistent policy or procedural framework to guide efforts (*i.e.* the

Figure 2. Means and style of development of entrepreneurial cultures



development is largely *ad hoc*). On the other hand, depending on the perception of the leadership and administration, such activities could be increasingly set within an explicit policy frame with carefully designed processes and support mechanisms to help things along, *i.e.* systematic facilitators.

Implications of the model

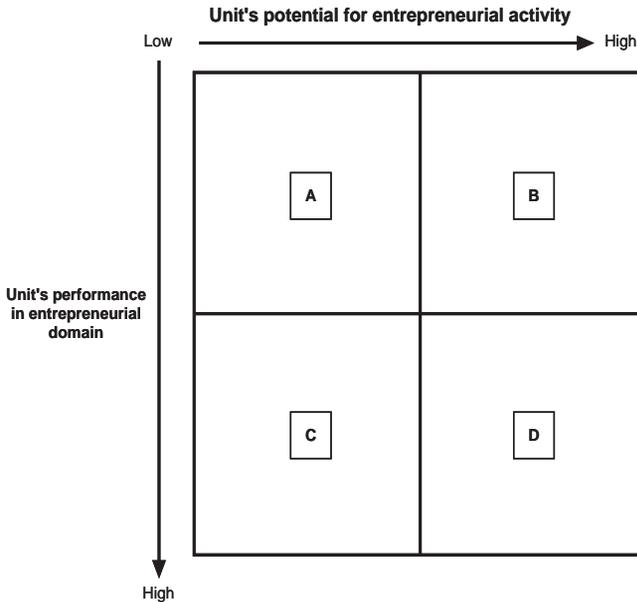
It is usually possible to analyse an institution and locate its current position in one or other of the four quadrants *i.e.*:

- A: *ad hoc* – Marginal: low development and relatively unsystematic.
- B: Systematic – Marginal: relatively low level of development, but explicitly and carefully supported.
- C: *ad hoc* – Extensive: considerable development, rather disorganised.
- D: Systematic – Extensive: considerable development, well and explicitly supported and organised.

Indications of the characteristic feature of each sub-type are indicated in the quadrant boxes, and each already contains different assumptions about the nature of the organisational culture.

Of course, it may well be more convenient and useful for practical purposes to analyse each faculty or unit in terms of these factors, especially where effort is decentralised and differentiated.

Figure 3. Entrepreneurial potential and performance



Having located in which quadrant the university or the unit is at present, the next question is “to where does the organisation wish to develop?” *i.e.* if it is in Quadrant A, should it expand into Quadrant C, or systematise its efforts in the direction of Quadrant B? It might be argued from some institutional cases studied that Quadrant C is typified by excitingly frenetic entrepreneurialism, strong on adrenaline, but rather inefficient and displaying strong symptoms of fragility. Consequently, movement from Quadrant A to Quadrant B might be rather advisable, before too much expansion is contemplated, to ensue that sustainability is in-built from the start. Sustainability of entrepreneurial endeavours is clearly vital in the building of an entrepreneurial culture, and in this regard, Quadrants B and D are probably preferable to universities eager to develop their efforts in entrepreneurial directions.

Assuming a university wishes to move its cultural profile from Quadrant B to Quadrant D, the next questions are “how does it do this?” and “what instruments of transformation may be used?” and we shall shortly turn to this.

Entrepreneurial potential and performance (Figure 3)

It is quite natural that across universities, different faculties or departments will have more or less potential for entrepreneurial activities and the commercialisation

thereof, owing *inter alia* to reasons of subject culture and paradigm; degree of professional or business application; buoyancy of the market demand and ability to pay for university services (see the horizontal axis on Figure 3). Thus, one would normally expect units like information technology, business, law, engineering, biotechnology, etc. to have more potential than say theology or history. Having said this, the author was most impressed by the earning power of a department of moral philosophy student in one university which, because of contracts in ethical codes of conduct relating to electronic communications, earned more in a given year than the engineering faculty.

This implies a second dimension as indicated in the vertical axis of Figure 3 – actual performance in the entrepreneurial domain. From this matrix, one can thus also identify four Quadrants. It is possible to locate a department, faculty or centre into one or other of the quadrants, as follows:

- Quadrant A: Unit with low potential and low performance.
- Quadrant B: Unit with high potential and low performance.
- Quadrant C: Unit with low potential and high performance.
- Quadrant D: Unit with high potential and high performance.

Implications of the model

For Quadrant A units, there is perhaps little to be surprised about, or to be done other than encouragement to exploit what can be exploited without displacing basic goals. For Quadrant C, for the university there is the matter of congratulations and identifying precisely how this has happened and what can be learned in the way of good practice. For Quadrant B, the question is “why has the unit been unable to realise its potential?”, and answers could lie in leadership, departmental culture, the absence of facilitators, staff capacity and capability, the lack of quality time – or poor financial management. For Quadrant D, the question is probably “how much more investment could produce more high quality results, without distorting the unit or institution?”

Sustainability is thus ultimately connected with unit and university culture. We now turn to evidence of key instruments of cultural change.

THE SEARCH FOR SUSTAINABILITY IN INTERNAL CULTURAL TRANSFORMATION

The evidence of the cases in the CRE and UNESCO studies demonstrates that there are a number of key domains in which practices are likely either to act as facilitators or constraints in the development of an entrepreneurial culture. Underlying this seems to be two major assumptions. The first is that developing the appropriate context, procedures and instruments will condition and channel behaviour in strategically desired directions. The second is that these instruments,

unless they capitalise on academic motivations, and their fundamental academic and personal interests (which include professional and financial interests) are unlikely to be very successful, given the prevailing orthodoxies of collegial cultures. The discerning eye will detect a possible tension between these two assumptions, especially when placed in the setting of hitherto decentralised institutions. The resolution of the tension is partly to be found in the manner in which the “strategically desired directions” are evolved and legitimised. This implies a very open and consultative process where the consequences of not pursuing at least a minimum of strategic direction (defined in terms of destination rather than management style) are fully articulated and understood. Thus, the entrepreneurial model is different from the corporate model in terms of the style of policy formation and the flexibility evident in implementation mechanisms according to the particular setting. Some indications of the instruments in particular domains are now discussed.

The personnel domain

It seems fairly obvious that culture change should internally involve the personnel function in its broadest sense. Here, universities differ considerably in the flexibilities afforded to them by state finance higher education agencies to cope with the challenges of the market economy, and whilst governments may, on the one hand, create the driving forces for entrepreneurial change, on the other hand, they may well (wittingly or unwittingly) impose handicaps to a creative response by the universities. Notwithstanding this, however, the main instruments seem to be:

- Ensuring that structured quality time can be carved out of the teaching week for entrepreneurial activities, which by definition, tend to be non-routine, often conceived and required at short notice and unpredictable. Instruments here would include flexible timetabling of teaching, semesterisation, and funds for the buy-out of staff from regular teaching.
- Creating sensitive and explicit reward and incentive structure, certainly based on job satisfaction but probably also including access to scholarly time; development funds; reasonable shares of intellectual property income (patents, licensing, etc.); and the recognition that excellent endeavours in non-traditional “third stream” activity qualifies staff for promotion and career advancement in the same way as good performance in research (and teaching?).
- Providing appropriate staff development opportunities for academic and administrative colleagues to obtain competence and familiarity with existing institutional task and preparing them for highly innovative areas (Davies, 1998*b*). Topics would include training in consultancy; marketing, especially internationally; continuing professional development pedagogy; IT related pedagogues,

and central policy initiatives. In this context, one may note (Middlehurst *et al.*, 2000) the progressive deconstruction of the traditional academic role which tends to typify many in electronic learning initiatives. This clearly has profound implications.

- Designing flexible contractual arrangements to cope with non-traditional work patterns – imaginative fractional contracts; ease of recruitment of non-nationals; flexible conditions of service, and flexible and competitive salary arrangements.
- The hiring of external staff specialists as change agents in the entrepreneurial domains as consultants, full staff members or fractional appointments to bring to the university skills not common in the average academic (*e.g.* media based learning). There will certainly be issues of salary competitiveness here if industry and business are the source of such appointments.

The entrepreneurial university is also one which from time to time will want to shift resources across the university from declining to expanding areas. This, and the above pose formidable challenges for the personnel function, university management and state agencies.

The financial domain

Consistent with earlier definitions of “entrepreneurial” (financial consciousness and the commercial exploitation of external opportunities), it is very clear from Clark (1998) and Davies (1987) that instruments in this domain are critical for the establishment and sustainability of an entrepreneurial culture. Clark commends respect for good financial management both as a means of facilitating academic initiatives and as a means of ensuring accountability throughout the institution.

The cases analysed in the CVCP/HECFCE (Middlehurst *et al.*, 2000) and CRE-EC studies (Davies, 1998a) reveal (*inter alia*) the following key instruments of culture change in this domain:

- Continued advocacy from centre and deans of “a surplus oriented mentality” in the costing and pricing of contracts and services.
- The designation of academic units at an appropriate level (faculties or departments) as budget or profit centres, as distinct from simply cost centres, where all forms of income and expenditure are targeted, recorded and monitored, and surpluses (or a reasonable proportion therefore) are retained by the Unit for subsequent redistribution or investment. This emphasizes considerable operating freedom for the unit in how it achieves the agreed target and provides considerable incentives for its members to earn additional income. Considerable switches of expenditure between budget heads would be the norm.

- Incentive mechanisms derived from the above with a share-out of overheads and surpluses to individuals, groups, departments/faculty and university, on some pre-arranged percentage formula.
- Development funds for new initiatives at university or faculty levels.

Some may not unreasonably assert that the pre-eminence of financial instruments is a wholly unhealthy evolution in an academic community, and so it would be, if it distorted behaviour in self-centred directions; set up “fortress faculties” and deterred informal and/or cross-disciplinary initiatives. In this regard, the university’s processes would need to be designed – and a constructive culture engendered – to prevent this happening. Nonetheless, at their best, most sensitive financial instruments are a very effective way of development and sustaining an academic entrepreneurial culture.

The quality domain

Entrepreneurialism is frequently asserted to have its “seamy side”, the distasteful consequences of a financially driven institutional system. The international higher education press is certainly not short of examples of the “seamy side”, which may be classified thus:

- The sacrifice of quality standards in the interest of cutting costs or generating more surpluses (overseas franchise courses are often cited by the UK Quality Assurance Agency as being prime examples of this).
- Unethical advertising for business by universities.
- Failures of consumer protection.
- Standard courses of education which are demonstrably unsuited or unadapted to particular client groups (local, industrial or international students).

All the above pose for universities challenges of crisis prevention and reputation protection in potentially all entrepreneurial domains. This would seem to argue for robust quality processes for audit, assurance and evaluation to guarantee integrity at various levels from government agency down. Quality processes and regions across Europe, of course, differ considerably in orientation, intensity and effect, but if we follow a “fitness for purpose” conception, universities may certainly design quality processes to support entrepreneurial activity and condition behaviour to this end. Among the possibilities here are:

- Quality audit criteria directly relevant to entrepreneurial domains such as continuing professional development, or the recruitment and teaching of international students.
- Quality processes specifically designed to provide a client service focus *e.g.* ISO 9000, or Total Quality Management, which assesses the relevance and effectiveness of processes designed to deliver, for instance, an R and D

project, or a Euro-doctorate. Here the focus is on the satisfaction of the client not the producer.

- Quality processes designed to induce improvement and development – hence the significance of staff development.
- Quality processes designed to recognise good practice in entrepreneurial activities in various parts of the university, and to transfer this learning not only to other parts, but to mainstream educational and research activities also (for instance, the adaptation of media-based learning methods for traditional student populations; the use of R and D methodologies in course-based research). A variety of techniques are available for this purpose.
- Service agreements for central administrative units to ensure they provide adequate support for new endeavours rather than pursue narrower professional aims.
- Adequate ethical procedures.

Quality instruments have considerable potential to challenge and destabilise existing entrenched attitudes and behaviour, and to move an institution to different norms of behaviour – as long as the processes are of the “fitness for purpose” type, designed collectively and applied sensitively. Evidence shows this is not always so, in which case, a considerable opportunity to engender movements in an entrepreneurial direction may be lost. It has to be said that some quality regimes are so intensely bureaucratic and inward looking that they actually stifle the necessary flexibility for entrepreneurial activity.

Finally, it seems fairly clear that universities need to check constantly the effectiveness of their instruments in these various domains.

STRATEGIES OF CULTURAL CHANGE

If the above discussion is directed to issues of sustainability, this still leaves the question of what general strategies of cultural change may be appropriate in motivating the institution to take aboard entrepreneurial strategies in the first place.

General leadership approaches

Analysing the evidence from the case studies, one can detect three types of approach deployed by university leaders to advance entrepreneurial developments, which are by no means mutually exclusive:

- Rational – empirical approaches rely on an appeal to reason, to demonstrate to the body politic that entrepreneurialism in one form or another, is

highly desirable. This appeal might encompass reference to the consequences of financial reduction, to inter-institutional completion or to the advantages of being a global player or of being a focus for regional development. Market research, programme planning and good management information are tools to this end.

- Normative – re-educative approaches rely on supporting and enabling colleagues through the encouragement of a positively supporting climate; persuasion, incentives for individuals and departments, and effective staff development.
- Power – coercive approaches are based on the exercise of authority and control through threats, sanctions, withholding of funds, changing organisational structures, the removal and installation of key personnel, and resource re-allocation.

Clearly the particular circumstances will strongly condition what mixture of approaches is used – personalities, the nature of the prevailing culture, political configurations and economic conditions. Using the wrong tactics in specific circumstances will clearly be counter-productive in cultural evolution.

Levels of institutionalisation

The “permeation” model referred to in Figure 2 needs to be considered in terms of the penetration of the entrepreneurial belief and practices to various levels within the university. Thus the activity would need:

- Incorporation within the role of the academic (as appropriate) implying explicit job descriptions and rewards and incentives.
- Institutionalisation within the discipline or department or faculty as appropriate as a third stream of activity (consistent with Clark’s stimulated academic heartland).
- Embedding at institutional level (consistent with Clark’s developmental periphery and the strengthened steering core).

These are not at all mutually exclusive, but more likely to be mutually reinforcing.

Spectrum of positioning strategies

Evidence indicates that there is a spectrum of positions which universities and their leaders may adopt to develop entrepreneurial strategies. These range from the so-called Big Bang approaches at one end to Incrementalist approaches at the other (Davies, 1987).

The Big Bang approach is typified by a comprehensive and integrated grand strategy from the start: highly integrated vertically and horizontally; explicit with a strong PR dimension, highly rational and driven from the top, and with a differentiated organisation structure to deliver the strategy.

At the other end of the spectrum are a range of Incremental possibilities, which are based on so-called “low threshold” approaches, designed to reduce barriers gradually and empower colleagues to get involved. At its worst, this is marked by drift, indecisiveness and an inability at any level to conceptualise strategy. At its best, the leader is in effect creating an entrepreneurial culture by assembling a jigsaw, the total identity of which is probably only known to a small group. It is thus based on the gradual assembly of the various instruments appropriate to particular domains discussed earlier, low risk, a steady accumulation of trust and political bargains, a problem-solving capacity and a general low-key unobtrusive style. The encouragement of private consultancies and their gradual absorption into official institutional work is a considerable challenge here, especially for deans and department heads. Leaders have some sort of choice as to which position they adopt, but the cases demonstrate that the factors governing the choice are complex both singly and collectively, and include:

- The extent of crisis in the university or local/regional community, usually economic, which needs resolution in a limited time frame.
- The nature of opportunities available for such work, and the demands on the university.
- The source of the stimulus in political terms (internal or external) and the political clout of the various players (politicians, bankers, rectors, industrialists, etc.) in being able to impose agendas on the university.
- Institutional traditions.

It is also evident that tactics deployed to “loosen-up” the university to prepare to entrepreneurial endeavours, and those to “move” the university do tend to differ in terms of where on the Incremental – Big Bang spectrum the university positions itself.

DEVELOPING A CULTURE OF SUSTAINABLE UNIVERSITY STAKEHOLDER PARTNERSHIPS

Whilst much of the existing literature on the entrepreneurial university is rich on what universities need to do internally to prepare themselves for entrepreneurial endeavours, it is much more modest on the issue of creating successful partnerships with external agencies from a behavioural point of view. Yet it is clear that a university can only be entrepreneurial if it has good client relationships,

and what factors lie behind effective partnerships is a topic worthy of considerable further study.

The stakeholders we are talking about here would include municipalities, other HEI, chambers of commerce, regional authorities and development agencies, private enterprises of various kinds and sizes, banks, cultural bodies, trade unions, social NGO's, media, and employers' associations. The CRE-EU-ERT Study (Davies, 1998a) which devoted considerable attention to this issue, found that, in 20 cases drawn from across Europe, by far the most frequent and permanent contacts were with municipalities, other HEIs and chambers of commerce, and most universities conceded they had a long way to go in this domain.

It is evident that universities and other stakeholders have rather different organisational cultures and basic beliefs and agendas which condition behaviour. To take an example, in the relatively narrow field of technology transfer, companies generally require knowledge which is specific enough to be commercially applied; their timespans are short; decision-making is relatively quick compared to universities; they would wish to own the intellectual property for purposes of commercial exploitation, and would not be very keen on the publication of results of R and D to a wider world. Universities on the other hand tend to wish to probe the more fundamental aspects of a research issues: the time horizons are longer; and the "publish or perish" axiom is readily discernible (Goddard, 1999). Whilst the above portrayed is no doubt greatly oversimplified, it does point to the difficulty of obtaining congruent cultures.

In addition to the above, the CRE-EU-ERT study identified other barriers to cultural convergence. Whereas individual academics no doubt get on very well with particular stakeholders, elevating this relationship to a corporate/institutionalised level is more troublesome. Whilst individual links may be very effective, they are decidedly vulnerable because they all personalised the old problem of sustainability. There is often a slow development of a mutual problem-solving culture, weak communication links, short-term-ism, and an in-built competitive instinct between universities and other providers. When one imposes national or institutional bureaucratic or policy constraints (*e.g.* curriculum design, credit recognition, carry-over of monies across financial years), the difficulties are compounded.

The issue of inter-organisational cultural convergence is thus difficult. For very obvious reasons, each partner's operating culture is well established and fulfils instrumental purposes in its own domain. Two broad alternatives therefore emerge to cope with this challenge, which are certainly not mutually exclusive, and are closely related to different structural patterns:

- The basic cultures are maintained, in separate organisations, and dialogue takes place across the inter-face, to achieve greater understanding and effective joint action. This is clearly facilitated by secondments of university

- Time spent on developing understanding is a good investment.
- Many factors will influence progress along the spectrum – personal relations, institutional sophistication at, for instance, R and D, the ability of participants to move from *ad hoc* to systematic approaches, openness and honesty; a belief in synergy.
- Regression is always possible – and indeed, a natural element of joint learning.

Finally, we should observe that, whilst entrepreneurialism may be said to be a consequence an increasingly competitive world of higher education, it does not preclude strategic alliances with other providers, both higher education and commercial. Indeed, the formation of sound strategic alliances is likely to be a prerequisite of entrepreneurial success in a competitive setting. Whilst the discussion has focused on the example of university-industry partnerships, we increasingly witness the development of inter-institutional consortia like *Universitas 21*, the European Consortium of Innovative Universities, etc. The cultural dynamics and sustainability of such entrepreneurial consortia is another important field of study.

CONCLUSION

It will be apparent from the above that the development of a sustainable entrepreneurial culture is a complex and difficult business, and the author does not wish to be prescriptive about either the desirability or inevitability of the phenomenon, nor indeed how universities should set about, changing existing cultural patterns. Institutional national and regional cultures, governmental and economic systems, and the stimuli to become entrepreneurial clearly differ, and so must the responses.

However, the role of the university leadership in culture change is important. Clark (1998) talks of the “strengthened steering core”, and its role in moving the university, through a change agency function in gospel spreading, resource redistribution – “centralised decentralisation”. The above evidence reinforces understanding of the critical role of leaders in cultural evolution, through the development of policy and related instruments and their interpretation of external signals. Personal leadership style is clearly very relevant involving self-criticism, trust and openness and a strong problem-solving focus.

