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European Universities in Transition

Issues, Models and Cases

Edited by

Carmelo Mazza Paolo Quattrone Angelo Riccaboni



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Contents

<i>List of contributors</i>	vii
<i>List of figures</i>	ix
<i>List of tables</i>	x
<i>Acknowledgements</i>	xi
<i>Foreword. University reform – a prerequisite for success of knowledge-based economy?</i> Kari Raivio	xiii
 Introduction. Found in translation? The persistence of the university as institution <i>Carmelo Mazza, Paolo Quattrone and Angelo Riccaboni</i>	 1
 PART I ISSUES	
1 University reforms: the tension between form and substance <i>Nigel Thrift</i>	17
2 Minerva and the media: universities protecting and promoting themselves <i>Lars Engwall</i>	31
3 PhD education – challenges and opportunities of Europeanization <i>Marie-Laure Djelic</i>	49
4 The role of business schools in the process of university reform <i>Anthony G. Hopwood</i>	70
 PART II MODELS	
5 Bologna and business education: far from a model, just a process for a while . . . <i>Nicolas Mottis</i>	93
6 New modes of governance: the re-regulation of European higher education and research <i>Tina Hedmo and Linda Wedlin</i>	113

- 7 Combining the production and the valorization of academic research: a qualitative investigation of enacted mechanisms 133
Julie Callaert, Bart Van Looy, Dominique Foray and Koenraad Debackere
- 8 The university is not an institute of technology 154
Gilles Van Wijk

PART III CASES

Section III(i) Governance and Performance Measurement

- 9 Australian higher education transformed: from central coordination to control 171
Suzanne Ryan, James Guthrie and Ruth Neumann
- 10 Managing modernization: introducing performance management in British universities 188
Tom Keenoy and Michael I. Reed
- 11 Higher education governance, leadership and management reform: systemic corporate governance reform at City University, London 205
Ian Creagh and Richard Verrall
- 12 The structure and significance of the Italian research assessment exercise (VTR) 221
Eliana Minelli, Gianfranco Rebola and Matteo Turri

Section III(ii) Innovation and Regional Economies

- 13 Education and training for innovation in SMEs: a tale of exploitation 239
Stuart Macdonald, Pat Anderson and Dimitris Assimakopoulos
- 14 European and regional disparities in human capital: the case of Italy 258
Paolo Emilio Signorini

Afterword 270
 Pasquale Gagliardi

Index 277

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Figures

1	Number of scientific publications per million population, 2003	xv
5.1	Different starting points	95
5.2	MBA models	105
7.1	Publication ratio in relation to division turnover	138

Tables

I.1	Share (%) of the most highly cited 1 per cent of publications 1997–2001	xvi
I.2	Top 10 universities in the Shanghai Jiao Tong University (2006) and the <i>Times Higher Education Supplement</i> (2006) rankings	xvi
2.1	Three governance systems	32
2.2	Selection of interviewees	35
3.1	Seven dilemmas of Europeanization for doctoral education	57
3.2	Three strategies to Europeanization	61
5.1	Management education models: a comparison	98
7.1	Breakdown of sample in faculties and inventorship	136
7.2	Breakdown of sample in publication output	136
7.3	Respondents' views on topic overlap between basic and applied activities	140
7.4	Respondents' views on whether industry funding fills gaps in basic research funding	144
7.5	Frequencies of association between scenarios of university–industry linkage and mechanisms to avoid difficulties	148
9.1	University revenue by main source	174
9.2	Changes in EFT academic teaching staff and students 1996–2005	178
12.1	Area 10, philological-literary sciences, antiquities and arts	231
13.1	Employee attributes considered most important for innovation in SMEs	246
13.2	Preferred intensity of provision of education and training	247
13.3	Level of education and training considered most appropriate to SME innovation	247
13.4	Status of participants in education and training schemes	249
13.5	External sources of information considered important for innovation in SMEs	249
13.6	Means by which SME managers acquire information for innovation	251

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The idea behind this volume originates from the awareness of the deep crisis of the Italian university system and the various calls for reforms happening there as well as over Europe and beyond. During long discussions about this crisis and the feasible solutions, we became aware of the need for a thorough exploration of the reform process under way in Italy and in Europe. This volume represents our attempt to collect different views on this process and, by this, to develop solutions for the situation in Italy.