Government and higher education agencies also have a role to play in stimulating entrepreneurial cultures. It could be argued that stimulation is relatively easily done – by reducing governmental financial support, as the case of recent conservative administrations in UK and Australia demonstrate. Sustaining entrepreneurial endeavours is a different proposition, but can be done through a variety of means, including the encouragement and support of mission diversity in

higher education; deregulation on a number of fronts; investment in university capacity (*e.g.* in IT with reference to virtual provision); resource incentives; incentives for university-stakeholder collaboration; and by quality regimes which recognise the client/market dimension and all which follows therefrom. European governments are very varied in their understanding of, and support for the evolution of entrepreneurial culture in universities.

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Promoting Academic Expertise and Authority in an Entrepreneurial Culture

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ABSTRACT

The prospects for success of efforts to develop an integrated and positive entrepreneurial culture hinge almost entirely on a clear understanding of the primary work motives and values of academics. This means working within and promoting the implicit values of the academic heartland. This paper will draw on the findings of trends in the work roles and values of academics in Australian universities from a 1999 national survey of academics in Australian universities conducted by the author. The data also provides some clear trends over the last five years that directly inform thinking about the capacity of academics to adapt to, and work effectively in, entrepreneurial university cultures. The paper argues that enabling academics to manage the growing complexity of their working lives is a prerequisite to the kinds of entrepreneurial activities essential for organisational success. Closely related is, of course, the need to rethink reward systems and incentives for academics if they are to contribute to organisational goals. The paper will suggest starting points for establishing priorities for the implementation of institutional management strategies aimed at transforming the work roles of academics.

INTRODUCTION

The connection between rewards and performance for academics has become particularly critical as universities increasingly expect academics to adopt and advance institutional goals. Marked changes in the work roles, motives and values of academics confirm the growing complexity of the academic work environment and the difficulties embedded in the current reward systems. Recent developments in understanding the nature of motivation and entrepreneurial creativity suggest that strategies aimed at stimulating and supporting academic entrepreneurialism involving the undermining of existing intrinsic and extrinsic rewards might be

seriously misguided. Worse, the introduction of new incentives – if managed inappropriately – can quite possibly be counterproductive to the goals of the entrepreneurial university.

Academic expertise, authority and identity are tightly meshed with the primary work motives and sources of satisfaction that enable academics to be productive and successful. These cannot be understood without reference to the differential impact of extrinsic and intrinsic motivation. Efforts to transform universities towards entrepreneurial cultures are problematic, if not futile, unless institutional leaders and managers understand the skills, passions and outlooks of academics, and how their performance in their core work is influenced (or not) by reward systems. Ironically, the incentives that have traditionally driven academics to do what they do best, are the elements that the research suggests are most likely, in part at least, to promote creative entrepreneurialism. Yet these incentives are in danger of being distorted by the pressures on universities to seek new horizons and new ways of doing business.

An “integrated and positive entrepreneurial culture” (Clark, 1998) by which a university might transform itself into an institution that reworks its processes and structures is only possible if it is underpinned by an understanding of the academic heartland. In Clark’s terms, it involves some serious risk-taking, is innovative, and emphatically focused on positioning the university to meet the challenges of the future. Clark (1998, p. 3) is at pains to point out that he is referring to the “entire social system that is the university”, and that, while entrepreneurialism is commonly associated with individual effort:

“Collective entrepreneurial action...is at the heart of the transformation process...Groups of academics and administrators can fashion new structures, processes and orientations whereby a university becomes biased towards adaptive change... Academic groups can also help insure that academic values will guide transformation.”(Clark, 1998, p. 4)

Nevertheless, the collective orientation of academics is limited by the extent to which individual academics are predisposed to join entrepreneurial ventures, and the ways in which their heartland values and motives are acknowledged in the work they do. The nature of academic work roles and their shared motives and values are the driving force behind the university culture on which ambitions for collegial entrepreneurialism are built, or dashed. Why some universities fail and others succeed in this endeavour is to a large extent dependent on the work orientations of academics and their daily habits of work. These are deeply embedded in the processes and structures of universities, and it is something of a truism to observe that academics have long resisted change. Indeed, the values and work habits of academics are often seen by administrators as a major obstacle to

change (McInnis, 1998) in ways that seem seriously at odds with the new realities of the last decade or so driving institutional transformation.

Spender makes the point, with respect to Australian universities, that “While all other institutions and enterprises around them have restructured to participate in the new economy, universities have made a virtue out of preserving the old one” (2000, p. 13). Although this is a somewhat exaggerated critique, and does not acknowledge the extraordinary efforts of many Australian universities to step into, and indeed play a leadership role in the knowledge economy, it does fairly reflect the level of debate about the restructuring of Australian higher education over the last decade that dominates media discussion. The insistence of universities on “old forms”, as Spender describes them, limits the possibilities for innovative breakthrough:

“Their emphasis is on getting more income, rather than on wealth generation. This leads to a culture of complaint, and not the recognition of opportunity.” (2000, p. 13)

However, there is mounting evidence that the everyday realities of academics are changing to a point where openness to the kinds of institutional change that creates a culture of opportunity is increasing. And, of course, there is the agenda of necessity whereby individual academics are faced with the stark choice of adapting to new demands, or becoming redundant. While fear may be a motivator in many circumstances, it is unlikely to generate the kind of creativity necessary for producing the best that academics can offer. The challenge of engaging academics in the process of developing an integrated and positive entrepreneurial culture therefore hinges on getting the balance of motivating factors right.

FORMS OF MOTIVATION FOSTERING ENTREPRENEURIAL CREATIVITY

Academics have long been primarily concerned with satisfying intrinsic motives. That is, they are driven by the need to satisfy their curiosity in the subject matter, and they are typically less motivated by the perception that the work will reap rewards outside the work itself. In a series of studies of the motives underlying innovative behaviours, Amabile (1997, p. 21) argues that intrinsic motivation toward a task can be “temporarily undermined by the experimental imposition of salient extrinsic constraints such as the promise of a tangible reward or an expert evaluation”.

Of particular interest to those leading institutional change is the finding that extrinsic motivators and constraints have a similar impact on creativity. Amabile (1997, p. 20) defines entrepreneurial creativity as the generation or implementation of novel ideas to establish a new venture of some sort. While experimental research demonstrates that intrinsic and extrinsic motivation frequently operate in some form of opposition, recent research in a range of work environments –

including research and development laboratories – suggests that some extrinsic motivators actually operate as supports to creativity. These have particular relevance to efforts to create positive entrepreneurial environments in universities where academics are crucial to the transformation process.

The extrinsic supports that appear to count most are: reward and recognition for creative ideas; clearly defined overall project goals; and frequent feedback on the work. Moreover, the most salient intrinsically motivating factors that support creativity are: a degree of autonomy in the work; work that is perceived as challenging and important; and a sense of interest and excitement in the work itself. The rewards that seem to have most impact are those that confirm the competence of the individual, and those that enable the individual to pursue more intrinsically interesting work (Amabile, 1997, p. 22).

A formula of sorts – implicit in the analysis of Amabile and her colleagues – is that the generation of entrepreneurial creativity requires a large component of intrinsic motivation, plus certain kinds of extrinsic motivation that Amabile calls “synergistic extrinsic motivators”. These can combine positively with intrinsic motivators. The most powerful mix of motivational elements stimulating creative entrepreneurialism produces a synergy based firstly on strong levels of personal interest and involvement in the project itself. The second facilitating aspect concerns rewards (promised or real) that achieve three things: they confirm the competence of the individual; they support skill development; and, they enable future development. For those interested in motivating academics it is worth noting that:

“The extrinsic motivators of tangible reward – such as winning external funding or achieving generous profit margins – will enable the entrepreneur to continue playing the game.” (Amabile, 1997, p. 24)

The metaphor of the pin ball game (Kidder, 1981) should be readily recognised by academics and those who observe them. Winning a grant means they get to stay in the game to make another machine, develop a new technique, or pursue an alternative line of enquiry.

Amabile’s research program also identified the rewards that “confirm competence without connoting control”. These are potentially critical to any endeavours to develop an entrepreneurial culture in academic environments where the resistance to change is likely to be in direct proportion to the decline in the amount of control over the work itself. In contrast to “extrinsics in the service of intrinsics”, controlling forms of extrinsic motivation have a negative effect:

“... if entrepreneurs find themselves in circumstances where their sense of self-determination is undermined...they may well begin to cognitively and emotionally disengage from the specific problems to be solved, and their creativity may decline.” (Amabile, 1997, p. 24)

THE CHANGING WORK MOTIVES AND VALUES OF ACADEMICS IN AUSTRALIA

Results from an ongoing national study of academics shows some important trends in the factors influencing the work motives of academics, and the extent to which their current work environment is an appropriate base on which to build an entrepreneurial culture. The data comes from two national surveys of academics in Australia, the first by the Centre for the Study of Higher Education (CSHE) in 1993 (McInnis, 1996), and the second was a Department of Education Training and Youth Affairs (DETYA) commissioned national survey conducted by the author in 1999 (McInnis, 2000). The aim of the 1999 survey was to explore trends in the work conditions, preferences, sources of satisfaction, and outlooks of 2 609 academics from 15 Australian universities across five states. The 1999 study focused in particular on the changing level of commitment of academics and the factors influencing their changing outlooks and motives given that the identity of academics has long been defined by: "...the level of satisfaction they get from the work itself and the degree of choice they have traditionally had over their work agenda." (McInnis, 2000, p. 4).

However, the context of Australian higher education has changed in the last five years, and sources of academic motivation and satisfaction have been under enormous pressure. The data in Table 1 show a major decline in the general job satisfaction of academics from 67 % in 1993 to just 51 % in 1999. Further, slightly declining proportion of academics continue to be more motivated by the work itself, and about half still describe their work in terms reflecting the power of intrinsic rewards.

Table 1. Trends in work values, satisfaction and outlooks 1993-1999
(% agree on 5 point scale collapsing categories "strongly agree" and "agree")

	1993 N = 1 340	1999 N = 1 610
I am more motivated by intrinsic interests in my work than by material rewards	80	75
I subordinate most aspects of my life for my work	53	51
Generally speaking I am satisfied with my job	67	51

Source: McInnis, 2000.

While the extremely low satisfaction with salary shown in Table 2 is the most important determinant of overall satisfaction, job security and the importance attached to the autonomy to pursue their own academic interests were ranked the highest in the 1993 study (McInnis, 1996). But as the data clearly shows in Table 2, there has been a major decline in all three of the key work motives, and especially the autonomy factor – the opportunity to follow their personal interests – which dropped in satisfaction level from 66 to 53 %.

Table 2. Trends in satisfaction with key work conditions 1993-1999
 (% satisfied on 5 point scale collapsing categories "very satisfied" and "satisfied")

	1993 N = 1 340	1999 N = 1 610
Your academic salary	37	31
Security of your job	52	43
Opportunity to pursue your own academic interests	66	53

Source: McInnis, 2000.

The strength and consistency of these work motives across the survey sample – in markedly different institutions – is striking. However, the data (McInnis, 2000) show some diversity across fields of study, with, for example, a strong contrast between those in Humanities, and those in Business in terms of the extent to which they are motivated by intrinsic interests (81 % c/f 66 %).

Added to the somewhat gloomy picture is the profound increase in the demands and complexity of academic work in Australian universities reported in the 1999 study. The average working hours have increased since 1993 from 47.7 to 49.2 hours per week, but perhaps more importantly, 55 % of the sample believed their hours had *substantially* increased over the last five years. Moreover, while the proportion of time spent on teaching each week has declined slightly over the last five years from an average of 53.0 to 48.7 %, the time spent on administration (covering a broad range of "non-core" activities) has increased significantly from 6.4 hours per week to 8.4 hours. These are widely regarded as a serious distraction from the core activities of teaching and research, let alone the activities necessary to promote entrepreneurialism.

It is perhaps useful from the point of view of institutional management to note that the major demographic influence on overall satisfaction is career stage. Relative to mid-career academics, those in their early careers (seven years or less) are much more satisfied, while those in their late careers are somewhat less satisfied. In other words there is a clear trend towards dissatisfaction for most academics as they move through the three career stages. While there are no great differences in the levels of intrinsic motivation from early to mid and late career, early career academics are least likely to be working in research that involves the advancement of theory, although it should be noted that this still occupies the interest of almost two thirds in this group. The early career academics are also significantly less likely to be conducting research that informs their teaching. Efforts to promote a culture of entrepreneurialism might do well to put the next generation of academics at the front and centre of their institutional strategies:

"Since most of this early career group have only experienced academic life in the nineties it is reasonable to assume that their perceptions are less influ-

enced by contrasts with the past era that many older academics clearly regard as better days. From a policy and leadership perspective it seems wise to at least start with the assumption that this early career generation deserve to have their enthusiasm for academic work reinforced at every opportunity.” (McInnis, 2000, p. 66)

CONTRADICTIONS AND INCONGRUITIES IN REWARD SYSTEMS

It has been observed for some time that most academics are working at odds with the rewards framework in which they work. The most basic contradictions are shown in Table 3. The perceived importance attached to particular functions by the promotion reward system shapes everyday patterns of work, career planning, and, in turn, influences levels of satisfaction with the overall work environment (McInnis, 2000, p. 14).

Table 3. **The promotion reward system: realities and preferences**

(% responses mainstream cohort; N = 1 554)

	Is now rewarded	Should be rewarded
Research/scholarly activity	91	89
Ability to attract external funds	82	46
Administrative/leadership skills	59	70
Contribution to committees	52	45
Effectiveness as a teacher	44	95
Community service	29	55
Length of service	22	16

Source: McInnis, 2000.

An overwhelming majority of those who responded to this item see research and scholarly activity as the current priority in the reward system (91 %). This is followed fairly closely by the ability to attract external funds (82 %). In the list of what should be rewarded, some major gaps between realities and preferences appear. In this instance, teaching shifts from fifth place in the current rewards system to first place in the preferred criteria. The 95 % nominating teaching is more than double the proportion who see it as currently rewarded. Research is second at 89 %, suggesting that academics prefer that teaching and research be given close to equal status in promotion criteria. Interestingly administrative and leadership skills remain at third position in the preferred list with a greater level of support (70 %) than currently given (59 %). While entrepreneurialism is not exclusively or necessarily about directly generating new sources of institutional revenue, the ability to attract funds stands out as a major cause of dissonance for academics. It

is clearly considered to be less important (46 %) than is currently perceived to be the case (82 %).

PROMOTING ACADEMIC EXPERTISE AND AUTHORITY

The lessons from the research of Amabile on motivation and creativity – set against the Australian picture of a rapidly changing context – illustrates the complexities involved in shifting an institution towards entrepreneurial cultures of the kinds observed by Clark.

The imposition of tangible rewards can undermine, albeit temporarily, the kinds of intrinsic motivation most commonly associated with academic work and productivity. The key element here is the imposition – or perceived threat of imposition – of external control that undermines both individual autonomy and collegial authority. The negative impact of the controlling forms of extrinsic motivation described earlier cannot be underestimated. As Henkel (2000) found in her investigations of academics in the UK, the notion of academic freedom was crucial to the identity of academics, indeed it was:

“A function of academic control of the professional area of teaching and research, (and) that these were the conditions they needed to do work and therefore the conditions in which their academic identity was grounded.” (2000, p. 7)

The extrinsic motivators supporting creativity identified earlier in this paper present problems for universities in the current climate. Those that appear most relevant for engaging the academic heartland in entrepreneurial cultures are to some extent evident with respect to research and teaching. Providing appropriate rewards and recognition for creative ideas is most commonly associated with research, but increasingly, many Australian universities, and indeed, the federal government, and many universities, now provide substantial rewards for innovations in teaching. However, as the Australian data suggests, universities are sending ambiguous messages to academics about the relative value of teaching in relation to research. They fail, therefore, on two of the criteria listed previously for extrinsic support to encourage creative activity of academics related to teaching: they lack clearly defined goals, and they do not provide frequent (or readily understood) feedback on the work of teaching.

Creating an entrepreneurial culture requires moving beyond these dichotomising experiences. It was noted earlier that the most powerful extrinsic supports for creative activity are those that address the importance of autonomy in work. However, the Australian data suggest that this autonomy for academics is under serious threat as more find themselves doing work that is not central to their interests or competence. Is money the answer? It has been observed that money talks on campus, as elsewhere, and the money says “do research”. However, as

Amabile's work suggests, money or related material rewards are unlikely to motivate many academics, unless entrepreneurial aspirations are accompanied by opportunities to do work in which the academics have a strong personal interest and close involvement, and in the absence of external controls that undermine their sense of competence.

It is not yet clear if the next generation of academics referred to earlier are likely to be more mixed in their motives and possibly more pragmatic in their acceptance of the need to balance the intrinsic and synergistic extrinsic rewards that comes with a market-driven higher education system. However, Henkel (2000) paints a picture of a relatively adaptive profession, and, as with the Australian survey reported above, finds young academics now starting from a notably different set of assumptions from their older colleagues.

On a more positive note, if the solution to getting academics supporting an entrepreneurial culture is the use of "synergistic motivators", then persuading academics that institutional goals will enhance their levels of personal interest in their work is crucial. And the reality should live up to the promise. Moreover, it is essential that the competence of the individuals is confirmed – an increasingly challenge given that more academics are doing work for which they feel unqualified and unprepared.

INSTITUTIONAL MANAGEMENT STRATEGIES TO TRANSFORM ACADEMIC WORK ROLES

There are many strategies for transforming academic work roles to facilitate the emergence of an entrepreneurial culture. Below is a working list of possible priorities as a starting point for developing institutional strategies based on the preceding discussion. Most are quite obvious, but nevertheless need restating given the recent dramatic decline in the primary sources of academic work satisfaction and motivation. Efforts to manage academic work should therefore consider the following principles:

1. The fact of several identities for academics should be recognised, and also that the entrepreneurial agenda is one of a range of competing pressures on their priorities. Some of these priorities are external to the institution. It should not be assumed that all academics ought to be entrepreneurial in all their endeavours all the time.
2. Incentives to support the desire of academics to pursue their own academic interests. The compelling desire of academics to be immersed in their subject of their choice is crucial. Imposing controls on these activities with extrinsic rewards as a trade-off may be counterproductive and undermine the long-term quality of the work. However, it is not unusual, and

quite possible, to shift the focus of academics to new areas of research and teaching reflecting changed institutional priorities.

3. It is increasingly the case that academics will be required to teach and research in areas in which they are not particularly interested (initially at least) and for which they feel somewhat unqualified. Development and support strategies should be in place to enable and reward the growth of new skills and interests. Likewise, a systematic approach is needed to enable academics to manage the growing complexity of their working lives.
4. Inconsistencies and incongruities in the reward system should be removed. Reward systems should be based on a more flexible approach taking into consideration career stages and cycles of productivity. Rewards should be provided for the generation of creative ideas outside the strategic and operational goals of the institution.
5. A strategic approach for fostering the collective identity of the new generation of academics is essential. The entrepreneurial goals of an institution should be prominent in recruitment and induction programmes, in the rationale for deployment of academics, and in the criteria for advancement and promotion.
6. Professional development opportunities should not be seen as an imposition, or a means of control, but as genuinely supporting academics to acquire the skills and personal resources they need to manage the entrepreneurial side of their work identity. Nor should the activities be seen as a distraction from the main focus of work in terms of time or energy. The flexible delivery of professional development programmes might be considered, but not at the expense of making personal growth a collective experience.
7. The values of the academic heartland should be formally acknowledged in strategic and operational plans, explicitly linked to the entrepreneurial transformation process, rewarded, and celebrated.

Confirming academic expertise and authority, without the controls or apparent controls that have a negative effect on creativity, is a major challenge for those who aim to cultivate an entrepreneurial culture in universities. If it is true that entrepreneurs in any environment are likely to lose their creative approach to problem solving when their sense of self-determination is threatened, it is doubly true of academics, for whom autonomy is synonymous with their professional and personal identity.

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Breaking Down Structural Barriers to Innovation in Traditional Universities

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ABSTRACT

The need to improve relations between universities and their social and economic environment is the cause of one of the most significant changes in the management, organisation and power structures in universities nowadays. However, the structure of traditional universities hardly allows the strengthening of new instruments to transform this kind of institutions into entrepreneurial universities. In this paper, we analyse the main obstacles that Spanish universities have to face in this process. These obstacles are (among others): strong dependence on the State, the civil servant status of the staff, the internal structure of power in institutions and the sometimes dysfunctional actions of different governmental levels (central and regional). In our paper, we suggest ways of confronting some of the organisational and managerial difficulties in order to reach an adequate level of competitiveness in the context of new social and economic requirements.

INTRODUCTION

Over the last two decades, Spain has experienced a period of profound change affecting its social and economic systems. Political and economic changes have considerably affected the higher education system. Universities, which were completely controlled by the central government, became autonomous. They have moved from depending on central government to depending on regional governments. They have changed from a bureaucratic internal structure to a collegial model of operating. Higher education financing and research funds have been greatly increased in recent years. All these changes have taken place over a short period of time, during which the number of students has also increased dramatically (Mora, 1997; Mora and Vidal, 2000 a).

The University Reform Act (LRU), promulgated in 1983, brought about several changes in universities' legal framework (Sanchez-Ferrer, 1997). Although the higher education institutions became autonomous, the State kept the power to take many decisions affecting the higher education system. As a consequence of legal changes and factual behaviours, the power structure in higher education is a complex five-tier system, which frequently clash. The tiers are as follow:

- *Central government* is in charge of general and legal issues affecting the planning of the general academic organisation, competence for the accreditation system, the authorisation of new programs and centres, and the common system of access and retribution of the academic staff, most of whom are tenured civil servants.
- *Regional governments* are responsible for financing public universities, the creation of new institutions and general planning of the higher education system in their territory.
- *Universities* make decisions about internal organisation and management, program curricula and syllabi, internal budgeting, select academic staff (restricted by the general rules applied to academic civil servants) and non-academic staff, organise teaching and research and the election of their governing bodies.
- *Faculties and Departments* keep factual competencies about teaching and the management of some resources.
- *Academic staff* who, using their academic freedom and the security of their tenured position, keep a great deal of power over not only their teaching and research work but, especially, over the management of the institution.

Over the last years, the relevance of higher education as a basic tool for the economy and the increasing numbers of students and institutions have raised public interest in the higher education system. Institutions have become more open and have tried to adapt to the new environment by diversifying their programs and improving their managerial structure. Nevertheless, there are still too many regulations that act as institutional barriers which prevent universities from becoming entrepreneurial.

STRUCTURAL BARRIERS IN THE WAY OF CHANGE

Despite the fact that the State still plays an important role in steering universities, they are gradually moving away from State control. Nevertheless, as McDaniel (1997) remarks, the move from direct State intervention to institutional autonomy should be accompanied by other mechanisms such as competitiveness (for students, staff, funds and reputation), diversification of resources and increasing client power and social responsibility. In the Spanish case, as well as in other

university systems coming from a Napoleonic model, traditions do not make it easy to move to a new situation which is more open to social demands. At least, we identify the following structural barriers, which stand in the way of change in this kind of university systems.

First, the State still keeps mechanisms to maintain university dependence. In the Spanish case, these mechanisms are both regulatory and financial. From this point of view, the most important restriction on institutional autonomy is the central government control over academic programs and, to some extent, even over curricula. Although universities can implement self-regulated programs, their diplomas are not recognised as “national” programs, which means they do not have a legal status as “official” programs (Mora and Vidal, 2000*b*). This makes it difficult for institutions to establish programs adapted to local needs or new programs seeking to cover new niches in the labour market. Moreover, the creation of new “official” programs is a long process involving many committees, which are controlled by academics. This means that the final result can be rather different from the initial aim and new curricula could be more oriented to satisfying the individual interests of academics than the real needs of students and society.

The strong dependence that universities have on public funds and the mechanisms that provide these funds are another important barrier to institutional change. Although some regional governments have adopted more objective formula based systems (Mora and Villarreal, 1995), this kind of instruments is not yet commonplace. In most cases, the annual amount of public resources received by one institution is the result of annual negotiations between universities and regional governments. The prevalence of this mechanism suggests that institutions have no motivation to change to another system, which implies greater accountability, greater transparency and more information, in spite of strong dependency on a singular source of funds. On the other hand, most regional governments seem to be comfortable with this informal arrangement because it allows them to keep financial control over universities and to intervene in university matters directly.

The civil servant status of staff is the second element, which limits change in the university system. The civil servant status affects both academic staff and non-academic staff, and implies a tenured position. In addition, academic staff are members of national bodies of civil servants whose salaries and basic duties are fixed at central level. This greatly reduces the capacity of institutions to make decisions on personnel matters. Promotion is regulated by central government rules, although it is implemented in an outwardly transparent public process. In addition to tenured staff, universities can contract professionals from the non-academic world seeking collaboration in teaching activities that require practical knowledge. As these professionals do not have any other extra duty

apart from teaching hours, their salaries are relatively low. Regrettably, this fact has denaturalised the laudable goals of this type of staff and universities are using these positions as a way of having “cheap and flexible labour” instead of acting as a connection with the external world (Mora, 2000).

The internal power structure of universities is another important obstacle to innovation in Spanish universities. As a result of the LRU, universities adopted a collegial structure in the sense of Clark (1983). Management responsibilities lie with academics who exercise their power mostly through collegial bodies. Although those bodies are formally composed of academics, non-academic staff and students, the real power belongs to the academic staff. In practice, the direct responsibility for the results of operational decisions is not well defined and the process does not cater for the changing needs of the social and economic environment. Although, a general feeling in Spanish universities it exists about the need for change in management process and structure in order to make them more efficient and professional, the initiatives carried out are limited to the most innovative universities and, even in these institutions, result cannot be considered as satisfactory. The strong dependence of management staff on academics often implies conflicts between managerial and academic cultures.

Another structural barrier to change, which is inherent to the Spanish higher education system, is the existence of two different levels of public authorities steering the university system. Although the regional dimension of higher education has been recognised (Neave, 1994), the result of regionalisation in Spain cannot be qualified as an efficient solution for the whole system. In some aspects, the sharing of power between the two levels of government does not run smoothly and this is the origin of repeated conflicts between central and regional governments. Moreover, a wide set of problems is arising as a consequence of regional governments taking over. Firstly, although different regions have different educational policy, the general trend is to construct a complete higher education system in each region. Each region wants to have a wide range of programs, leading to a situation in which each territory, irrespective of its size, constitutes a complete higher education system. In most cases, this implies the creation of new institutions and the duplication of programs and services. Secondly, the regional dimension implies the consolidation of local markets, narrowing future possibilities to create more competitiveness and reducing mobility incentives students may have. Thirdly, duplication means less specialisation. Instead of promoting and developing the excellence in some specialities, main efforts rely on the repetition of the same offer in different places. Fourthly, over the last ten years higher education institutions have devoted a significant part of time and efforts looking for a new relationship with their new administration in charge (regional governments), trying to reach some advantages in their financial and statutory position.

FROM TRADITIONAL TO INNOVATIVE UNIVERSITIES

How can a traditional university become an innovative one? We can identify three mechanisms that may compel an institution to introduce changes that improve their effectiveness and responsiveness to social demands. They are the following:

- Changes in governmental regulations, which establish a new framework of relationships and/or new proceedings between institutions and the State.
- Changes in socio-economic circumstances in the university environment affecting the public or private demand of services and the potential to obtain financial resources.
- Changes in public opinion about the functions, objectives and responsibilities of universities.

Any of these mechanisms would introduce pressure on the structure of institutions, which would lead to a change in their internal procedures, organisational structure and management practices. Even so, the probability of translating that kind of pressure into an operative change depends on the characteristics and structure of the universities and the ability to break the existing balance set by established traditional dealings.

Nowadays, the main external pressures affecting higher education systems can be probably identified as belonging to the demand side of the academic market, what we have mentioned above as changes in socio-economic circumstances in the university environment. Higher productivity and greater quality is required from institutions whereas governments intend to restrict their financial contributions to academic institutions. Institutional response could be conservative or expansive. In the conservative response, the institutional units would try to keep their former position, negotiating their relative scarcity of resources, adapting or reducing their structure to face the new situation, and probably reducing overall quality. In the expansive response, the institutional units would adopt new management methods, search for new funding sources and try to obtain the biggest portion of the new market. In large universities with different units both responses could be carried out at the same time in different units depending on their characteristics and the chances they have of succeeding in that new environment and their particular operative culture.

Institutions as a whole can respond to demand requirements as Clark (1998) has called "entrepreneurial universities". This is a general name for institutions, which have been able to establish their autonomy on a self-defined basis. Even though they have adopted different ways to face up to their particular environmental challenges, entrepreneurial universities show five common characteristics:

- A diversified funding base, which allows them to obtain supplementary funds and reduces the dependence on the government.
- The development of peripheral units outside regular departments, encouraging new ways of working with the environment as well as new modes of thought and training.
- Creation of a new steering core which combines the new managerial values with traditional academic ones and focuses the activity of the whole institution.
- Development of a new set of common goals to guide and rationalise the structural changes needed to improve the capacity of response to new social demands.
- Integration of traditional departments into the new entrepreneurial culture, convincing them of the advantages in terms of additional resources, expanding activities in new fields of knowledge and market opportunities.

Although all these characteristics can only be found in the most innovative universities, one can expect the same features to appear in more traditional universities facing similar changes. We shall analyse to what extent the above mentioned mechanism for introducing pressure on traditional universities is relevant to the Spanish higher education system and to what extent “entrepreneurial features” are present in Spanish universities.

INNOVATIVE TRENDS IN THE SPANISH HIGHER EDUCATION SYSTEM

Over the last two decades, pressures on innovation in Spanish universities basically came from the demand side while norms and regulations (governments steering actions) were scarcer. Changes in governmental regulations affecting the main aspects of organisation, government, civil servant status of the staff, academic accreditation and structure have been minimal. The higher education framework has remained unchanged since 1983 when the University Reform Act was established.

Significant changes in the demand side of the educational market have taken place. The demand for long-life learning, the need for professionals with new skills, the technological transfer to industries and the increase in R&D projects are significant features of the new emerging markets. On the public side, the governments have tended to transform the assignment process, establishing competitive rules, especially in the research funding process.

Cultural changes are also affecting the role and functioning of universities. The need for greater accountability, innovation and new management methods are generally accepted. Some universities have adopted new management methods to improve their efficiency, effectiveness and internal quality. In addition, a

general debate about the objectives and structure of the higher education system is taking place and it is likely that this will lead to more profound changes in the future.

Although these changes do not add real pressure on universities to innovate, they are creating a new reference framework where institutions will have to develop in the near future. Under this new situation, higher education institutions are developing initiatives for innovation to reduce the impact of the structural barriers mentioned in the first section (Mora, 1997). These initiatives are the following:

Development of market oriented activities in the non-regulated teaching area. Many post-graduate activities and long-life learning programs are provided in a market-like way. The significance of these activities has encouraged institutions to develop new formal structures to sustain and organise this academic offer, although a wide number of private initiatives as well as academic staff-driven activities are also covering market needs outside the institutions.

Development of market oriented activities in the research area. In research activities, the growing importance of demands and their perspective as a source of finance for universities have promoted the creation of new structures to manage and strengthen research initiatives. Although the amount of income obtained from this type of activity is not very high (varying from 5 to 10 % of the total amount of current resources in institutions), this amount is becoming an indicator of institutional excellence. Moreover, these resources represent an additional financial source for universities thus reducing pressure on the expenditure side of the budget.

A relevant problem related to the progressive development of market areas is the imbalance introduced between the institutional units which can potentially develop a market-oriented activity and the units with less potential to sell their services. Although some institutions retain a part of these resources for distribution among all units, in general the funds are given back to the units which generate them.

Existence of supplementary income rewards to academic staff operating in the market side of academic activities. Although the strict regulation of salary conditions and job duties does not apparently allow universities to reward the productivity of its academic staff, those who operate in market-like activities can keep a substantial part of the funds raised, specially in advisory activities or technological transfer to the private sector, as personal salary. This creates segregation based on the demand of such services in the market and the ability to sell them, as well as between academic units.

The establishment of a non-civil-servant ladder for staff. The creation of new market-oriented structures has permitted universities to employ both academic and non academic staff outside the narrow limits of civil-servant status. It permits greater flexibility in defining the skills demanded of the staff and in fixing salaries and

incentives attached to the job position. To increase competence in the learning market, these activities allow universities to take on part-time staff as qualified professionals, paying them not for the time they spend in their academic job but for the benefits provided by the institution.

The launch of informal structures within universities as an institutional response to the restrictive regulations of the decision-making process (Villarreal, 2000). Informal structures do not try to replace collegial bodies in the decision-making process but to supplement them in two ways: firstly, supporting staff in planning activities, implementing new procedures and strengthening the adoption of new activities, and secondly, creating informal discussion groups to analyse the main aspects of institutional management to improve the decision making process in collegial bodies.

WHAT CAN BE DONE TO ENCOURAGE INNOVATION?

An analysis of current trends allows us to highlight several factors that could increase innovative activities in universities, change their cultural perspective, help to redefine their objectives and improve their effectiveness. They are the following:

Developing a corporate identity. One of the main problems in Spanish universities is the lack of a common identity and well-defined objectives for the institution as a whole. This situation encourages anarchical behaviour of the diverse units outside the borders of the well-defined and bureaucratically articulated core of the university. On the other hand, the lack of initiative of universities in defining common objectives hinders the introduction of internal rules to assure profit-sharing and duties in market activities.

Reduction of regulations in academic activities. The current situation has led to the existence of two well-defined teaching activity areas: the nation wide regulated system and the non-regulated area. The second one is growing very fast. In most cases its increasing importance is a consequence of the strict regulations of the former. Reducing academic regulations means introducing new accreditation methods that allow universities to be more flexible in making their curricula, introducing some of the topics the market demands, modularising their formal degrees in such a way that the modules can be used both on the formal and on the market side of the offer.

Introduction of professional profiles in governance. Without changing the overall system of governance this is difficult to achieve. However, it would be necessary to re-define the role of the people in charge of institutional governing and management. They should change from representatives of academic bodies to professionals doing their work efficiently, using new management techniques and receiving rewards depending on the result of their activity. This does not mean replacing “professorial” by “professional”. On the contrary, it implies that it is necessary to

reinforce the links between academic and administrative bodies (Kogan, 1999) in order to implement changes in academic administrative tasks and increase the tasks of non-academic administrators.

Introduction of new management methods. This implies the introduction of a new set of priorities and a new culture to manage financial and material resources. Greater autonomy to manage the activities, client and market oriented culture to cope with a growing size of the market, more accountability and new internal procedures are some of the basic conditions to improve the management decisions in the higher education institutions (Braun and Merrien, 1999).

Developing an internal incentives system, including salary and non salary bonuses linked to: *a)* excellence in teaching, research and service activities; *b)* external profits reached from contracts; and *c)* innovative solutions implemented to institutions.

Developing a new academic staff structure. The changes needed to increase flexibility and efficiency require legal modifications and a new legal status of academic staff. The civil servant status of professors is prejudicial to the modern day university system. Universities cannot be entrepreneurial if their academic staff are government employees subject to external rules and regulations. Independent teaching staff employed by the university itself are a prerequisite for university autonomy. Similarly, the flexibility now required of universities facing society's rapidly changing demands is hard to reconcile with an organisational structure based on a national body of civil servants that is necessarily clumsy and unmanageable.

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Enterprise Culture and University Culture

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ABSTRACT

Universities are organisations and as such have their own culture, but this is built upon goals, structures, objectives and, more importantly people, all of which have their salient features that make comparisons with the enterprise culture very difficult.

Similarities – need to optimise available resources, the existence as an organisation (production cycle/process), the use of management techniques, to differing degrees – and differences – procedure for management appointments, staff profile, style of management, absence of clear performance measurement criteria, and guaranteed perpetuity – demonstrate how far comparisons can be taken regarding the cultures of these two types of organisation.

In fact the differences outweigh the similarities. Only competition and the perception of changes to come (e.g. competition between universities and between countries, student empowerment, new information technologies) can generate developments that will allow the university culture to evolve. Then it will be possible to draw up typologies common to both the enterprise and the university culture.

This paper considers:

- What is meant by an organisation's "culture"?
- Similarities between firms and universities, and the specific nature of a university culture.
- What is known as an organisation's culture is now acknowledged to be a decisive factor in its performance. Substantial research has revealed this to be true in private enterprise, but does it apply to the public sector, and state-funded universities in particular?

WHAT IS MEANT BY AN ORGANISATION'S "CULTURE"?

An organisation's culture can be identified in a number of ways. The leading aspect relates to the organisation's in-house values, the unwritten rules which its members follow – consciously or not – and which determine their patterns of behaviour. So within that organisation there may be a spirit of competition or, conversely, solidarity, of bonding or keeping one's distance; it may be customary for people to comply with procedures or, on the contrary, go about their work as they choose. This aspect of an organisation's culture heavily influences how its members define and live their working lives (being the best, coming first, etc.). At a more visible level an organisation's culture shows through in language and dress, but more importantly in "rituals", the in-house stories that are passed on, told to new entrants and take on myth-like status – in a word, all those elements that form the daily life of a secret community we call a culture. The culture has its roots in an organisation's history – no matter how short – and is thus consubstantial with the life of that community.

According to the latest research a "strong" corporate culture, *i.e.* one that is specific to and acknowledged by the firm, can boost its performance, although little has been written about causality and which of the two precedes the other. Understandably a strong culture, one with which the staff can readily identify, has a positive impact on staff motivation (feeling of pride, if not superiority, of being the select few, etc.). A corporate culture generates that feeling of belonging which is vital if an organisation is to function properly. Some think this ensures a minimum degree of loyalty to the organisation, while the humanist approach goes further and describes the feeling of belonging as a personal need.

The type of culture we have just described is very present in universities. Academics in particular have a deep-seated attachment to their mission of transmitting and creating knowledge, and derive from this a kind of nobility that is peculiar to them. They view their mission as unique and themselves as heirs to an age-old institution whose traditions they are perpetuating. We might therefore be readily inclined to see a university's culture as a factor contributing to performance. But it is not as simple as that, and the question is whether the term "culture" has the same impact in two such different contexts. I propose that we look rapidly at the similarities between firms and universities, before delving more deeply into the differences in the way these cultures come about.

SIMILARITIES

Firms and universities are organisations with numerous points in common, in that they both :

- Have a legal and social identity, assets, ownership rights and obligations.

- Use human capital to produce goods or services that meet a demand.
- Must make do with scarce resources.
- Use quite sophisticated techniques with regard to management and measuring output and results.
- Have their own pattern of work organisation, with in-house procedures and hierarchies.

All of these features are common to firms and universities alike. This still surprises some academics, who often have the impression that they are not on the same planet as other wage-earners, even in the public sector, and a feeling of being special that is akin to a superiority complex. The fact that their university is in the public sector prevents them from wondering where the money comes from to pay their wages. This intangibility of the link between remuneration and economic activity takes us on to some of the differences to be found in the notion of a culture and its effects on these two types of organisation.

SPECIFIC NATURE OF A UNIVERSITY CULTURE

Let us now look at some of the areas in which firms and universities differ substantially, even if little has been written on the subject.

PERFORMANCE CRITERIA

While these criteria are clear in private firms (where medium-term profitability is the main test, as well it might be since otherwise firms could well disappear), the same does not apply to state-funded universities. This is a crucial point: how can performance be measured in this area, what exactly does it mean for a university to fulfil its mission? This leads us to the question of each institution's objectives. In firms, an economic objective enables the management to determine and impose some unity, a coherent policy approach ensuring that the firm's constituent parts all pull together towards a set of common goals. The ambitions and plans of its management – who derive their legitimacy from ownership or a mandate – become those of the firm as a whole. Consequently no member of the firm would dream of challenging those objectives, unless he were willing to run a great personal risk.

Does the same apply to universities? Probably not, first because any mention of a mission concerns the institution as a whole, and second because there is no question of setting objectives, only guidelines. So the idea of performance hardly ever arises, since it would have to be measured. While there is some evaluation, its conclusions are still conventional and stripped of any practical implications. It is time to set up a dialogue on the notion of objectives within each university. This would change mentalities and launch a genuine debate – going beyond conventional

wisdom – on what role universities should play and what their real mission is, thereby addressing the idea of performance. Measuring performance and results is a prerequisite to judging good or bad performance. There needs to be a kind of “performance culture”, centred around resource optimisation, cost control, monitoring, and the comparison of results against projections, before the consequences can be taken on board.

Performance should be measured against an organisation’s *raison d’être* (profit, development of science, public service, etc.). Firms cannot afford to neglect their markets, can universities? They do not enjoy a monopoly, either in teaching or research, and competition is growing keener as demand becomes more diversified. Because universities do not spontaneously think in terms of markets, the notion of performance is not clearly articulated.