Our emotional involvement as Italian academics (even though two of us have only minor involvement in the Italian university) has progressively shifted towards a research interest in the transition of the university system as a sign of the changing role of university in society. For this reason, we organized an international workshop in Venice (May 2006), at the *Fondazione Giorgio Cini*, to convene scholars, researchers, policy makers, and business people and discuss the role of universities in society and the economy. This volume is the outcome of the reflections made during the workshop.

As the volume is the outcome of an articulated research reflection, we need to thank many people for this undertaking. Firstly, we thank all the participants who took part in the Venice workshop and those who then also contributed to the realization of this volume. Their discipline and respect of all deadlines have been a key asset to finalize this collective endeavour.

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If this volume still presents errors and misunderstandings despite this wonderful array of collaboration, the fault lies with no one but us.

Foreword. University reform – a prerequisite for success of knowledge-based economy?

Kari Raivio

The European Union (EU) set in Lisbon in 2000 the goal of being the leading knowledge-based economy in the world by 2010. To achieve that goal, at least 3 per cent of GDP would be invested in research and development (R&D) (European Parliament, 2000).

In an interim evaluation (Kok, 2004) the conclusions were dismal: the European economy is falling behind compared to the USA and Asia, and the 3 per cent R&D investment target is being met only in Sweden and Finland. Enlargement is making matters more difficult, since the EU-25 is performing worse than the EU-15.

Despite disappointing progress, European heads of state decided to stick to the Lisbon target but without a time limit for its attainment. Growth and jobs became the new slogan, and specific measures to resuscitate the Lisbon process were agreed upon (European Commission, 2006), including increased R&D spending, tax stimuli to promote innovation, and public procurement to open lead markets. An essential task was seen in the reform of universities. Their funding should be improved, bureaucratic meddling in their activities abandoned, and their relations with industry fostered. The Commission was mandated to draft plans for modernization of European universities (Commission of the European Communities, 2006).

Great expectations are thus placed upon universities by the EU and national governments. Why this sudden attention? Are European universities really underperforming and if so, why? Are they to be blamed for the sluggish economy of most European countries? If they are, what should be done about it?

PERFORMANCE OF UNIVERSITIES

The three main functions of universities are research, education and innovation, that is economic exploitation of research. None of the three yields clearly definable 'products', and thus transnational comparison of the performance of universities is difficult.

Success in research can be assessed on the basis of quantity and quality of scientific publications, which are recorded in databases. These do not include most of humanities and social sciences research. In terms of numbers alone, Europe has surpassed the productivity of the USA, and if expressed per million of population (Figure 1) or per amount of funding spent, many European countries compare favourably with the USA. However, if the quality or impact of the publications is assessed on the basis of citations, the USA is still clearly in the lead. Of the most important articles, those belonging to the 1 per cent receiving the largest number of citations, nearly two thirds originate in the USA (Table 1).