POWER MECHANISMS

Unlike firms, state-funded universities owe their existence to a supervisory government body. As long as the university continues to function, the influence of that body remains very strong if not predominant through the guidelines and resources it provides, but also through its impact on labour relations, structures and administrative rules and regulations. While this initial difference is crucial, universities do have their “local” authority, namely the President and Board of Governors (or equivalent). They are responsible for running the institution (setting a course and keeping to it) but in doing so find themselves in a very different position to that of their counterparts in the private sector.

First, they derive their legitimacy from elections, which in theory afford them their status. But the elections may be underpinned by forces that have little to do with the smooth running of the university, while factors like political game-playing by corporate groups and unions, or pressure and personal ambition (also found in firms) may override the institution’s own concerns and strategy. What is more, once elected they are in theory irrevocable. And the President and Board of Governors do not necessarily share the same vision of their institution, for they do not have to be elected simultaneously.

Finally and most important, the overriding power of the local executive does not really apply in the case of academics with tenure, who need to be persuaded that they are under good leadership since the President is merely *primus inter pares*. Putting together a kind of university “project” – a method used elsewhere – appears to be one way of opening the door to change. But a top-down approach will not suffice if universities are to evolve. Mobilising energy and initiative implies having a strategy, giving direction, explaining where the institution is heading, and allowing those in the community to take “ownership” of the challenges and

objectives involved. University presidents should be totally committed to this mission, which means giving them greater local powers.

STAFF

In terms of the working population, academics are in a category of their own and a far cry from those employed in business. Some have even gone into academia to avoid the private sector. For others, it is a vocation. They cherish their independence and are unlikely to agree to move elsewhere against their wishes. They are also unique insofar as they are first and foremost specialists in a scientific discipline (or experts as one would say in the corporate sector) and most wish to remain so to the end of their career. So academics tend to reason primarily as chemists or doctors, for instance, and the professional ties they have are with colleagues in the same field (whom they meet through scientific networks). They feel they belong as much to their specialisation as to their university because their career depends on it. Hence, the general interests of the university are not among their main concerns. This is particularly the case in non-specialist universities where the top posts and the prestigious disciplines are reserved for the select few whom the president (central authority) often has difficulty convincing of the need to act in the general interest.

Moreover, when an academic decides to become an administrator, this often means forgoing any chance of career advancement, and little can be done to prepare somebody for such a change. This situation is in complete contrast with the private sector, where the process of grooming and appointing senior managers and future executives is an extremely meticulous one. Finally, whilst advancement in the private sector entails occupational mobility, in higher education it is difficult to see how a lawyer could convert to computer science. Therefore, setting aside the ideological differences which may still arise, the procedure for appointing university leaders is specific to higher education. When former professors are elected president, they sometimes “discover” that their laboratory or department is just a part – and sometimes an unrepresentative one – of the large ship they are now steering and that they often have to find answers to questions that had never even crossed their minds. This perception among staff shows how difficult it is under these conditions to create a university culture which would have to compete with the discipline-based cultures. An exception to this problem of acquiring a shared university culture – though exclusive to France – is the example of the *grandes écoles* (major engineering and business schools) that have successfully developed a culture and identity of their own, thereby contributing undoubtedly to their prestige and success.

Universities should have control over the careers of their staff in order to maintain a uniform hierarchical structure, but this inevitably undermines the

authority of individual departments (the most successful organisations are those that place considerable emphasis on the individual). Universities should be able to recognise and reward managerial qualities in the same way as a department acknowledges scientific excellence. Otherwise why invest in the management of universities, or why not create a specialist administrative corps, a proposal that university tradition and culture – at least in France – would flatly reject.

GUARANTEED PERPETUITY

Universities (and academics even more so) believe they are unsinkable whatever the external circumstances or the internal difficulties. The durability of universities is certainly central to their overall mission but is in complete contrast to the highly transient nature of private sector firms. Because a firm's existence is never guaranteed, the various stakeholders have to stick together to some extent as well as quickly adapt to new constraints and new professions, a process that takes much longer in universities. After all, how can performance be gauged in a captive market? This sense of the eternal does not facilitate changes in mentalities and, as advancement is not linked to the running of the university but rather to scientific merit, only external pressure can lead to change.

This sort of pressure is beginning to be felt: regional, national and international authorities are implementing non-automatic, negotiable, multi-annual resource allocation procedures, better informed students-turned-consumers are comparing what is on offer, there are increased links with the private sector, systematic policies aimed at promoting research, new technologies, and Internet. In short openness and competition, which are becoming the norm, are leveraging change and will force universities to develop their own culture and specificity, thereby enhancing performance.

There are two promising signs: first and foremost, the realisation amongst senior administrators of the need to modernise; also, the emergence of outreach, which universities are beginning to embrace. The transparency made necessary by international competition is becoming a value which, in turn, is gaining ground throughout the public sector. The role of the outside world and the comparative studies which are published have made no little contribution to these changes.

OUTLOOK

There are definite limits to modelling university culture on corporate culture. However, developing this asset will enable universities to improve their performance, adapt better and innovate at this time of great change. It is becoming less common for academics to greet the idea of change with scepticism, and organisational innovation is no longer seen in terms of gaining or losing control. We can

afford to be optimistic because universities cannot elude this issue and have at their disposal the resources they need to evolve. Two conditions must be met if this potential is to be exploited:

- First, they should be realistic and willing to be judged on the facts. This means systematically developing evaluation procedures, not only for projects (this is established practice in teaching and research) but also for policies, initiatives and performance, and the findings should subsequently be taken on board.
- Second, practices encouraging exchanges and communication between universities but also with firms and with non-academics should become the rule; this will enable university staff to break free from the compartmentalisation that is stunting their growth.

In other words, their approach should be based on experimentation and interactivity – a magnificent challenge for universities.

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Responding to Changing Student Expectations

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ABSTRACT

Mass higher education systems deal with an increasingly diverse and demanding student population. Student expectations of quality, service and value for money are rising as they take on an ever greater share of the burden of financing higher education, while new for-profit providers of higher education are emerging to cater for particular student groups, notably those already in paid employment. The positioning of students as clients, customers or stakeholders has been a long-standing source of contention in higher education, as has the emergence of management responses which reflect these changing positions. The OECD Programme on Institutional Management in Higher Education chose to develop a project to provide institutions with a range of information on the management implications of changing student expectations. The relevant issues and initial steps in the IMHE project are outlined in this paper

It is now nearly three decades since Martin Trow published his study of the implications of the transition from elite to mass higher education systems around the world (Trow, 1973). Pressures arising from a change in the student body figured prominently in his analysis, as universities struggled to adapt practices which had evolved to cater for a small and relatively homogeneous group of students, predominantly in the 18-21 age group, being prepared for academic careers or for a limited range of professions, notably law and medicine. Nowadays of course, a higher proportion of the school leaver population engages in study at university; they enter via a number of different pathways, and they seek preparation for a wide range of professions. In Australia, for example, nearly 40% of those who complete secondary schooling go on to higher education within two years (West, 1998, p. 71). Further, people now need to develop new skills and stay abreast of rapid growth in knowledge throughout their working lives, and so participation in higher education among older age groups is of growing significance for universities; indeed the

projections suggest that in many countries the major component of growth in the higher education sector over the next decade will be in the lifelong learner market. In Australia, for example, it is now the case that nearly 40% of university students are over 24 years in age. Along with this growth in numbers comes a greater diversity in terms of class, gender, race, ethnicity and academic preparation. These are all factors, which challenge the capacity of longstanding university policies and procedures.

More students now come to university with strong expectations that the experience not only will assist in a practical way their preparation for life and the workforce, but also will accommodate their need to engage in paid employment while studying. In Australia between 1994 and 1999 the percentage of full-time first-year undergraduates with a part-time job rose from 43% to 51%, and those with such jobs are generally working longer hours. These “learner-earners” are attending university alongside an expanding population of “earners-learners”, older students who already have a job and are attending university on a part-time basis. Students in the latter group often have substantial professional and life experience, and many pay full tuition fees. They come to university with high expectations of academic standards and service, and many of them expect to be able to apply the fruits of their studies to their immediate professional benefit.

Alongside this growth and diversification in the student body, broader changes have been taking place in society, such as those which emphasize the rights of consumers and require accountability and procedural fairness from providers of products and services. Relationships have also changed between universities and the societies within which they are located. Perhaps most importantly, universities have been caught up in broader currents of change driven by taxpayer demands for government funds to be well spent. One result of this pattern is that government funding of universities has become more tightly rationed and subject to more stringent conditions. Universities are now expected to be professionally run, and responsive both to their students' needs and the outside world: not only do government funding bodies expect universities to prepare strategic plans, manage their assets and account closely for their funding, but also students are demanding high quality teaching as well as efficient and contemporary systems for handling their administrative transactions with the university.

Universities are also being pushed further into participation in markets, or quasi markets, where they compete with one another as well as with new providers, for students and for research money. Sheila Slaughter and Gary Leslie, in their book, *Academic Capitalism*, trace back the influence of markets on universities in the United States, the UK and Australia to the 1980s, where they argue that market pressures led to changes in academic professional work that were *in kind* rather than in degree (Slaughter and Leslie, 1999, p. 5). Their research viewed changes in universities as primarily due to a focus on maintaining and expanding revenue in

the face of increased competition and declining block funding from government. The effects of such changes are multiple, and examined in depth in their book which focuses largely on the research side of academic activity. They argue that academics will pursue research resources over teaching money since research accrues prestige and selective status. This preference is underlined by increasingly marginal levels of government funding for teaching extra students and institutional policies which provide incentives for staff to pursue external research funding.

Nevertheless, universities must also pay due attention to their students if they are to maintain financial viability. This is likely to be accentuated in coming years as more countries increase the contributions made by students towards the cost of their education and seek to direct funding in more “student centred” ways. The former provides students with an additional cause to take an active and demanding interest in the type and quality of their university experience, while the latter has the potential to influence individual and institutional behavior in ways akin to the “academic capitalism” described by Slaughter and Leslie. “Student centred” funding means establishing a direct financial relationship between the student and the university, either through a tuition fee or some form of voucher. Vouchers periodically attract the interest of governments, but practical problems have meant they have not been widely implemented. It is one thing for government to issue vouchers to qualified school leavers; but in many countries a large proportion of university students enter via other pathways, thereby ensuring that the introduction of vouchers would likely be administratively complex. Tuition fees, by contrast, are growing in importance as sources of institutional revenue, particularly in the so-called lifelong learning market of working adults.

Whatever the merits or otherwise of tuition fees for higher education, there is a strong argument that a direct financial relationship between students and institutions would encourage more attention to student needs. Slaughter and Leslie note that in private colleges and universities in the United States, tuition revenue is an important part of institutional revenues and “the result is that students are treated as important clients ... the contrast with student treatment in public universities is often stark” (Slaughter and Leslie, 1999, p. 237). However, Simon Marginson offers a dissenting view. He argues that market competition in higher education is influenced by the nature of higher education as a *positional good*. By this he means that the value of university education is, at least in part, relative rather than absolute and it is perceived value rather than intrinsic quality which guides student choice. Further, “quality tends to be determined by where the status goods are found, rather than status determined by quality – ‘quality’ education is associated with elite institutions, with the presence of sandstone and ivy, rather than literacy rates or student evaluation of teaching. The quality of teaching and learning is incidental, except as a post hoc rationalization of elite placement”

(Marginson, 1998, p. 84). In other words, students will still pursue education at elite universities because of status reasons, even if such elite universities pay less attention to teaching quality.

However, Marginson's observations do not mean that elite institutions can be entirely complacent. Market competition may be inherently unequal across a system, but experience to date with full-fee paying programs in the postgraduate coursework and overseas student areas demonstrates that elite institutions must at least compete with each other, while other institutions will vie for niches and must work harder to persuade prospective students, particularly those who would otherwise qualify for entrance to an elite university, of the relative value of their offerings. Few if any universities can now afford to ignore the changing role of university students, and the transition of the student population from an elite group of submissive patronized apprentices to a large and diverse collection of demanding clients.

THE CHANGING ROLE OF STUDENTS

Such a blunt formulation is, of course, far from widely accepted in higher education. Many academics feel an instinctive aversion to hearing students described as customers or clients. Craig Swenson, Regional Vice-President at the University of Phoenix, has pointed out that such aversion might stem partly from a flawed understanding of the terminology. He suggests that academics with little or no actual business experience seem to assume that business people accept at face value the phrase "the customer is always right" (Swenson, 1998). Such a literal interpretation does not of course apply in the business world, particularly for professional and expert services, where customers and clients defer to the knowledge of the providers. As Swenson puts it: "Bankers don't let customers set interest rates on their loans, nor do hospitals ask patients how to set broken bones. In the same vein, recognising students as customers does not mean allowing them to dictate what topics the curriculum should include or what grades they should receive."

However, concerns about viewing students as customers can also be traced to beliefs about the fundamental nature of higher education. In one view, the relationship between an academic and student is one of guidance and mentoring with an aim of developing the student in various ways – as an educated individual and as a future professional or academic. To the extent that there is an analogy with the external world, the appropriate formulation is that of apprentice and master rather than provider and client. The latter terms, so it is claimed, do disservice to higher education by reducing it to a commodified transaction. While many would agree with this stance, there are probably fewer today who would publicly side with the view of Thorstein Veblen when he wrote in 1918:

“... the student who comes up to the university for the pursuit of knowledge is expected to know what he wants and to want it without compulsion. If he falls short in these respects, if he has not the requisite interest and initiative, it is his own misfortune, not the fault of his teacher” (Veblen, 1993, p. 14).

Veblen was writing of what he called “the higher learning”, which ascribed proper university status only to what we would nowadays call research and post-graduate research training. However, our universities are now much broader in their scope, and attitudes towards students derived from one tradition do not sit easily with contemporary requirements. Nevertheless, echoes of such traditional disregard for student learning remain. Reviewing the trends towards emphasizing teaching and learning in higher education over the past two decades Marvin Lazerson of the University of Pennsylvania recently noted that:

“many in higher education even wonder what the fuss is all about. Learning is ... still widely viewed as a student and elementary/secondary school problem. Either students come to college with the skills and motivation to learn or they do not. If there is a problem with learning, it is not higher education's This belief that the problems of learning are someone else's, not theirs, provides professors with an enormous defense against rethinking their responsibilities towards students” (Lazerson, 2000, p. 19).

Major changes in views of student roles came with the waves of student protest in the 1960s and 1970s. In many countries students demanded greater representation in decision making and governance and, in some cases, particularly in the United States, they agitated for changes to curricula to reflect what were seen as more “relevant” political and social themes. In more recent times, Western universities have seen another shift, as student political activity has generally yielded to concerns with the ability of higher education to offer a solid base for professional careers and economic security. This is particularly noticeable in Australia, where higher education has always had a more vocational flavor than in the UK or the United States systems. Relevance nowadays is frequently interpreted more in professional and vocational terms than in relation to political or social agendas. In general, student political unrest in the West is now considered less legitimate, although it remains important in many developing countries where “civil society” is poorly established and where students are among the few groups with some degree of knowledge and freedom (Altbach, 1999).

Students, their parents and employers, and government, now demand accountability, professional standards of service and high quality education from universities. But in this environment, universities should not trade one limited notion of the role of students for another. Ruth Dunkin, recently appointed as vice-chancellor of Australia's RMIT University, identifies two points of tension in the “customer-provider” view of higher education (Dunkin, 2000). The first is the

focus on the accumulation of private value to the individual, rather than the wider dissemination of the benefits of education to the community. The second tension is the implied definition of the object of the educational transaction as a definable, limited “product”. Instead of focusing solely on the student as customer who exchanges money for service from a university, Dunkin suggests that there are three sets of exchanges which add depth to higher education. They are those between students and the university; between students and the community; and between the community and the university.

Dunkin goes on to say, in relation to the student-university relationship:

“At the micro level, the relationship of the individual student to the university is usefully conceived as similar to that of a client seeking professional services like accounting or health care. As with signing up to a course of medical treatment, the agreement between student and institution is not simply an exchange of money for services. The treatment is a process. The patient is trusting that the doctor’s experience in treating other patients, and must submit to her judgement, while at the same time being an active participant in the treatment – undertaking exercises, taking prescribed medication, monitoring her own condition.

The concept of the partnership between students and staff to reach an agreed goal has been embodied by many institutions in the form of a “learning contract”, making explicit the responsibilities of each party. This contract asks students to take responsibility for their own learning. Its success depends on students’ ability to articulate their desired goals. The parallel responsibility of the institution is to empower students to be able to fulfil this responsibility.

The implications of striving for this balance place a responsibility on staff to acknowledge the power differential between themselves and students and work in a way that reduces this gap. Staff must ensure that they are responding to students’ needs, and fulfilling their professional responsibilities to keep up to date on educational theory and best practice, as well as practice in their own fields.”

The university experience for students extends, of course, beyond the relationship with academic staff. Students deal with university bureaucracies from the point of lodging an application for enrolment, through the processes of enrolment, assignment to classes, and graduation or departure. Many students also avail themselves of a range of services provided by universities, such as counselling and career guidance. Others might wish to appeal academic results, or seek redress for discrimination or harassment from staff or other students. In these non-academic relationships, the notion of “student as a client” is clearly less problematic.

In either case – whether we are referring to academic or non-academic relationships, students as customers, clients or stakeholders – terminology is secondary to

the practical need to recognise that students should be treated with respect, their rights and responsibilities defined and assured, and their needs and expectations at least understood and acknowledged, if not always met.

THE IMHE PROJECT

It was within this context that the OECD Programme on Institutional Management in Higher Education (IMHE) chose, as part of its 1999-2000 work programme, to develop a project to provide institutions with a range of information on the management implications of changing student expectations. It was further proposed that the project be managed in an on-line format, using a Web page and e-mail discussion forum.

Initial information about the project and the web-site address were e-mailed to over 200 individuals drawn from a listing of IMHE members and other contacts. The target group comprised European, UK and Australian universities. In response, some 49 individuals replied that they would be interested in receiving further updates about the project and participating in the forum.

However, it became apparent early in the process that the project was suffering from two significant difficulties. First, the scope of the issue was extremely broad, indeed it could in principle encompass almost all aspects of university operations. In such circumstances, responses could be pitched at any level, and initially focused on the philosophical aspects of viewing students as customers or clients, rather than on the management responses to student expectations. Second, the on-line forum itself proved inadequate in stimulating feedback, much less interaction or discussion of the contributions posted by others. There are several possible factors, which may have been at work in this regard:

- For many people, E-mail communication tends to be less formal and structured than other forms of written communication. Cultural and linguistic factors may also have been at play here, since the responses in this project were in English and frequently lengthy, which may have deterred European contributors.
- An on-line forum pre-supposes that people will be able to find the time to participate by providing responses, reading postings or responding to what others have written. However, in contrast to attendance at workshops or conferences, the on-line forum does not provide designated time for these tasks.
- On-line discussion groups have been employed in teaching and learning situations in universities for some years now. While some have reported that e-mail communications can, with suitable moderation and stimulation from a teacher, encourage otherwise diffident students to participate in

class discussions, others have found problems. In many cases, participants prefer to “lurk” and passively view the contributions made by others, rather than to participate actively themselves. At QUT, for example, we have found that unless participation in on-line discussion groups is an assessable part of the course of study, discussion can often be dominated by a few individuals or groups. A published case study of a web-based distance education course at a major US university also found that even where students participate in e-mail exchanges, frustrations can arise from the lack of interactivity in asynchronous communication and misunderstandings about expected styles (Hara and Kling, 1999).

To help focus the project, three questions were posed in order to stimulate more specific responses. These questions touch on aspects of different stages of students' experience of universities: first, as they deal with university administration; second, as they are taught; and third, as some seek redress for perceived problems. The three questions were as follows:

- **Information systems:** how far advanced are universities' plans for the development of on-line systems to handle student transactions, including enrolments and payments? What are the plans for the future?
- **Student evaluations and feedback:** how systematically are universities offering students the opportunity to provide feedback about their studies? Some universities have used one-off surveys, and many use regular student evaluations of teaching or courses. The latter are widespread, and sometimes mandated, in many US universities, and are largely left to the discretion of academic staff in Australia. Do universities have plans to use student evaluations more systematically? If so, to whom are the results made available and how are the results used?
- **Student grievances:** how are universities responding to student grievances, as part of or beyond their legislative requirements? Do they have one (or more) Student Ombudsman or similar positions, to deal with such grievances? If so, how do the people in such positions operate? What authority do they have, and to whom do they report?