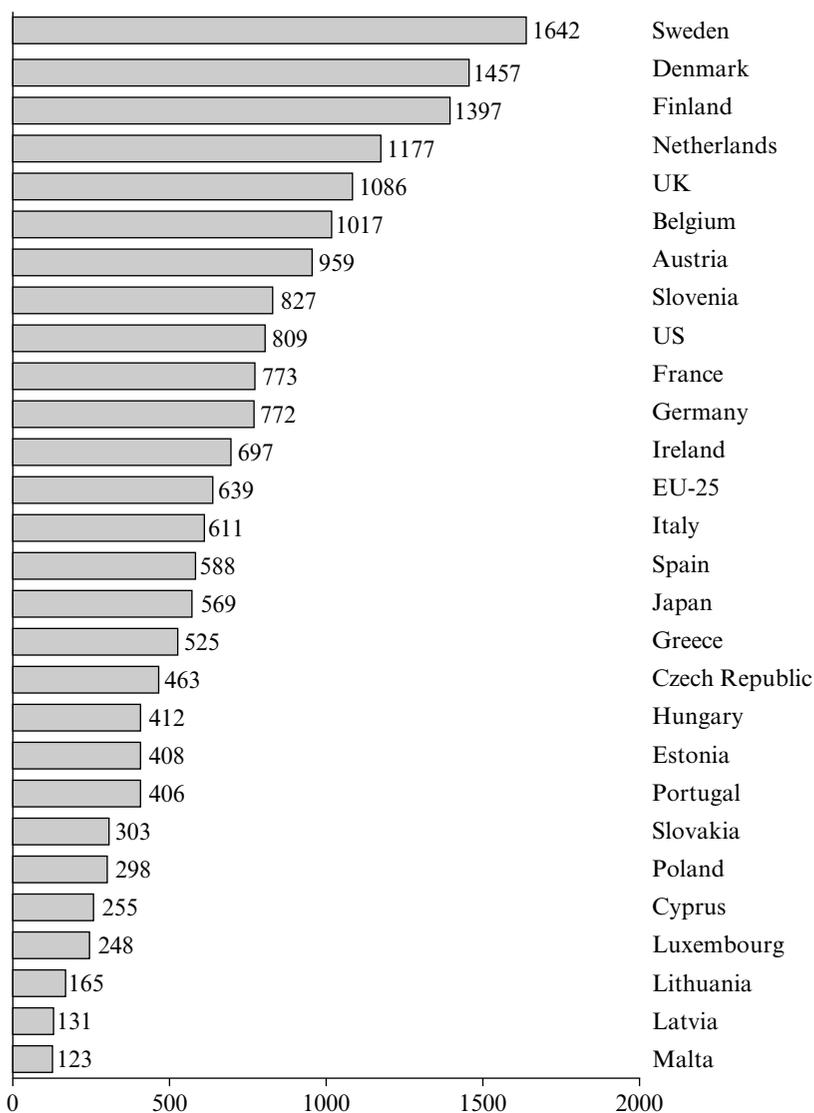
Research in different countries is carried out mainly in universities or in dedicated research institutes (May, 1997). Therefore, the scientific success of nations cannot be directly ascribed to universities. Although missions and national characteristics are different, attempts to rank all the world's universities have been made by Shanghai Jiao Tong University in China, and the *Times Higher Education Supplement* in the UK. In both of these ranking lists (Table 2), American universities dominate, with only Oxford and Cambridge consistently among the top 10. These rankings reflect superior research achievement in biomedical and natural sciences.

The educational mission of universities is more difficult to evaluate, and direct comparisons have not been attempted.

CAUSES OF ILLNESS

The basic problem with European universities is a mismatch between funding and aspirations. OECD statistics (OECD, 2005) show that in 2003 the expenditure in tertiary (higher) education averaged 1.3 per cent of GDP in EU countries but 2.9 per cent in the USA. Annual expenditure per student in higher education, in equivalent US \$ converted using PPPs for GDP, was \$9872 in EU countries but \$24 074 in the USA. Part of the programme to reform European higher education is the Commission proposal of investment of at least 2.0 per cent of GDP, which today is not met by any EU country.

A similar gap in funding also exists in R&D investment, where the Lisbon target of 3.0 per cent of GDP is far above the EU average (1.8 per cent).



Source: European Union, DG Research, Key Figures 2005

Figure 1 Number of scientific publications per million population, 2003

Table I.1 Share (%) of the most highly cited 1 per cent of publications 1997–2001 (Thomson ISI Database)

USA	62.8	Australia	2.8
UK	12.8	Sweden	2.5
Germany	10.4	Spain	2.1
Japan	6.9	Belgium	1.7
France	6.9	Denmark	1.5
Canada	5.8	Israel	1.5
Italy	4.3	Russia	1.3
Switzerland	4.1	Finland	1.1
Netherlands	3.8	Austria	1.0

Table I.2 Top 10 universities in the Shanghai Jiao Tong University (2006) and the Times Higher Education Supplement (2006) rankings

Shanghai	Times
Harvard	Harvard
Cambridge	Cambridge
Stanford	Oxford
UC Berkeley	MIT
MIT	Yale
Caltech	Stanford
Columbia	Caltech
Princeton	UC Berkeley
U Chicago	Imperial College London
Oxford	Princeton

To make matters worse, meagre funding is spread thinly to many institutions all professing to do research at a high international level. A survey by the Commission found 980 such universities in Europe, whereas in the USA only 261 universities award doctoral degrees and even fewer consider themselves research-intensive. Failure to specialize and differentiate leads to a homogeneously mediocre system.

Another problem in many European universities is an atmosphere of state bureaucracy, rather than the vibrant, dynamic, competitive but also rewarding culture in American universities.

SURVIVAL STRATEGIES

To enable European universities to fulfil the expectations placed upon them, increased funding is necessary but not sufficient. The role of the EU is small in research funding and even smaller in direct support of higher education. National governments are in a key position to improve the finances of universities, but most of them are struggling with economic problems. Reaching the GDP targets of 3 per cent for research and development and 2 per cent for higher education thus requires a long time or a suddenly booming economy, which is unlikely.

Particularly under economic scarcity, taxpayers' money should be well spent. National interests are better served by a versatile and differentiated university system, each unit concentrating on its strengths, instead of each pretending to be a globally important research university. Competitive funding is the best way to promote evolution and specialization of universities. The private sector should be involved through incentives to both sides to promote mutual interests.

Increased autonomy, to respond proactively to a changing environment and increased competition, has been regarded as essential by both EU Commission and OECD experts. Simultaneously, the accountability of universities to their numerous stakeholders must be emphasized and reflected in the composition of their governing bodies.

INDUSTRY–ACADEMIA COLLABORATION

When knowledge becomes the most important driver of economies, both the educational and the research functions of universities must be brought more strongly to bear on the private sector. Industry is increasingly outsourcing its research and development as well as continuing education of its workforce, and these activities provide fruitful areas of collaboration. Multinational companies are not a problem, since they are aware of their needs and find optimal sources of know-how globally. On the other hand, small and medium-sized enterprises (SMEs) have a regional base and an important economic role, but their contacts with higher education are poor. OECD statistics indicate that even in Finland, which is the leading country in this respect, only 20 per cent of SMEs interact with universities, whereas the EU-25 average is 7 per cent. In-house research and development is carried out in less than a third of SMEs in the EU-25, and only a few governments provide funding to business R&D in SMEs. These should be more knowledge-intensive to compete in the globalized world.

To promote industry–academia relationships three areas should be stimulated (LERU, 2006). Firstly, on the supply side of innovation, universities should have more autonomy to adjust research and education to changing opportunities and needs of their partners, increased competitive funding to develop their strengths and to diversify, and better leadership and governance to make and implement strategic decisions. Secondly, to increase business demand for innovative activity, public procurement should be exploited as a market for new products and services, and tax incentives should be used to promote R&D in SMEs. Thirdly, mutual awareness of joint potential for innovation should be promoted by meetings, conferences, exchange of personnel, and joint R&D as well as continuing education projects. Governments should support such activities as appropriate and remove the administrative obstacles that discourage fruitful collaboration.