Eighteen responses were provided to these three focus areas, all but three emanating from Australian universities. A summary of the three issues, and the responses received, is set out below. Those who are interested in further details can access the postings on the website: <http://www.qut.edu.au/imhe>

Information systems

By and large, the student experience of university administration and bureaucracy is notoriously poor. With the advent of high performance networked computing, and the growth in applications of computing for administrative purposes in

other sectors of the economy, it might be expected that universities would be able to make substantial improvements.

There is little point in dwelling in detail on this aspect of change within universities other than to highlight two important points. The first is that for most universities, particularly those with populations of students who come to a physical campus, there is not as yet strong evidence for demand for on-line systems for dealing with financial transactions. Most institutions remain concerned about issues of privacy and security in this area, and many students still lack the facilities for connecting to university sites prior to enrolment (it is readily appreciated that this situation may change significantly over the next few years). The second point, however, is that there is strong impetus for the development of integrated and smoothly functioning systems for student administration once students have enrolled. "Integrated" in the context means the desirability for such systems to be able to deal with all aspects of student administration, including enrolment changes, time tabling of classes and so on, and also with finance and staffing information and external reporting and accounting requirements. Further, the growing use of on-line systems for teaching and learning will in coming years mean that co-ordination of administrative and academic information technology will be important.

For large complex institutions such as universities, these are formidable challenges. Many institutions are weighing the benefits and risks of in-house system development versus deployment of commercial software. In either case, such developments require increasingly sophisticated project management and risk management from universities, as well as co-ordination, not only of previously separate areas within each university, but also among different universities. Some countries have already pursued national co-ordination of the purchase and development of administrative computing: in Australia this has been a costly and cumbersome process, which has since splintered into different groups of universities pursuing particular products and packages.

Student evaluations and feedback

Many higher education students are dissatisfied with the quality of feedback they receive and the level of interaction they experience with academic teaching staff during the course of their university studies. In a report on student experiences and expectations produced for the UK Dearing Committee in 1997, fewer than half of the students surveyed were satisfied with the level of feedback they received (Callender, 1997). Similarly, in Australia annual national surveys of graduates have shown that nearly half of those graduating for the first time reported that feedback was mostly in terms of marks and grades, around 40% felt that staff do not put a lot of time into commenting on their work, and nearly one third disagreed with

the statement that “teaching staff normally gave me helpful feedback on how I was going” (Coaldrake and Stedman, 1998, p. 75).

Some trace such student disconnection from their learning environments to the advent of mass higher education. Yet the earlier quotations from Veblen and Lazerson indicate that a certain degree of indifference towards student learning has been a longstanding issue in higher education. Despite a move in many higher education systems to emphasise the importance of teaching and learning, and to adopt strategies to lift the teaching profile so that it sits alongside that of research, demonstrable improvements remain elusive. The advent of on-line platforms for teaching and learning has introduced additional impetus for concentrating on teaching reform, but adopting on-line teaching and learning adds further layers of complexity. As pressures for change mount, with these pressures driven both by internal advocates of improvement and by the expectations of students, governments and others, many academics have voiced concerns that changes are being driven by fundamentally inappropriate views of higher education. This is particularly evident in fears about the increasing use of student evaluations of teaching.

Student evaluation of teaching has been widespread in US colleges and universities for a very long time, and many years of research and practice have ensured that such evaluation has a robust level of validity and utility. The practice of student evaluation of teaching is growing rapidly in other countries; already widespread in many secondary school systems it is also being extended systematically to university teaching. In most Australian universities, it is being implemented on a regular basis, always with the avowed objective of enabling staff to improve their teaching, but in some instances also with the results being provided to managers for summative purposes. In the UK the growing influence of the Quality Assurance Agency is placing pressure on institutions to demonstrate that such evaluations are taking place.

Responses to the IMHE questions from Finland and Sweden also showed evidence of the growth of this practice: at the University of Turku in Finland plans are being developed for a more systematic use of course evaluations, although it is emphasised that the purpose of such evaluations is for teaching development, not staff appraisal, and the methods of evaluation are left to departments. A respondent from Uppsala University in Sweden noted that course evaluations had a long history at that institution, but only in some parts of the University. Recently, however, they have been made mandatory and the Swedish Government is likely to prescribe compulsory course evaluations by a change in the Higher Education Act later this year.

The emerging trend towards almost universal adoption of student evaluations of teaching, and the parallel trend to make the results available to university managers, underline the importance of proper interpretation of the results. Take, for

example, the following view expressed by a professor of journalism at an American university:

“The institution of student evaluations is one of a number of factors that has resulted in an increase in pressure to look upon students as consumers – and the adoption by many in the higher education bureaucracy of the ‘traditional’ business philosophy which holds that ‘the customer is never wrong’” (Martinson, 2000, p. 80).

The above view reflects the important point that fears about particular policies, which may or may not be traceable back to treating students as customers or clients, are often based on a misconceived view of what such treatment might mean. Already mention has been made of the fundamental error of assuming that businesses deal with clients by slavishly pandering to their demands, and in higher education the same should be true. If managers also have overly simplistic views of how students should be treated as clients, and always insist on glowing student evaluations, then academic fears are justified. Student satisfaction is not synonymous with good quality university teaching. However, student evaluations of teaching provide useful and important information, and if students are deeply and consistently dissatisfied with their education experience then this should be known and acted upon.

Student grievances

Any organisation that seeks to establish a professional relationship with its clients or customers needs to implement some formalised processes for dealing with complaints. While universities might take issue with the terminology of students as customers or clients, student complaints over academic or administrative matters are an important reality, and formal or informal procedures need to be developed to deal with them.

Such procedures vary greatly among the different higher education systems around the world, and within particular countries. In the UK, for example, many of the older universities have a University Visitor who acts as a final arbiter on student complaints. Visitors include members of the Royal Family, the church or the peerage. The Dearing Committee in its 1997 Report on UK Higher Education noted that complaints from students are likely to increase, particularly as student expectations and financial commitments increase. Dearing also noted the evidence of increasing disputes between institutions and their students, about both academic and non-academic matters, including litigation, as well as concerns from staff and students about the way in which some cases had been handled. Dearing recommended that universities should review their complaints policies and procedures to ensure that: they reflect the principles of natural justice; they are transparent and timely; they include procedures for reconciliation and arbitration; they

include an independent, external element; and they are managed by a senior member of staff. The task of developing some guidelines for this process was given to the Quality Assurance Agency, which found that long-standing practices did not yield easily. Some four years later, it appears that a consensus is emerging in the UK that the Visitor system and the variability in formalisation of complaints procedures should be replaced by more open and transparent mechanisms. A Student Ombudsman in each university has been proposed as part of such a new system.

Student Ombudsmen are already in place in several universities around the world. Surprisingly, one respondent to the IMHE project from Uppsala University in Sweden – the country of origin of the ombudsman – noted that his university did not have such a position and indeed that the “university has no record of specific procedures concerning student grievances, apart from general procedures emanating from the fact that Swedish universities are governmental agencies.” The same respondent did note, however, that the issue had been raised recently by students and that a Student Ombudsman position was under consideration.

The role of Student Ombudsman reflects the general principles attaching to ombudsmen in the broader public arena, that is, they are there to investigate issues, to support and reinforce institutional policies, and to act as a mediator. Their role is usually not the first step in the investigatory process and such positions do not have executive powers. Other universities have created positions such as Dean of Students, which may play a similar role.

HOW NEW PROVIDERS ARE RESPONDING TO STUDENT EXPECTATIONS

The IMHE project shows that most universities are engaging in major changes to reflect the variety of external pressures and expectations they are experiencing. However, many of those who work within universities are still uncertain and fearful about these various forces which are at work, and mired in debates over terminology. While traditional universities exhibit all the symptoms of a system in transition, new providers are emerging to cater for the rapidly escalating demands of the knowledge economy. These new providers have no qualms about referring to students as customers or clients, and they operate in some cases symbiotically with traditional universities, in other cases in competition.

The Australian government has commissioned two studies of new higher education providers, the most recent in conjunction with the UK Committee of Vice-Chancellors and Principals.

The first study, published in 1998, examined the operations of new higher education providers around the world, noting that the majority emanated from the United States (Cunningham *et al.*, 1998). The second study took a more detailed look at a selected sample of the most successful and ambitious of these for-profit

and corporate universities (Cunningham *et al.*, 2000). One of the most striking features was the professional nature of their operations, arising from their external client focus and attention to their “students” as “customers”. The term “professional” in this context refers to the way in which they approach the education/training enterprise in a similar way to the other parts of their business. These are corporations with global businesses and missions, making billions of dollars a year—or servicing those who work in such sectors. Considerable time, money and effort are invested into making as seamless a transition as possible between the work environment and the classroom. “Earner-learners” studying at the University of Phoenix or Keller Graduate School of Management will walk into surroundings similar to their workplace; classrooms are located in office buildings, business parks, industrial estates and hotels. When staff from Arthur Andersen or McDonald’s University attend their corporations’ training centres in St-Charles and Oak Brook, they are required to wear smart casual business dress. At Phoenix, the customer focus is evident in positions such as Vice-President of University Services, which incorporates the Office of the Registrar, Admissions and the Prior Learning Assessment Centre. This client focus aims to facilitate the worker-student involvement in education and training. Attention is also paid to a wide range of auxiliary services, such as streamlined enrolment and admission procedures, unlimited beverages at Arthur Andersen or McDonald’s, or free lifetime access to the Internet, on-line library and on-line databases at the University of Phoenix.

The “for-profits” focus on “student-as-customer” underlines their selling points of service provision, timeliness and convenience. Customer services consume a large proportion of the staffing budgets of most for-profit educational organisations. In traditional universities in the US, academic counselling is a role which falls to teaching staff; at Keller and De Vry Institutes counselling is a specialised role, and staff are available 8 a.m-8 p.m. for advice and assistance in everything from course choice, financial advice, and housing to photocopying.

Professionalisation of the teaching enterprise extends to the corporate investment in education and in resources, including technical staff support and physical facilities and resources. Quality assurance processes are built into every step of the education experience from initial inquiry to graduation. The education/training enterprise is also systematically structured and designed to be evaluated, with clearly defined processes, objectives and expected outcomes.

Teacher training of academic staff in the US corporate universities is often mandatory. Curricula may be centrally developed and teachers required to follow closely the curricula, even to the extent of adhering to “scripts”. Performance is constantly monitored; sometimes this is quite overt, as at Keller Graduate School where Centre Directors sit-in on classes once each term; and at McDonald’s where one-way mirrors are used in the face-to-face classrooms. At the University of Phoenix, transcripts of online classes can be reviewed if students complain that they

have not received value for money'. While some of the more extreme forms of monitoring may be reasonably seen as "over the top" in a university setting, it is worthwhile understanding how commercially-oriented providers are attempting to assure and demonstrate service and quality for their students. Conventional universities need at least to consider whether students can be persuaded that approaches to university teaching and learning are in their own best interests, rather than simply those which suit the habits of academic staff.

Both curriculum and content are increasingly determined by the limited time availability of the "earner-learner" and the "learner-earner". In meeting the needs of their adult worker students with domestic, work and community responsibilities, for-profit providers are accommodating a part-time student market with an instrumentalist, vocational approach to their learning needs. "Learn tonight, apply tomorrow" is a refrain frequently heard from both staff and students in those institutions.

There is a strong trend to the "modularisation" of content via resources that students can access on demand, and accumulate towards a longer program. At its extreme, this is expressed in Ford's rubric of "bumper-sticker sized bits of information", "chunks of learning – learning sized bites".

Formal education/training is increasingly perceived as one "set" of more general learning strategies that encompass coaching, mentoring and experiential learning. For Arthur Andersen, the value of their programs at St Charles is the provision of a real working environment, a real team, and a real problem, which students are able to tackle with their respective individual skills. The practitioner trained in a pragmatic and facilitative teaching approach is seen as more likely to succeed in allowing students to learn experientially and from other students. Earner-learners have the added advantage of maturity and a consciousness of their role as "customer". They demand "value for money". University of Phoenix staff consider them demanding because they stretch teachers to be relevant and skilful.

Most of the new providers emphasise the convenience of their operations for their students, but there is an important distinction to make here between convenience and what traditional universities sometimes refer to as "flexible delivery" or "open learning". The for-profits emphasise that they do not offer a smorgasbord from which students can pick and choose. On the contrary, courses tend to be highly structured, reflecting the demand not only from students but also from industry. This is a point frequently overlooked by some of the advocates of online education, who assume that merely making subjects available over the Web will build a meaningful virtual university.

By and large, the new providers focus primarily on the education and training needs of working adults, particularly in the fields of business and information

technology. As such, they might be considered of relatively minor relevance for universities which have traditionally catered for young adults seeking their first degree or graduate students pursuing training in research. However, for most universities, “earner-learners” are of increasing importance, as is the trend towards undergraduates themselves becoming “learner-earners”. Such students have heightened expectations that universities will not only provide them with a quality education, but that they will do so in ways which are convenient and which treat them with the status/standing to which they feel entitled.

For-profit and corporate universities have obvious deficiencies from the viewpoint of conventional higher education. Some choose to dismiss these new players as overly reductionist, providing little more than a narrow vocational training driven by the desire to make a profit. However there are two points to make to those who are dismissive. First, these providers may not be models to be emulated in all respects, and this may be particularly true of their approaches to curriculum and deeper learning. They nevertheless provide useful illustrations of professional operations, and they show how students can play a more active and valued role in their own education and training. Second, traditional higher education has often claimed its superior quality and commitment to deeper learning, but has often resisted attempts to verify such claims. While it is true that such attempts have in the past sometimes been clumsy and simplistic, academics themselves by and large have been slow to understand the importance of producing acceptable alternatives.

CONCLUSIONS

The ideal of universities as self-governing communities of autonomous scholars may not exist in reality, but it is nevertheless apparent that universities remain largely organised and managed in ways which reflect primarily the aspirations and needs of academic staff. Further, many of the views held about students by academics derive from a past when students were young, submissive and academically elite. Many academics strongly object to referring to students as clients or customers, but are comfortable to talk about student and “teaching load”, and to seek “teaching relief” in order to pursue research. External parties, on whom universities rely heavily for income and support, increasingly expect university education to be conducted accountably and professionally. This is particularly true of the growing body of “earner-learners” who are often themselves practising professionals in their own areas of employment. New education providers are emerging to cater for this growing area of higher education, and they are prepared to offer high levels of convenience and service.

Too great a discrepancy between external expectations and internal academic attitudes does not augur well for traditional universities. Of course, it can be

argued that universities operate as they do in order to protect quality, to ensure academic autonomy, and to operate in the best educational interests of the students. Too great an emphasis on responding to students' expressed preferences could compromise standards. While this may be true, if universities are unable to demonstrate that they are in fact preserving standards, instead of simply preserving antiquated or patronising attitudes towards students, then they will continue to lose respect and patronage (or "market share", for those prepared to indulge in such language).

Burton Clark's research highlights the importance of enabling suitable forms of entrepreneurialism to flourish in our universities. Entrepreneurialism implies a capacity and willingness to understand and engage with the needs of particular groups, be they students, governments or industry. Universities, particularly non-profit universities, have a unique role to play in society, and must pursue unique forms of entrepreneurial activity: Burton Clark uses the apparently oxymoronic term "collegial entrepreneurialism" (Clark, 2000) to describe this challenge. It implies a marriage between the values and practices of the "academic heartland" and the "steering core", which needs not only to steer but also to ensure appropriate levels of accountability and coherence across the university. The implications of this for university managers are sweeping, and have only been broadly and briefly canvassed in this paper. For the future, more focussed work is needed to share information, ideas and practices which can help develop locally-relevant solutions to these global problems.

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Changing Patterns of Diversity in Europe: Lessons from an OECD Study Tour

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ABSTRACT

In October 2000, a team of nine persons from IMHE member institutions undertook a study tour of four European countries to examine developments in new and traditional universities. The participants came from institutions in Quebec, Finland, the Netherlands, the Slovak Republic and the United Kingdom. The aim was to explore some of the management challenges facing higher education in all OECD countries as they respond to changing economic, social and educational needs.

In all the countries visited there is concern about the development of policy and the management of institutions. National systems are trying to diversify higher education to cope with new circumstances, and it was evident that institutions need to diversify in order to survive. In particular, all of the countries and institutions visited were concerned with rethinking the role of professional education. The article discusses a number of “trans-binary” developments, the emergence of strategic planning responses and problems of funding and control. The developments showed that there is a need to constantly re-interpret what it means to be a university in any era or circumstances.

INTRODUCTION

In October 2000, a team of nine persons from IMHE member institutions undertook a study tour of four European countries to examine developments in new and traditional universities. The participants came from institutions in Quebec, Finland, the Netherlands, the Slovak Republic and the United Kingdom. The aim was to explore some of the management challenges facing higher education in all OECD countries as they respond to changing economic, social and educational needs.

The changing needs noted during the study tour are familiar: they include a desire to relate higher education more closely to the economy; to offer access to a wider range of students, often to those without conventional entry qualifications, or of “mature” age on entry, and to create new forms of study appropriate to these needs. In many countries, new or “alternative” institutions have been created to promote these developments and to increase diversity in higher education. Often these institutions operate under different legal, financial and quality assurance systems from those of the traditional universities.

Europe is a particularly good location to study these issues. It has a great diversity of systems, policies and institutional forms in different countries, as well as the trans-national European Union. Institutions in continental Europe also face reorganisation to create a two-tier – bachelors: masters – structure, following the Bologna Declaration. The institutions visited on the tour included new and traditional universities in the United Kingdom (Oxford Brookes and Westminster in the first group, Oxford University in the second), a new network of universities and other institutions in France (the *Pôle Universitaire*), the *Université Libre de Bruxelles* in Belgium, two old (Amsterdam and Leiden) universities in the Netherlands and the *Hogeschool* in Amsterdam, engaged in trans-binary co-operation with the University.

It was clear that in all the countries visited there is concern about the development of policy and the management of institutions. There are pressures to increase the efficiency of institutions; there are worries about “mission drift” as non-traditional institutions aspire to university status in a process of “academic drift”, and a more recent “vocational drift” of the traditional universities.

DIVERSIFICATION

All the national systems visited are trying to diversify higher education to cope with new circumstances, and it was evident that institutions need to differentiate in order to survive. In particular, all of the countries and institutions visited were concerned with rethinking the role of professional education. Yet, it was also evident that, despite the perceived need to diversify, all the national systems seen on the tour had undergone or are undergoing change to merge binary systems or to create closer co-operation between institutions.

Because of the differences in national systems, the way the changes have been conducted varies considerably. In the United Kingdom for example, the former “binary system” of very autonomous institutions has been replaced by a unified system, with the polytechnics now able to award their own degrees and with university titles. This has resulted in the establishment of system-wide funding and quality assurance agencies, presenting challenges for the “old” as well as the “new” universities. In the Netherlands, we saw two examples of quite different strategies for institutional co-operation, but it seems that the initiative here

resides with institutions rather than the state. The co-operation of one of the largest *hogescholen* with one of the largest universities raises interesting questions about the future of its binary system. France is moving away from centralised, controlled national system of many institutions with more limited autonomy, with policy of regional co-operation to create *Pôles universitaires*. In Belgium, the situation of the universities is further complicated by the complex language, community and regional structure of the country. The experience on the study tour suggested that national systems and individual institutions probably need to be thought of as located on a continuum – a simple binary model is no longer adequate (if it ever was) to describe the situation.

Indeed, many of the institutions visited emphasised how they shared characteristics of the other sector. We were reminded that New College Oxford, although founded in the 14th century, started out as a vocational institution. The University of Leiden was anxious to demonstrate that it was a “modern” university, with an emphasis on high level research and high quality teaching. The “new” Oxford Brookes and Westminster Universities reminded us of their long histories.

TRANS-BINARY CO-OPERATION

One of the most interesting examples of the complexity and ambiguity of binary models, and of a way of responding to it, was seen in the Netherlands. There is a well-established binary system. Thirteen “traditional” universities offer courses on the continental European model, leading to *doctoranders* (masters) level and to PhD. The vocational (HBO) sector consists of some 70 *hogescholen*, offering courses which can be entered at age 17, to around bachelors level. There is much debate about this system, particularly in the light of the Bologna Declaration, which would permit the *hogescholen* to offer masters level courses for the first time. In Amsterdam, the first steps are being taken to bridge the binary divide.