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Introduction. Found in translation? The persistence of the university as institution

**Carmelo Mazza, Paolo Quattrone and
Angelo Riccaboni**

INTRODUCTION

The scope and nature of the university institution is the object of a wide academic and political debate (Derrida, 2001; Slaughter and Leslie, 1997; Schofer and Meyer, 2005; Brint, 2005; Ramirez, 2006; Frank and Gabler, 2006). Issues like the commercialization of knowledge, technology transfer, the rise of the corporate university, the standardization of curricula and degree programmes raise a wide research interest in different disciplinary domains. Pressures to change existing regulations are increasing due to the changing role of the university in society as well as to the evolution of academic science production (Nedeva and Boden, 2006).

As Slaughter and Leslie (1997) and Frank and Gabler (2006) illustrate, the main characteristics of the university as an institution are persistence and expansion. The university is a centuries-old institution whose role in the production and diffusion of knowledge has not been (and possibly is not) at stake. For this reason, university education is still expanding worldwide as are the number and size of universities. However, despite persistence and expansion, the scope and nature of the university has not been stable over time (see Rüegg, 1996). Different ideas co-exist about what the university is and what it should be.

In this introduction, we propose our view of the current role of the university in society and, moving from that, we look at the roots of university persistence, analysed in our times of significant challenges on the basis of the empirical elements included in the contributions of this volume.

In so doing, we wish to bring the issue of persistence back into the organizational theory debate. Persistence is what makes institutions happen, and the ongoing attraction and embeddedness of social transformations and new praxis is at the heart of institutional persistence. We will argue that

institutions' persistence is due to their ability to attract diversity rather than simply to impose shared rules of conduct or to propose common organizational models. The case of the university is paradigmatic in this sense. Universities exist on a worldwide scale; however, identifying common patterns in terms of their organization, mission and evolution is hard work. Therefore, we argue that we found institutions where the ongoing translation of existing practices occurs and the rise of certain institutions happens when there is a successful combination of organizational and social diversity with institutional homogeneity. In this sense, the study of the university as institution is quite illuminating and certainly deserves further analysis. This introductory chapter seeks to clarify this issue and is a small and initial step in that direction.

CHALLENGES OF TODAY'S UNIVERSITY

Universities have performed a varied role in economies and society during their long history (Rüegg, 1996). Generalizing from this long history, one could affirm that the university performs three main functions: a) research and teaching, b) elite selection and education, c) support for the local development of culture and society.

Research and teaching constitutes the essential social role of knowledge production and diffusion. In performing this role, universities are undergoing a series of changes which all relate to a greater managerialization of these activities. So we witness the mushrooming of assessment exercises, the increasing involvement of students and stakeholders in the evaluation of teaching, and the rise of competing institutions especially in the teaching domain. Challenges also reflect the debate on the new modes of production and diffusion of knowledge outlined by Gibbons et al. (1994), which views this production and diffusion as dispersed across a network of varied actors ranging from universities to business firms (see the emergence of corporate universities devoted mainly to professional training). Interestingly, this debate has largely shaped the education policy developed at the EU level in the Bologna accord and the following Prague and Berlin communiqué and the Lisbon agreement.

Second, the role of the university in elite selection and education is at the core of the importance of university institutions over time. For instance, if we take the political establishment as an example of a ruling elite, by looking at the records of Prime Ministers in many European countries, it is difficult to find any who have no university background in well reputed universities. Equally, it is not rare to find that many leading politicians have backgrounds as university professors.¹ This does not always correspond to

a significant scientific record, but it signals the legitimating power that university affiliations still own in the political realm. The situation does not differ substantially if one moves from the political to the business domain. The increasing support to alumni associations by leading business schools is moving in the same direction and is seeking to reproduce a similar kind of effect for business leaders who have an MBA background.