The University of Amsterdam (UvA), we learned, accepts that it is useful to distinguish different types of education (academic and professional) and that there is a need in the labour market for different kinds of education and educated people. A “typical Dutch compromise” would be to combine both types of education in a single institution. There are, however, significant obstacles to a full merger of institutions across the binary line. Universities are public institutions and their staff are civil servants. The *hogescholen* have the status of private institutions, with different employment contracts for staff. *Hogescholen* are not funded to undertake basic research, and it is unlikely that extra funds would be made available to develop this. There is resistance, especially in the universities, to change. co-operation is however, possible. Sharing of infrastructure (such as student facilities and services) makes obvious sense, and the UvA and the *Hogeschool van Amsterdam* (HvA) have begun this process.

By forming a separate joint unit – the University *Hogeschool van Amsterdam* (UHA), the two institutions have begun a gradual and cautious process going beyond this, involving co-operation on educational programmes. In the Dutch system, such developments between institutions in the two sectors are difficult. Curricula are strictly separated between vocationally or professionally oriented and academic. It is hard to combine courses because they have such distinctly different purposes and content. At present, students wishing to change from one sector to the other often gain no credit for the courses they have taken, so transfer is inefficient. Students, too, do not always recognise the nature of the difference between the sectors, believing for the most part that HBO courses are lower level than those in universities.

Under the auspices of the UHA, agreement has been reached so that UvA students in some subjects are able to take an element from a HvA course (*e.g.* in project management) and return to UvA to gain their University degree. (Diagram 1). A similar arrangement for HvA students to take a UvA unit is proving more difficult, because the UvA staff do not believe that HvA students are well enough prepared, but progress is being made. (Diagram 2). Parts of some courses, too, are being shared, taught by teachers in both institutions. (Diagram 3). A further development is of “dovetailing” courses. (Diagram 4). HvA students start to take university courses in their third year in place of some elements of the HvA programme. This allows them to complete the HvA diploma in their fourth year, but go on to study at the university to get the Drs (masters level) university degree. In specific subject areas, there are plans to develop joint programmes where students take additional university studies but gain a HvA diploma. Enthusiasm in UHA for further movement towards a merger is tempered by the need to maintain the support of UvA staff, but the experiment offers a unique way of resolving some of the dilem-

Diagram 1. **UvA -curriculum, including courses from HvA-curriculum**

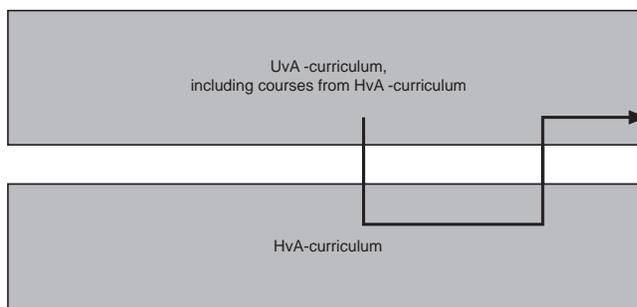


Diagram 2. HvA-curriculum, including courses from UvA

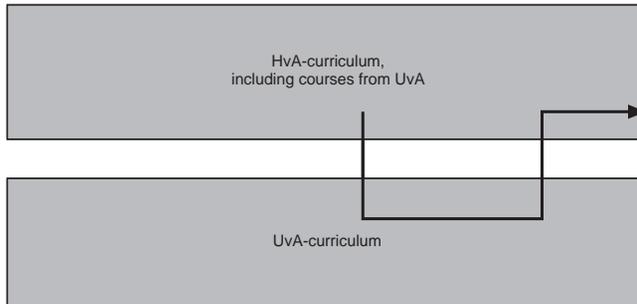


Diagram 3. Dovetailing courses

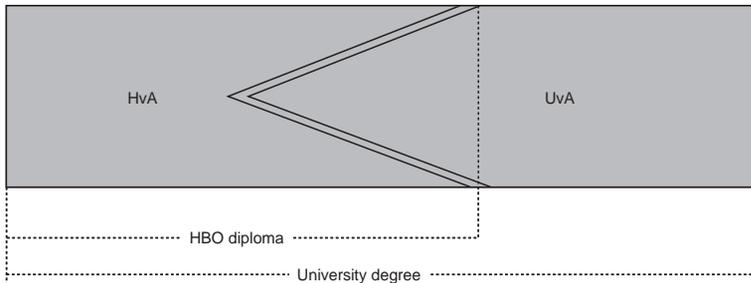
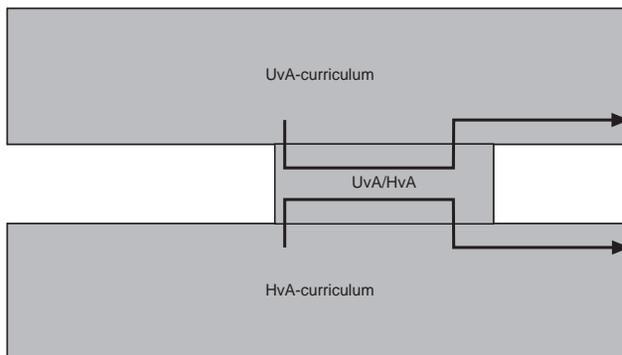


Diagram 4. Shared courses



mas of offering different kinds of courses for different purposes without excessive institutional or sectoral divisions.

Such sectoral divisions were identified by the visit to British institutions, and came as a surprise to most participants. There was felt to be a *de facto* binary system despite the 1992 unification. The new universities were seen as very competitive and greatly concerned about their disadvantages in funding (especially of research). The Vice Chancellor of the University of Westminster, who is also Chair of the Consortium of Modern Universities, which represents the former polytechnics and other colleges, nonetheless supported the 1992 changes. He cited the disadvantages that the polytechnics had felt – a lack of international recognition, a mistaken belief that they did not award degrees, and their lower status in the eyes of many employers, parents and potential students. There was a feeling in 1992 that “we have arrived”.

The sense of competitiveness was illustrated at the University of Westminster by its active recruitment of overseas students, which was combined with a concern to offer access locally to a wide range of students from the multicultural London community. Westminster has been so successful with overseas recruitment that it won a Queens Award for Enterprise. But the University is aware of the potential problems. The presence of overseas students is seen as an asset, offering local students the opportunity to study in an international environment, but there was a feeling that there is a “natural limit” to the percentage of overseas students (about 30 %) before the university becomes a different kind of institution.

The *Pole Universitaire* at Lille was of interest because of its trans-institutional and trans-sector links. It is one of 11 such organisations set up around the periphery of France. It includes six state universities, a private university, an association of 26 *Grandes Écoles* (both public and private), teaching hospitals, regional and local government, chambers of commerce and research centres. Each organisation is a member of the Board and pays an enrolment fee. It thus includes both academic and professional higher education (including the French “short-cycle” higher education in the *Instituts Universitaires de Technologie*) as well as the private and public sectors of the economy and society. In the French context, its success in securing communication between institutions is considerable.

But the study tour members felt that such a development that would be very unlikely in some other countries. It requires the proximity of a diverse range of institutions (not available in Quebec for example) and a policy and funding environment that assists co-operation rather than competition (unlike the United Kingdom, for example). The study tour participants noted the significant political dimension to the development – in the sense that it shifts the power base in higher education away from Paris to the regions. They were pleasantly surprised that such a development appeared to be succeeding, though it is still at an early

stage. It encourages (forces?) institutions to be closer both to the community and to each other. The development at the *Pôle* was seen as encouraging in contrast to the disaggregated and divided system in Belgium with different universities serving different communities, regions and language groups and with a complicated funding regime especially for research.

Elsewhere, further cross-binary links still seem to be problematical. In the Netherlands, the University of Leiden has begun a process of co-operation with a music conservatoire (in the HBO sector) in The Hague, which will form a faculty of the University, but the University is emphatic that it has no intention to merge with the nearby *hogeschool*. It sees instead the possibility of developing “strategic links” with the University of Delft to compete in the international market.

STRATEGIC PLANNING

Many responses to change were identified as common to all the institutions visited. All face the challenge of mass higher education. Strategic planning – at institutional and supra-institutional level is widespread, so much so that at Oxford Brookes there was talk of being “planning overwhelmed”. Oxford Brookes University is one which feels it has a well developed strategic planning process and it emphasises the links between strategic planning, resource allocation and quality assurance. As a “new” university in the United Kingdom, it acquired an independent legal existence only in 1989, when the polytechnics and a few other colleges were made into “statutory corporations”. Soon after this Oxford Brookes embarked on strategic planning and it is now reviewing its strategic objectives. The University has a highly devolved structure, with 13 schools almost entirely responsible for their own development, so the strategic planning process is one in which overall strategic objectives are created by aggregation, centrally moderated, of the schools’ plans. One outcome of this is that, paradoxically, the strategic planning process does not really produce an overall strategy. New ideas and new developments are added to those already existing, and the more difficult decisions about cutting out activities tend to be avoided.

There are fascinating differences between the planning and management systems in the different institutions. In the Netherlands, the structure of governance and management of the universities is one that all members of the study tour could recognise (although it differed in detail from that of say UK or Canadian universities) with a predominantly lay governing body, an executive board (with just three members) and faculties. The power of the academic staff and student body was noted. All major decisions have to be agreed by the councils representing these groups. This structure contrasted with the more managerial model and very flat hierarchy established in the *Hogeschool van Amsterdam*. Here, the departments report directly to the executive board. The whole budget is allocated to departments, who

have to provide resources from it for institutional overheads, etc. There is an internal market for premises and central services. As the President put it, the structure is “simple, but not easy”.

THE ROLE OF THE STATE

The increased role of the state was noted in most institutions. All the British institutions expressed concerns about the pressure under which they now operate. The tradition of maintaining the state at “arms’ length” has been replaced, as one study tour member put it, by one of “state intrusion” – through quality assurance and funding agencies. The function of governing bodies becomes key in these circumstances, and Michael Shattock gave an account at a seminar at New College Oxford of the issues that they face and the contribution that they can make. At Oxford Brookes there was a feeling of suffering from “quality overload”, with subject review visits from the Quality Assurance Agency for Higher Education costing an estimated GBP 80 000 each time.

The University of Westminster was anxious to point out that it had a much longer experience of higher education than most traditional UK universities (its foundation dates back to the first half of the nineteenth century) and one staff member resented “the pretence” that QAAHE can make “a judgement of some refinement...about quality”. An elaborate system of evaluation of performance was also evident in the internal processes of other institutions visited. At the *Hogeschool van Amsterdam*, for example, programmes are evaluated by staff and students (using an independent research bureau) as well as by the *HBORAad*.

CONSUMERISM

This practice reflected the development of a further element of the changing environment adding pressure to the universities – the emergence of the idea of the student as a “consumer” of services provided by the institution, rather than as a member of it. David Palfreyman of New College Oxford raised some of the legal issues presented by this development. Universities increasingly face legal actions by students, based on various bodies of law, including consumer law, contract law, common law. The issue was more evident in the United Kingdom than in other countries visited, but was recognised as of increasing concern elsewhere.

The role of the student as customer was also evident in the way in which different institutions identified their “markets”. In the United Kingdom, there was a marked and visible contrast even between the two “new” universities visited – between the relatively middle class catchment of Oxford Brookes University and the urban, multicultural students at Westminster. In the United Kingdom, of course, universities are selective. In the continental European countries, students

with university entry qualifications have a right to a place. Despite (indeed because of) this, Leiden University makes significant efforts to encourage recruitment by the “best” students and to select during their first year. In the Dutch system, students can be examined at the end of their first year and may not proceed if they perform unsatisfactorily. Leiden interviews all its entrants and makes clear that this practice is rigorously enforced, and it offers tutorial support to students during their first year to assist them. Students unlikely to succeed are given an early opportunity to transfer elsewhere, but it is hoped that subsequent retention rates will be improved.

In Belgium, the problems of competing in the student market are compounded by the divisions of the country by language and community. The *Université Libre de Bruxelles* has to compete for students as funding is dependent upon numbers, but is restricted in its catchment. It takes about 65 % of students from Brussels who enter higher education, but cannot teach outside the area it is located in.

RESEARCH

In all the institutions visited, the role and funding of research was an important concern. We noted the contrast between Europe and North America. In the latter, all universities would normally be expected to undertake both teaching and research. In Europe, there are many institutions, which concentrate on teaching. One question is: what is the trend? On both continents there appears to be a move to concentrate research funds in a limited number of institutions, with some institutions in North America proposing formal differentiation of the system, which would distinguish research universities. In the United Kingdom, there is concern that, whilst the new universities have, formally, equal access to state funds for research, a two tier system is emerging. For “new” universities, the accession to university status had not produced research funds comparable with those of the older universities. Their main concern was the Research Assessment Exercise, which assesses the quality of research and on which funding is based, and which has resulted in this outcome. Although the rules of the exercise are apply equally to all institutions, the former polytechnics feel that without the tradition and historical funding base of the older institutions, they will continue to gain few funds. The University of Westminster was at pains to point out that it had always done research, but it, like Oxford Brookes, gained only a small percentage of government funding for research. This was in marked contrast with figures cited at the University of Amsterdam, where about two thirds of spending was attributed to research. By way of further contrast, the *hogescholen* in the Netherlands are not involved in research, and it is not clear how moves to co-operate or possibly merge institutions will affect this. The old universities, like those in the United Kingdom,

have little interest in spreading research funding across a wide range of institutions, for this would exacerbate existing problems about the scope and function of university research in a small country. There is already, it was said, a danger that research funds will be spread too thinly across institutions. And many Dutch companies are now outsourcing their research to other parts of the world, diminishing the contribution that Dutch universities can make to them.

All the institutions visited are attempting to establish costing systems to cover the full costs of any research activities, though most admitted that many industrial contracts still did not so do. At the University of Amsterdam, there was acknowledgement of intellectual benefit of the activity; at other universities, there was greater concern about the cost to the institution.

COMMERCIAL VENTURES

The expansion of the mission of universities into commercial areas was a problem in many institutions. The mission of the *Université Libre de Bruxelles* refers to “science diffusion” and “research valorisation” (through patents etc), but concerns were expressed about the different sources of funding for basic and applied research, and about the pressure on universities to become “expert in all things”. How far should the university go into research and development and commercial development – how could the “core business” be preserved? At Bruxelles and several other institutions visited, there was also a sense that the return on some of these activities was not worth the effort. The cost of developing research ideas and of patenting them is high, and several universities thought that such an activity was probably rewarding only to a few institutions in the world.

In several institutions visited, an attempt to resolve some of these dilemmas is being made by the establishment of separate organisations, private or non-profit companies in which the university had a stake. The dilemmas and a similar response were evident in the study tour visit to the *Institut Pasteur* in Lille, one of two such private research institutes working at the forefront of bio-medical research and genomics. Its director claims to have transformed it into a “research enterprise”, forming links with companies to market its research and it is one of the first research foundations to go to the market in France. The *Institut* maintains a stake of at least 20 % in these joint ventures, and the funds generated sustain 250 staff.

The device of establishing a separate company for non-mainstream activities has also been used at the University of Leiden, but for teaching. It is establishing a series of international masters programmes to be taught in English and run by the company which buys in University staff. The aim is to recruit about 500 students at full cost.

CONCLUSION

In developments such as these, it is evident that universities are responding in novel ways to the challenges they face. Across Europe, the study tour encountered a variety of approaches to common problems, conditioned by, and sometimes compounded by local, regional, national or trans-national circumstances. All these developments showed that there is a need to constantly re-interpret what it means to be a university in any era or circumstances. All the institutions were anxious to preserve the “core values” of a university, but to respond, too, to the external demands placed upon them. The extent to which they will succeed in this depends not just on institutional responses, but also on the policy environment created for them by governments and other agencies.

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Tertiary Education in the 21st Century: Challenges and Opportunities

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"It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change." Charles Darwin

ABSTRACT

In the past few years, many countries have witnessed significant transformations and reforms in their higher education systems, including the emergence of new types of institutions, changes in patterns of financing and governance, the establishment of evaluation and accreditation mechanisms, curriculum reforms, and technological innovations. But the tertiary education landscape is not changing as fast everywhere. Some universities have proudly tried to maintain their traditions, good or bad; other universities throughout the world have been passive in the face of crisis. In this rapidly evolving world, what is likely to happen to those higher education institutions which are not willing or able to change?

To approach this problem, this paper looks first at the new challenges characterizing the environment in which higher education institutions operate and compete at the beginning of the 21st century. Second, it examines some concrete implications of these challenges in terms of changing institutional forms and new ways of delivering higher education programs, looking at promising trends and experiences in countries and institutions which have taken the lead in introducing reforms and innovations.

INTRODUCTION

Imagine a university without buildings or classrooms or even a library. Imagine a university ten thousand miles away from its students. Imagine a university without academic departments, without required courses or major or grades. Imagine a college open 24 hours a day, seven days a week, 365 days a year. Imagine a college proposing a bachelor's degree in Individualized Studies or in Interdisciplinary Studies,

with a catalogue of more than 4 000 different courses. Imagine a degree valid only for five years after graduation. Imagine a college willing to reimburse its students if they do not find a suitable job within six months after graduation. Imagine a higher education system where institutions are ranked not by the quality of their teachers, but by the intensity of electronic wiring and the degree of Internet connectivity. Imagine a country whose main export earnings come from the sale of higher education services. Imagine a socialist nation which charges market rate tuition fees to obtain full cost recovery in public higher education. Are we entering the realm of science fiction? Or are these evocations real-life stories of revolution in the world of higher education on the eve of the 21st century?

In the past few years, many countries have witnessed significant transformations and reforms in their higher education systems, including the emergence of new types of institutions, changes in patterns of financing and governance, the establishment of evaluation and accreditation mechanisms, curriculum reforms, and technological innovations. But the tertiary education landscape is not changing as fast everywhere. Some universities have proudly tried to maintain their traditions, good or bad. At Oxford University, New College is a venerable 16th century institution. At Bob Jones University in South Carolina, interracial dating is still banned. These unbending institutions are not alone; other universities throughout the world have been passive in the face of crisis. The oldest university on the American continent, the Autonomous University of Santo Domingo in the Dominican Republic (established in 1538), is about to collapse under the pressure of its 80 000 students crowding facilities originally designed to accommodate only 6 000 students. The largest classical university in Latin America, the National Autonomous University of Mexico, was paralyzed for ten months in 1999-2000 by a strike over the Rector's proposal to introduce voluntary tuition fees in an amount equivalent to USD 140 per year. In this rapidly evolving world, what is likely to happen to those higher education institutions which are not willing or able to change?

THE NEW CHALLENGES

"It was the best of times, it was the worst of times. It was the age of wisdom, it was the age of foolishness..." Charles Dickens

There are three major, intertwined new challenges which bear heavily on the role and functions of higher education: *i*) economic globalization; *ii*) the increasing importance of knowledge as a driver of growth, and *iii*) the information and communication revolution.

Globalization

Globalization is the complex integration of capital, technology, and information across national boundaries in such a way as to create an increasingly integrated world market, with the direct consequence that more and more countries and firms

have no choice but to compete in a global economy. Globalization may not be a new phenomenon. The conquest of America by the Spanish and Portuguese invaders at the end of the 15th century, the triangular cotton and slave trade in the 17th and 18th centuries, the construction of the trans-Atlantic telegraph cable in the 1860s, and the colonization of most of Asia and Africa until the middle of the 20th century were key factors of economic integration and determinants of economic growth on a global scale. But there has undoubtedly been an acceleration of the phenomenon in the past two decades as demonstrated by the increase in international trade and the growing interdependence of capital markets.

Emphasizing globalization as an important economic trend does not imply a value judgment, either positive or negative. Many people see this evolution as a major source of opportunities, while critics decry the dangers of inter-dependency and high volatility, such as the risk of transferring financial crises from one country to the other. But globalization is happening, whether one approves of it or not, whether one likes it or not, and every country in the world, every firm, every working person is affected by it and is very likely a part of it.

Growing role of knowledge

The second dimension of change is the growing role of knowledge. Economic development is increasingly linked to a nation's ability to acquire and apply technical and socio-economic knowledge, and the process of globalization is accelerating this trend. Comparative advantages come less and less from abundant natural resources or cheaper labor, and more and more from technical innovations and the competitive use of knowledge. The proportion of goods with a medium-high and high level of technology content in international trade has gone from 33% in 1976 to 54% in 1996.² Today, economic growth is as much a process of knowledge accumulation as of capital accumulation. It is estimated that firms devote one-third of their investment to knowledge-based intangibles such as training, research and development, patents, licensing, design and marketing. In this context, economies of scope, derived from the ability to design and offer different products and services with the same technology, are becoming a powerful factor of expansion. In high-technology industries like electronics and telecommunications, economies of scope can be more of a driving force than traditional economies of scale.³ New types of companies, called producer services companies, have begun to prosper as providers of specialized knowledge, information and data supporting existing manufacturing firms. Experts see them as the principal source of created comparative advantage and high value added in advanced industrialized economies.⁴

At the same time, there is a rapid acceleration in the rhythm of creation and dissemination of knowledge, which means that the life span of technologies and

products gets progressively shorter and that obsolescence comes more quickly. In chemistry, for instance, there were 360 000 known substances in 1978. This number had doubled by 1988. By 1998, there were three times as many known substances (1 700 000). Almost 150 000 new “patent equivalents” were added to the Chemical Abstracts data base in 1998, compared to less than 10 000 a year in the late 1960s. Perhaps the best illustration of the short lifetime of new information and products comes from the computer industry, where the monopoly of the Intel micro-processing chip has decreased spectacularly in duration with each new version. With its 386 microprocessor, Intel dominated the market for more than three years in the late 1980s. Ten years later its competitive edge lasted only three months with Pentium II. Even more dramatic, Pentium III was supplanted by AMD’s Athlon microprocessor after being on the market for only a few weeks.

In addition, in many fields the distance between basic science and technological application is narrowing or, in some cases, disappearing altogether. The implication is that pure and applied research is not separate any longer. Molecular biology and computer science are two salient examples of this evolution.

The results of a recent survey of technical innovation in US manufacturing firms underscore the strategic importance of academic research in the development of new industrial products and processes. On average, 19% of new products and 15% of new processes were directly based on academic research. The proportion was even higher, 44 and 37% respectively, in high technology industries such as pharmaceuticals, instruments and information processing.⁵ There is also a significant geographical dimension to this relation between academic research and industrial applications. This is underlined by a rich body of evidence on the impact of universities on regional development and the spillover effects of academic research on industrial research and technology and local innovation.⁶

Information and communication revolution

The third dimension of change is the information and communication revolution. The advent of printing in the 15th century brought about the first radical transformation in the way knowledge is kept and shared by people. Today, technological innovations are revolutionizing again the capacity to store, transmit, access and use information. Rapid progress in electronics, telecommunications and satellite technologies, permitting high capacity data transmission at very low cost, has resulted in the quasi abolition of physical distance. Sixty years ago a phone call from New York to London cost the equivalent of USD 300 per minute, today that same call costs only five cents per minute. In 1985, the cost of sending 45 million bits of information per second over one kilometer of optical fiber was close to 100 dollars; in 1997, it was possible to send 45 000 million bits per second at a cost of just 0.05 cents.⁷ For all practical purposes, there are no more logistical

barriers to information access and communication among people, institutions and countries.

IMPLICATIONS FOR HIGHER EDUCATION

"In questions of mind, there is no medium term: either we look for the best or we live with the worst." John Gardner

What are the implications of these converging challenges for higher education systems and institutions? They herald: *i*) radical changes in training needs; *ii*) new forms of competition; and *iii*) new configurations and modes of operation for higher education institutions.

Changing training needs and demand patterns

To begin with, a trend towards higher and different skills has been observed in OECD countries and in the most advanced developing economies. In knowledge-driven economies, ever-greater numbers of workers and employees need higher level skills. This is confirmed by recent analyses of rates of return in a few Latin American countries (Argentina, Brazil and Mexico) which show a rising rate of return for tertiary education, a reversal of earlier trends in the 1970s and the 1980s.⁸ Moreover, in OECD countries, highly skilled white-collar employees account for 25 to 35% of the labor force.

The second dimension of change in education and training needs is the growing importance of continuing education needed to update knowledge and skills on a regular basis because of the short "shelf life" of knowledge. The traditional approach of studying for a discrete and finite period of time to acquire a first degree or to complete graduate education before moving on to professional life is being progressively replaced by practices of lifelong education. Training is becoming an integral part of one's working life, and takes place in a myriad of contexts: on the job, in specialized higher education institutions, or even at home. As Shakespeare wrote with prescience several centuries ago: "Learning is but an adjunct to ourselves, and where we are our learning likewise is."

In the medium term, this may lead to a progressive blurring between initial and continuing degree studies, as well as between young adult and mid-career training. Finland, one of the leading promoters of continuing education in Europe, is among the most advanced nations in terms of conceptualizing and organizing tertiary education along these new lines. Today, the country has more adults engaged in continuing education programs (200 000) than young people enrolled in regular higher education degree courses (150 000).

This evolution also means that, in the medium term, the primary clientele of universities will no longer be young high school graduates. Universities must now

organize themselves to accommodate the learning and training needs of a very diverse clientele: working students, mature students, stay-at-home students, traveling students, part-time students, day students, night students, weekend students, etc. One can expect a significant change in the demographic shape of higher education institutions, whereby the traditional structure of a pyramid with a majority of first degree students, a smaller group of post-graduate students, and finally an even smaller share of participants in continuing education programs will be replaced by an inverted pyramid with a minority of first time students, more students pursuing a second or third degree, and the majority of students enrolled in short term continuing education activities. Already in the United States, almost half of the student population consists of mature and part-time students, a dramatic shift from the previous generation. In Russia, part-time students represent 37% of total enrollment.

From the student's perspective, the desire to position oneself for the new types of jobs in the knowledge economy provides a strong incentive to mix study program options and qualifications, often beyond traditional institutional boundaries. New patterns of demand are emerging, whereby learners attend several institutions or programs in parallel or sequentially, thus defining their own skill profiles on the labor market.

Another important consequence of the acceleration of scientific and technological progress is the diminished emphasis in tertiary education programs on the learning of facts and basic data *per se*. There is a growing importance of what could be called *methodological knowledge* and skills, *i.e.* the ability to learn in an autonomous manner. Today in many disciplines, factual knowledge taught in the first year of study may become obsolete before graduation. The learning process now needs to be increasingly based on the capacity to find, access and apply knowledge to problem solving. In this new paradigm, where learning to learn, learning to transform information into new knowledge, and learning to transfer new knowledge into applications are more important than memorizing specific information, primacy is given to information seeking, analysis, the ability to reason, and problem-solving. In addition, competencies such as learning to work in teams, peer teaching, creativity, resourcefulness and the ability to adjust to change are also among the new skills which employers value in the knowledge economy.

The third dimension of change in training needs is the growing attractiveness of degrees and credentials with international recognition. In a global economy where firms produce for overseas markets and compete with foreign firms in their own domestic markets, there is a rising demand for internationally recognized qualifications, especially in management-related fields. Many entrepreneurial university leaders have been quick to identify and capitalize on this trend, as illustrated by the following examples:

- In the US, a rapidly growing number of online universities are reaching out to students in foreign countries. Jones International University, which already serves students in 38 countries, is the first online university in the world that has been formally accredited by the same agency that accredits traditional universities such as the University of Michigan or the University of Chicago.
- In Asia and Eastern Europe, there has been a proliferation of so-called overseas “validated courses” offered by franchise institutions operating on behalf of British and Australian universities. One fifth of the 80 000 foreign students enrolled in Australian universities are studying at offshore campuses, mainly in Malaysia and Singapore.
- Hundreds of thousands of students in Commonwealth countries take each year exams organized by UK Examination Boards such as the Institute of Commerce and Management or the London Chamber of Commerce and Institute.⁹
- In the Middle East, the American universities of Beirut and Cairo attract significant numbers of young people eager to earn a US degree.
- In China, one of the fastest growing private education institutions is a school specializing in preparatory courses for American colleges, called the New Oriental School, which already boasts 50 000 students in Beijing alone.¹⁰
- In Germany, where higher education is predominantly public, a number of private business schools have been recently established, either as independent institutions or subsidiaries of existing public universities. Following the example of a rapidly growing number of MBAs in the Netherlands and France, programs in these schools are taught in English and international students are actively sought.

New forms of competition

The decreased importance of physical distance means that the best universities of any country can decide to open a branch anywhere in the world or to reach out across borders using the Internet or satellite communication links, effectively competing with any national university on its own territory. The President of the University of Maryland wrote an article of complaint in the Washington Post in April 1999, vehemently protesting the opening of a branch of the University of Phoenix in Maryland. The California-based University of Phoenix, one of the most dynamic distance universities in the US, uses an incentive system to reward professors on the basis of the labor market outcomes of graduates and boasts an enrollment of 68 000 students. The British Open University has inundated Canadian students with Internet messages saying more or less “we’ll give you degrees and we don’t really care if they’re recognized in Canada because they’re recognized by

Cambridge and Oxford. And we'll do it at one-tenth the cost".¹¹ It is estimated that, in the US alone, there are already more than 3 000 specialized institutions dedicated to online training. Thirty-three states in the US have a statewide virtual university; and 85% of the community colleges are expected to offer distance education courses by 2002.¹² Distance education is sometimes delivered by a specialized institution set up by an alliance of universities, as is the case with Western Governor University in the US and the Open Learning Agency in British Columbia. The proportion of US universities with distance education courses has grown from 34% in 1997-98 to about 50% in academic year 1999-2000, public universities being much more advanced than private ones in this regard.¹³ The Mexican Virtual University of Monterrey offers 15 master's programs using teleconferencing and the Internet that reach 50 000 students in 1 450 learning centers throughout Mexico and 116 spread all over Latin America. In Thailand and Turkey, the national open universities enroll respectively 41 and 38% of the total student population in each country.

Corporate universities are another form of competition which traditional universities will increasingly have to reckon with, especially in the area of continuing education. It is estimated that there are about 1 600 institutions in the world functioning today as corporate universities, up from 400 ten years ago. Two significant examples of successful corporate universities are those of Motorola and IBM. Recognized as one of the most successful corporate universities in benchmarking exercises, Motorola University, which operates with a yearly budget of 120 million dollars representing almost 4% of its annual payroll, manages 99 learning and training sites in 21 countries.¹⁴ IBM's corporate university, one of the largest in the world, is a virtual institution employing 3 400 professionals in 55 countries and offering more than 10 000 courses through Intranet and satellite links. The 1999 recipients of the Corporate University Awards sponsored by the *Financial Times*, which recognize the most innovative corporate university initiatives of the year, were TVA University, IDX Institute of Technology, Dell Learning, IBM Corporate University and ST University.¹⁵

Corporate universities operate under one of any combination of the following three modalities: *i*) with their own network of physical campuses (*e.g.* Disney, Toyota and Motorola); *ii*) as a virtual university (*e.g.* IBM, Dow Chemical); or *iii*) through an alliance with existing higher education institutions (*e.g.* Bell Atlantic, United HealthCare, United Technologies). A few corporate universities, such as the Rand Graduate School of Policy Studies and the Arthur D. Little School of Management, have been officially accredited and enjoy the authority to grant formal degrees. Experts are predicting that, by the year 2010, there will be more corporate universities than traditional campus-based universities in the world, and an increasing proportion of them will be serving smaller companies rather than corporate giants.

The third form of unconventional competition comes from the new “academic brokers”, virtual entrepreneurs who specialize in bringing together suppliers and consumers of educational services. A few examples can be mentioned to illustrate this new trend:

- Companies like Connect Education, Inc. and Electronic University Network build, lease and manage campuses, produce multimedia educational software, and provide guidance to serve the training needs of corporate clients worldwide.¹⁶
- Rennselaer Polytechnic Institute coordinates and delivers degree programs from Boston University, Carnegie Mellon, Stanford University and MIT for the employees of United HealthCare and United Technologies.¹⁷
- Nexus, a UK based company advertising itself as the “world’s largest international student recruitment media company”, organizes fairs in many East Asian and Latin American countries, bringing together higher education institutions and students interested in overseas studies.
- Web sites like HungryMinds.com and CollegeLearning.com act as clearing-houses between schools and prospective students.
- ECollegebid, a consortium of colleges and universities, matches student objectives and ability to pay for an education with the willingness of a tertiary institution to offer tuition discounts.

At the shadier extreme of the academic brokering industry, one finds Internet-based essay mills offering to help students with their college assignments. Defended by their promoters as useful and harmless research tools, they are under attack from the academic community who decries their capacity to increase plagiarism and cheating.

Some “traditional” higher education institutions have been quick to catch onto the potential of education and training brokering arrangements. St-Petersburg Junior College recently entered into a partnership with Florida State University, the University of Central Florida and the UK Open University to offer four-year degree programs at some of its sites.¹⁸ The University of California at Santa Cruz, having set up its own corporate training department ten years ago right in the middle of Silicon Valley, has established successful partnerships with a number of corporate universities, notably those operated by GE and Sun Microsystems, even managing to attract additional state funding on a matching grant basis.¹⁹

The emergence of these new forms of competition is likely to change the nature of quality assurance bodies, mechanisms and criteria. It is doubtful that the philosophy, principles and standards routinely applied to evaluate or accredit campus-based programs can be used without significant adjustments to assess the quality and effectiveness of online courses and other modalities of distance education.

Appropriate and reliable accreditation and evaluation processes are needed to reassure the public that the courses, programs and degrees offered by the new types of distance education institutions meet acceptable academic and professional standards. Less emphasis is likely to be given to traditional input dimensions such as qualifications of individual faculty and student selection criteria, and more on the capabilities of graduates. Such a shift would reflect the results of effective teamwork among designers of pedagogical support materials, facilitators of resource-based course delivery, mentors of students, and evaluators of learning outcomes. Western Governors University's initiative to move to competency-based evaluations performed by an independent agency has created an interesting precedent, which may ultimately induce change in evaluation methods used by traditional universities.

At the national level, higher education authorities are increasingly challenged by the availability of foreign programs through distance education, franchise institutions and online courses. Very few developing nations have an established accreditation and evaluation system, let alone do they have access to the necessary information on these foreign programs or enjoy the institutional monitoring capacity to be able to detect fraud and protect their students from low quality offerings. Many Latin American countries, for example, find themselves in the awkward situation of having more distance education doctoral programs proposed by Spanish universities than conventional doctoral programs offered in their national universities. The presence of foreign universities is perceived as a threat even in some industrialized countries. In Australia, for example, the registration of the Hawaii-based Greenwich University on Norfolk Island in early 2000 has provoked a national controversy and prompted the Federal Government to establish the nation's first quality assessment agency (the Australian Universities Quality Agency):

“Distance learning is a world of extremes, when you look at the best university education around the world, some of it is now distance learning, when you look for the worst, all of it is distance learning. Bad distance learning may now be given a new lease on life by the brave new world of online teaching.”²⁰

For those countries which cannot afford to develop their own information system, there is always the possibility of participating in international accreditation and evaluation networks. Another option, following the recent initiative of Singapore and Hong Kong, is to demand from foreign tertiary education institutions that they meet the same quality assurance requirements and offer the same degree equivalence as those prevailing in the parent institution in the country of origin.

Changes in structures and modes of operation

Faced with new training needs and new competitive challenges, many universities need to undertake drastic transformations in governance, organisational structure and modes of operation.

A key aspect will be the ability of universities to organize traditional disciplines differently, taking into consideration the emergence of new scientific and technological fields. Among the most significant ones, it is worth mentioning molecular biology and biotechnology, advanced materials science, microelectronics, information systems, robotics, intelligent systems and neuroscience, and environmental science and technology. Training and research for these fields require the integration of a number of disciplines which have not necessarily been in close contact previously, resulting in the multiplication of inter- and multidisciplinary programs cutting across traditional institutional barriers. For example, the study of molecular devices and sensors, within the wider framework of molecular biology and biotechnology, brings together specialists in electronics, materials science, chemistry and biology to achieve greater synergy. Imaging technology and medical science have become closely articulated. Universities all over the world are restructuring their programs to adapt to these changes:

- At the University of Glasgow, physicians and mechanical engineers conduct research together in the field of control engineering, trying to develop technologies to help paraplegic patients.
- In Denmark, environmental science programs are taught by a group of specialists who include not only scientists and engineers but also theologians and political scientists responsible for teaching the relevant ethical and political economy dimensions. At Roskilde University near Copenhagen, traditional departmental borders were removed in the late 1980s. Chemistry and life sciences are part of a single multidisciplinary department, as are mathematics and physics or technology and social sciences. In each department, the educational experience of undergraduate students follows a project-based learning approach.
- George Mason University in Virginia started what is called the New Century College with a bachelor's degree in Interdisciplinary Studies as its main academic program.
- The University of Illinois at Urbana-Champaign and the University of Southern California have developed the "Team Engineering Analysis and Modeling" methodology based on the collaboration of researchers from a broad spectrum of the engineering and social sciences.
- The University of Warsaw's newly established Collegium for Interdepartmental Studies, which offers individually tailored undergraduate programs, is Poland's first attempt at interdisciplinary education.²¹

The new patterns of knowledge creation do not imply only a reconfiguration of departments into a different institutional map but more importantly the reorganisation of research and training around the search for solutions to complex

problems, rather than the analytical practices of traditional academic disciplines. This evolution is leading to the emergence of what experts call “transdisciplinarity”, with distinct theoretical structures and research methods.²² McMaster University in Ontario, Canada, and the University of Maastricht in Holland were among the first universities to introduce problem-based learning in their medical and engineering programs in the 1970s. The University of British Columbia is promoting “research-based learning”, an approach linking undergraduate students to research teams with extensive reliance on information technology for basic course information. Waterloo University in Western Ontario earned a high reputation for its engineering degrees – considered among the best in the country – through the successful development of cooperative programs that integrate in-school and on-the-job training. Such innovations have helped that institution achieve what the Cambridge mathematician Alfred North Whitehead described, many decades ago, as the noble mission of the university:

“The tragedy of the world is that those who are imaginative have but slight experience, and those who are experienced have feeble imaginations. Fools act on imagination without experience. Pedants act on knowledge without imagination. The task of the university is to weld together imagination and experience.”

Even Ph. D. programs may be affected by this trend towards increased multidisciplinary. Proponents of a reform of doctoral education in the US predict that Ph. D. students will be less involved in the production of new knowledge and more on contributing to the circulation of knowledge across traditional disciplinary boundaries.

Realigning universities on the basis of inter- and multi-disciplinary learning and research themes does not imply only changes in program and curriculum design, but also significant modifications in the planning and organisation of the laboratory and workshop infrastructure. From the Georgia Institute of Technology comes a successful experience in developing an interdisciplinary mechatronics laboratory serving the needs of students in electrical, mechanical, industrial, computer and other engineering departments in a cost-effective manner.²³ A unique partnership bringing together Penn State University, the University of Puerto Rico-Mayaguez, the University of Washington and Sandia National Laboratories has permitted the establishment of “Learning Factory” facilities across the partner schools which allow teams of students from industrial, mechanical, electrical, chemical engineering and business administration to work on interdisciplinary projects.²⁴

The use of modern technology has just begun to revolutionize the way teaching and learning occur. The concurrent use of multimedia and computers permits the development of new pedagogical approaches involving active and interactive learning. Frontal teaching can be replaced by or associated with asynchronous

teaching in the form of online classes that can be either scheduled or self-paced. With a proper integration of technology in the curriculum, teachers can move away from their traditional role as one-way instructors towards becoming facilitators of learning. Examples of pedagogical innovations relying on information technology come from all parts of the world:

- In Brazil, a few schools of medicine and engineering in federal universities have been experimenting with the use of computer-based programs to teach mathematics in first and second year, rather than having students attend regular classes. This change in pedagogical approach has resulted in a remarkable decrease in dropout rates from 70 to 30%.
- In Australia, the University of Newcastle led the way in the use of a problem-learning approach in medical education.
- The University of Southern Denmark has cut dropout rates in its business administration program in half by replacing traditional teaching with project-based learning.²⁵
- The Colorado Community College system is pioneering a two-year degree which is taught entirely online.
- In 1999, for the first time, a course of comparative education was taught simultaneously and interactively to groups of students in two separate New York State universities, SUNY Buffalo and SUNY Albany, combining video-conferences through satellite links and Internet sessions. This is also common practice at the University of Highlands and Islands in Scotland.
- St-Petersburg Junior College, Florida's oldest community college, has pioneered the use of two-way interactive video systems to regain the distance learning market invaded by institutions like the University of Phoenix.

In a pioneer study conducted at the beginning of the 1990s, two professors at the University of Michigan, Kozma and Johnson, analyzed several ways in which information technology could play a catalytic role in enriching the teaching and learning experience. They suggested a new pedagogical model involving: *i*) active engagement of the students rather than passive reception of information; *ii*) opportunities to apply new knowledge to real-life situations; *iii*) the ability to represent concepts and knowledge in multiple ways rather than just with text; *iv*) the use of computers to achieve mastery of skills rather than superficial acquaintance; *v*) learning as a collaborative activity rather than an individual act; and *vi*) an emphasis on learning processes rather than memorization of information.²⁶ Obviously, the new model calls for new ways of evaluating learning processes and outcomes.

However, modern technology is not a panacea. To create a more active and interactive learning environment, faculty must have a clear vision as to the purpose of the new technologies and the most effective way of integrating them in

program design and delivery – what experts call “instructional integration”. Then they must educate themselves in the use of the new pedagogical channels and supports. A recent report from the University of Illinois on the use of Internet classes in undergraduate education offers a few cautionary warnings.²⁷ Quality online education is best achieved with relatively small class sizes, not to exceed 30 students. Moreover, it does not seem desirable to teach an entire undergraduate degree program only with online classes if students are expected to learn to think critically and interact socially in preparation for professional life. Combining online and regular classroom courses gives students more opportunity for human interaction and development of the social aspects of learning through direct communication, debate, discussion and consensus building.

These pedagogical requirements apply also to the design and delivery of distance education programs which need to match learning objectives and appropriate technology support. In scientific fields like engineering, for example, the need for practical training is often overlooked. Computer simulations alone cannot replace all forms of applied training. In many science and technology-oriented programs, hands-on activities in laboratories and workshops remain an indispensable constituent of effective learning.

Technological change does affect only pedagogy. The information and communication revolution also has far-reaching implications for how universities are organized and deliver services. Already in the United States new universities are designed and constructed without a library building because all students are expected to use computers to access online digital libraries and data bases. Tertiary institutions with virtual libraries can join the recently established Online College Library Center which offers inter-library loans of digitized documents on the Internet. Even in traditional libraries, CD-ROMs can replace journal collections. Cornell University, for example, has created the “Essential Electronic Agricultural Library”, which consists of a collection of 173 CD-ROMs storing text from 140 journals for the past four years that can be shared with libraries at universities in developing country.

Wiring and Internet connectivity are thus becoming an important determinant of the attractiveness of a higher education institution. This is reflected by the recent publication, for the second consecutive year, of the results of a ranking survey which assesses US universities on the basis of their computer and communication infrastructure and their level of Internet use for pedagogical and administrative purposes. Case Western Reserve University, MIT and Wake Forest University were judged as the 1999 leaders in applying online services on campus²⁸. Case Western has established, in partnership with the Xerox corporation, an electronic network of 9 000 miles of cable and 15 000 information ports to dispense learning resources to students and faculty irrespective of their physical location. In 2000, Carnegie Mellon University came on top of the list, in recognition for its wireless campus network and its 11 000 networked computers. An increasing number of tertiary

institutions, like Mount St. Mary College in New York State and Drexel University in Pennsylvania, have become entirely “wireless”, taking the lead in installing high-speed wireless networks covering the whole campus.

The mushrooming of virtual institutions, online education programs and web-based courses raises challenging issues of intellectual property rights and academic freedom with respect to ownership and control of education materials developed exclusively for online or other multimedia dissemination channels. The lack of clarity on the definition of ownership rights and rules for usage of new education materials is likely to pit academics against their home institutions or against the institution contracting them to prepare course materials for online dissemination or broadcasting. Recent controversies illustrate the range of potential difficulties involved in regulating these new activities. In November 1999, a Harvard School of Law professor was reprimanded by Harvard administrators for selling videotaped lectures to Concord University School of Law, an online degree granting institution. An Arizona professor who developed a televised writing course for Pima Community College a few years ago has become a celebrity on local television, but has not had any success in getting the College to acknowledge copyrights for broadcasting, year after year, the videotapes he prepared. The ownership of online courses has become one of the most problematic issues debated in the negotiations for the renewal of the collective bargaining agreement with faculty members. The University of Texas system recognizes ownership of web courses by their creators, unless both parties accept beforehand that someone is hired for the sole purpose of writing an online course. In contrast, Burlington County College in New Jersey claims sole ownership of all online courses created on campus.²⁹

Several economic factors weigh heavily in favor of the widespread adoption of electronic modes of organisation and delivery of tertiary education services. The fiscal crisis faced by most countries, rich and poor alike, the rapid growth in the cost of higher education institutions in industrialized countries, especially in the US, as well as the growing demand for tertiary education in developing nations and in the former socialist countries of Eastern Europe and Central Asia all make it a necessity to find more cost-effective alternatives to traditional models of higher education. The cost of producing a graduate from the UK Open University is about one-third that at a regular university. The cost of the Cornell electronic agricultural library mentioned earlier is about 10 000 dollars, as compared to the 375 000 dollars it would cost any university to buy all the scientific journals included in the electronic database.³⁰ Yet, this differential can be somewhat misleading. University administrators must also keep in mind the high cost of information technology and infrastructure which includes not only the initial capital outlays required to follow the advanced information and communication technology path, but also the recurrent budget outlays needed for expenditures on infrastructure maintenance, training,

and technical support. It is estimated that these recurrent costs can represent as much as 75% of the life cycle costs of technology investments. These cost dimensions have very serious implications in terms of growing digital divide among institutions within any country as well as across nations.

To be able to adapt to this changing environment, flexibility is very important. Increasingly, tertiary education institutions need the capacity to react swiftly by establishing new programs, reconfiguring existing ones, and eliminating outdated programs without being hampered by bureaucratic regulations and obstacles. But in many countries and institutions, administrative procedures are very rigid when it comes to making changes in academic structure, programs or mode of operation. In Uruguay, for instance, it is only when confronted in the mid-1990s with competition from new private universities that the venerable University of the Republic – which for 150 years had exercised a monopoly over higher education in the country – started a strategic planning process and considered establishing post-graduate programs for the first time. Another example of institutional inflexibility occurred in Venezuela, where a dynamic private business administration institute called IESA had to wait several years to receive the official approval from the Council of Rectors for a new MBA program designed and delivered jointly with the Harvard Business School. The Brazilian Institute of Applied Technology (ITA), the most prestigious private engineering school in that country had similar problems getting accredited. In Nicaragua, the recently established University of Mobile from Alabama State has been denied a license to operate by the Council of Rectors keen on protecting the Nicaraguan public universities from foreign competition. In Romania, CODECS, the first distance education institution of the country created in the early 1990s, has had a hard time getting recognition of its degrees by the national higher education authorities. The only way it was able to achieve it was in an indirect manner, by forging an alliance with the UK Open University whose degrees are recognized in Romania. Finally, at a recent meeting of the International Association of Management Education (April 2000), leaders of business schools expressed alarm at the slow and bureaucratic response of their institutions to technological advances and labor market changes. For example, at Haas School of Business (University of California, Berkeley), it took five years to approve a new master's degree in financial engineering, by which time many competitors had already started to offer similar programs.³¹

To increase flexibility in the design and organisation of academic programs, many higher education institutions throughout the world have adopted the US standard of credit-based courses. This evolution has affected entire national university systems, as in the case of Thailand, or a network of institutions in a country, such as the Indian Institutes of Technology, or a single institution, such as the University of Niger.³² The New Bulgarian University, one of Eastern Europe's most dynamic young private universities, is the first university in that country operating

with a full academic credit system. In a historic meeting in Bologna in June 1999, the Ministers of Higher Education from 29 European countries committed themselves to the introduction of the credit system in their respective university system and the establishment of a European Credit Accumulation and Transfer System (EURO CATS).

Higher education institutions are also changing their pattern of admission to respond in a more flexible way to growing student demand. In 1999, for the first time in the US, a number of colleges decided to stagger the arrival of new students throughout the academic year, instead of restricting them to the fall semester. In China, similarly, a spring college entrance examination was held for the first time in January 2000, marking a sea change in the history of that country's entrance examination system. Students who fail the traditional July examination will no longer have to wait a full year anymore to get a second chance.

Effective labor market feedback mechanisms, such as tracer surveys and regular consultations with employers and alumni, are indispensable for the purpose of adjusting curricula to meet the changing needs of industry. In Denmark, industry representatives, including presidents of large companies, commonly sit on departmental boards in universities to advise them on training and research priorities. Of course, there is no better linkage than when a new higher education institution is fully integrated into a regional development strategy as happened in Finland, where the young University of Oulu has become one of the best universities in the Nordic countries, despite being located in a remote area very close to the Arctic circle. Its growth attests to the successful transformation of a small rural community into a high technology zone where winning companies (led by Nokia), science parks dedicated to applied research in electronics, medicine and biotechnology and the 13 000 student university function in symbiosis.³³ Palack University, in the Czech city of Olomouc, has received praise for its efforts to develop new law courses in response to the retraining needs generated by the reform of the legal system. The Michigan Virtual Automotive College is a focused learning partnership bringing together the State government of Michigan, the Detroit car industry, Michigan State University and the University of Michigan.

An interesting example of willingness to change and adapt the curriculum and programs on a regular basis is provided by the University of South Florida in Tampa, one of the relatively younger public universities in the US. The engineering department offers its graduates a five-year warranty not unlike the standard warranty against manufacturing defects, which comes with any consumer good. If at any time during the five years following graduation an alumnus/a is required to apply skills in his/her work but had not received the requisite training during the time of studies at the university, he or she can re-enroll free of charge to acquire these skills. Along the same lines, a university could very well envisage to achieve the dual objective of strengthening its financial sustainability and keeping its programs

up-to-date by selling a “training for life” package. Under such a scheme new students would sign up and pay not only for their initial professional education, but also for all the retraining periods required throughout their professional career. Operating in the same geographical area as the University of South Florida, St - Petersburg Junior College boasts the ability to create a new program in just a few months to answer new educational needs in the local community.³⁴

At the same time, the need for more flexibility calls into question traditional modes and patterns of academic appointments and careers. In almost all countries, the administrative status of public university professors has usually been similar or very close to that of civil servants, with the benefit of strong employment guarantees and promotion based on seniority. In many private universities, especially in the US, tenured appointments involve equivalent arrangements. Moreover, it has commonly been assumed that the presence of full-time professors was a key determinant of quality. In many Latin American countries for instance, where private higher education represents a significant proportion of overall enrollment – or even the majority as in Brazil, Colombia, the Dominican Republic, El Salvador and Chile – one of the principal evaluation criteria applied by the accreditation authorities is the number of full-time professors. In Poland, when a new funding formula was introduced at the beginning of the 1990s to prop up quality in public universities, one of the main two parameters of the funding equation was the number of full-time professors with a doctorate.

But the need for higher education institutions to be able to respond rapidly to changing labor market signals and to adjust swiftly to technological change may require more flexible arrangements for the deployment of academic staff and evaluation of its performance, including moving away from civil service regulations and abandoning tenure-track appointments. In Tunisia, an important dimension of the reform that initiated the successful establishment of a network of non-university technology institutes (*Instituts Supérieurs des Études Technologiques*) at the beginning of the 1990s was a recruitment and remuneration scheme that would permit the full recognition of relevant professional experience and knowledge independently from the rigid rules about academic qualifications in force in the national universities. In Poland, university leaders have come to realize that over-reliance on full-time professors did not allow the flexibility of recruitment, as part-time lecturers, of practitioners required in key scientific disciplines. At the Technology University of Warsaw, for example, the impossibility of offering adequate remuneration to qualified computer science specialists from the private sector is now seen as a major obstacle.³⁵ Even in the United States, modifications to traditional tenure practices are under consideration. A recent report prepared by the American Association of University Professors looks at possible changes such as “tenure by objectives”, which involves a reconfiguration of the probationary period, post-tenure reviews that would put more emphasis on departmental than on individual

performance, and guarantees of academic freedom independent of tenure.³⁶ Some of these changes are already being piloted in a number of universities.

CONCLUSION

"We live in an era where everything is possible and nothing is certain." Vaclav Havel, former playwright, President of the Czech Republic

Higher education is facing unprecedented challenges at the start of the 21st century, under the impact of globalization, knowledge-based economic growth, as well as the information and communication revolution. These momentous changes in the environment are stretching the traditional boundaries of higher education. The time dimension is altered by the requirement for lifelong learning while new technologies are doing away with space barriers altogether.

These challenges can be seen equally as terrible threats or tremendous opportunities for the world of higher education. Some observers have gone as far as predicting the end of the traditional university as we know it, seeing open and online universities as the only cost-effective answer to the massification challenge faced by many countries:

"Universities won't survive... Higher education is in deep crisis. Already we are beginning to deliver more lectures off-campus via satellite or two-way video at a fraction of the cost. The college campus won't survive as a residential institution. Today's buildings are hopelessly unsuited and totally unneeded".³⁷

Whether we are actually about to witness the disappearance of classical universities altogether or its radical transformation as distance education progressively replaces campus-based teaching and learning, remains to be seen:

"... Many universities may die or may change beyond recognition as a result of the IT revolution. When asked what his light bulb would mean for the candle industry, Thomas Edison reportedly replied, 'We will make electricity so cheap that only the rich will burn candles.' We are entering an era in which most colleges and universities must decide whether to change a little (and thus remain in the academic candle industry) or a lot (and launch themselves into the academic electrical business)".³⁸

What is certain is that the hegemony of traditional universities has been definitively challenged and that institutional differentiation is bound to accelerate, resulting in a greater variety of organisational configurations and patterns, with the emergence of a myriad of alliances, linkages and partnerships within tertiary institutions, across institutions, and even reaching beyond the higher education sector. The recently announced alliance between MIT and Cambridge University, with financial support from the British government and private industry, is a symbolic illustration of these new trends. It is however likely, under any

scenario, that traditional universities will continue to play a major role, especially in advanced training and research, but they will undoubtedly undergo significant transformations prompted by the application of new education technologies and the pressure of market forces. A summary list of key questions and challenges associated with the new trends discussed in this document is presented as Annex.

Countries and higher education institutions willing to take advantage of these new opportunities cannot afford to remain passive, but must be proactive in launching meaningful reforms and innovations. While there is no rigid blueprint for all countries and institutions, a common prerequisite may be the need to formulate a clear vision of how the higher education system can most effectively contribute to the development of a knowledge-based economy, how each institution elects to evolve within that system, and under what conditions the new technologies can be harnessed to improve the effectiveness and relevance of the learning experience. Preparation of the Dearing Report in the UK, the work of the National Commission for Higher Education Reform in South Africa, the Tertiary Education Green Paper in New Zealand, and the Plan for the University of the Third Millennium in France are recent examples of attempts to develop a such vision at the national level, as a tribute to the wise words of the Roman philosopher, Seneca, who cautioned us two millennia ago that “there is no favorable wind for those who do not know where they are going”. Washington State’s Master Plan for Higher Education, released in January 2000, proposes a strategy to absorb the anticipated rapid growth of the demand for tertiary education which relies heavily on the development of online education programs.³⁹

Strategic planning exercises undertaken by individual tertiary institutions serve a similar purpose. By identifying both favorable and harmful trends in their immediate environment and linking them to a rigorous assessment of their internal strengths and weaknesses, institutions can better define their mission, market niche and medium-term development objectives and formulate concrete plans to achieve these objectives. For example, the exceptional growth of the University of Phoenix in recent years has been the result of a well-thought strategy involving a business model of university governance and management, a targeted clientele of working adults, a small number of professionally oriented programs, flexible arrangements to give credit for prior knowledge and experience, extensive use of education technology, and reliance on part-time, low-paid teachers well trained in technology-based pedagogy.⁴⁰ By contrast, for lack of strategic planning, many new distance education institutions have adopted inappropriate technologies, failing to assess their adequacy against the purpose of their programs, the competency of their professors and the learning needs of their students. It is also important to stress that strategic planning and reforms are not a one-time exercise, but that the more successful organisations, in the business world as in the academic world, are

those who are relentless in challenging themselves in the pursuit of better and more effective ways of responding to the needs of their clients.

A final word of caution is warranted to signal the danger of focusing exclusively on the implacable logic of technical change and globalization. Adapting to the changing environment is not only a matter of reshaping tertiary institutions and applying new technologies. It is equally vital to ensure that students are equipped with the core values necessary to live as responsible citizens in complex democratic societies. The small private University of Monterrey in Northern Mexico has been able to compete effectively with the neighboring Technology Institute of Monterrey because of its deliberate inclusion of community-related courses and activities stimulating the development of appropriate values and social skills among students. A meaningful education for the 21st century should stimulate all aspects of human intellectual potential. It should not focus only on giving access to global knowledge, but also uphold the richness of local cultures and values, in support of which time-honored disciplines like philosophy, literature, arts and social sciences will continue to remain essential. This overarching objective was artfully reemphasized by US Supreme Court Justice Antonin Scalia in a speech at the 1998 graduating ceremony of William and Mary College in Virginia:

“Brains and learning, like muscle and physical skill, are articles of commerce. They are bought and sold. You can hire them by the year or by the hour. The only thing in the world not for sale is character. And if that does not govern and direct your brains and learning, they will do you and the world more harm than good.”

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Annex I

What Can Go Wrong with the New Tertiary Education Scenario?

Problems with the education and training experience

- How to promote sufficient direct communication and human interaction on wired campuses and in web-based courses, in order to build up critical thinking and social learning? What is an appropriate mix of face-to-face and online teaching?
- Faced with many program configurations and course options to choose from, how can students construct an adequate academic path on their own?
- Is there too much emphasis on science and technology programs? What are the prospects for humanities and social sciences? How can students acquire the values needed to live as a responsible citizen?
- How can online students benefit from the international dimension of foreign studies (immersion in different culture)?

Problems of academic management

- What type of mechanisms and arrangements are desirable and effective to introduce flexibility and strengthen the capacity to change, adapt and innovate rapidly?
- How can stability be maintained in an ever-changing environment?
- How to promote inter-disciplinarity across traditional faculty and program boundaries?
- How to organize programs and courses for part-time students (integration into regular programs vs. organisation of separate programs)?

Problems with the use of technology

- How to choose technologies adapted to the curricular and pedagogical objectives of the programs?
- What is the appropriate balance between “high tech” and “high touch” (degree of human interaction as counterbalancing human response to the use of technology)?*
- How to avoid over-reliance on technological gimmicks and loss of hands-on training opportunities?
- How to preserve linguistic and cultural identity as communication in a major world language becomes more and more imperative?

*The concept of “high tech” and “high touch” was introduced by John Naisbitt in his 1982 book *Megatrends: Ten New Direction Transforming our Lives*, Warner Books, New York.

Problems of financing

- How to finance the new educational technologies and related infrastructures in a sustainable way? How to prevent a growing digital divide among institutions and across countries?

Problems of governance

- How can universities with a decentralized set-up (autonomous faculties and departments) undertake the type of comprehensive change required by the new challenges?

Problems with quality assurance

- What evaluation and accreditation mechanisms and methods are appropriate for online and distance education programs?
- What evaluation methodology should be used to assess programs that involve a heavy use of information technology?
- How can national authorities exercise quality control over foreign institutions established in their countries?
- How can students access current information on the quality of online institutions and programs?
- How to organize and regulate credit transfer arrangements between campus-based and virtual universities, as well as among virtual tertiary institutions?
- How to maintain academic standards for part-time students?
- How to conciliate the demand for rapid program and course development and the need for careful quality review?

Problems of intellectual property

- How to define and protect intellectual property rights in the case of educational materials prepared specifically for online use? Who owns online courses? How should their use be regulated?
- How to reconcile the intellectual property rights and academic freedom of professors with the rights and interests of their home institutions?

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The Journal is primarily devoted to the needs of those involved with the administration and study of institutional management in higher education. Articles should be concerned, therefore, with issues bearing on the practical working and policy direction of higher education. Contributions should, however, go beyond mere description of what is, or prescription of what ought to be, although both descriptive and prescriptive accounts are acceptable if they offer generalisations of use in contexts beyond those being described. Whilst articles devoted to the development of theory for its own sake will normally find a place in other and more academically based journals, theoretical treatments of direct use to practitioners will be considered.

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