Third, by also looking at its recent history, it can be stated that the university is the only place where social transformation may effectively move across into society. The university has always been the place where social transformations were nurtured in very different countries, from Europe and the USA in the 1960s, to Iran in the late 1970s and China in the late 1980s and, increasingly, nowadays. Moreover, in the popular culture, the representation of university colleges has been increasingly connected to changing rules and generational challenges.² In this sense, the social imagery of the university is that of a place where new rules are produced and existing rules are challenged.

If what we have briefly summarized above holds and even though we acknowledge that this may not apply to some university contexts, we propose to use the concept of *genius loci* to grasp the essence of this collective frame about the university. The genius was a god staying with a person, sharing happiness and pain and disappearing when the person died. The expression *genius loci* was first used by the Romans to state a link between these supernatural entities (the lares) and a given place rather than a person. This link explains the peculiar power and beauty a place owns. Later, this concept was adopted in architecture. In this area, the expression *genius loci* was used to describe the social and cultural aspects (Schulz, 1979) – such as language, folklore, architecture and history – of a given place, thus identifying its nature and character. It has also been used to describe the necessity to adapt the architectural forms of a building or architectural artefact to the context in which it is erected.

Rather than emphasizing this process of adaptation, we would like to stress the ability of universities to be able to propose, intersect and translate for their own benefit new trends and currents in various realms from the sciences and arts. So, what is nowadays considered one of the problems of the university, that is fragmentation and internal differentiation, is instead what we think has allowed its persistence over time. The house of diversity is what allows to be found in the institutions those features, skills and capabilities which allow the possibility of intercepting new and emerging trends in various realms of society and the economy. Making, or attempting to make, universities as homogeneous as possible and assuming that there is a homogeneous model which could serve as a benchmark, would mean the end of this institution. What is comforting for the destiny

of the university is that this homogeneity exists only in the minds of those who want to reform it or who call for its reform, and thus the institution seems to have a chance to survive.

In the case of the university, the *genius loci* stands in the peculiar role of the university in making ideas, people and disciplines meet and cross-fertilize. That diversity and difficulty of acting as a unified body, which nowadays is seen and constructed as a problem to be solved through professionalization of research teaching and administration activities, is instead what we think has allowed its persistence. In this sense, this peculiarity is at the heart of the university's social legitimacy given by its ability to be central in these encounters. If we want to take this argument to the extreme, the university has never had a set of clear characteristics which can be replicated isomorphically across the world and has nothing to offer if not the feature of being a space (and a physical one) where the encounter of different interests, agendas, social backgrounds and the like can happen. If we think of a university such as Oxford which is still said to prepare the future British establishment, one of the features of that organization which cannot be replicated or created easily in other contexts is its ability to be central in making these encounters happen. While some people find college dinners boring and useless (and some indeed are, see Mariás, 1989) these instead represent the way through which serendipitous encounters happen and planned fundraising attempts materialize into consistent cheques. In our view, what follows (for example knowledge creation, education, policy advice) is instrumental and not central to the persistence of the institution which is instead characterized by this being a *genius loci*.

Nevertheless, the university is nowadays less and less the place where this encounter occurs. Radio and TV studios, conference centres and talk shows are increasingly places where intellectual, political and economic games take place. Their ways of organizing time and communication are therefore shaping the knowledge form and substance, as Bourdieu (1999) has already remarked. Piero Citati, a leading Italian *maitre à penser*, has very recently argued against the former Italian Minister of Education (who started the recent wave of university reform in the late 1990s), saying that: 'The prestige of our universities decreases. If there are no deep changes, in fifteen years the Italian leading elite will consist of sons and daughters of wealthy people studying in the US and UK and of Rumanians, Bulgarians, Ukrainians, Poles, Chinese and Koreans emigrated from countries where education is better than ours' (Citati, 2007). Citati clearly refers to the loss of legitimacy of the Italian university in selecting the elites.

In particular, the university as *genius loci* is losing what seemed to constitute a key feature within economies and societies, that is providing support to economic and cultural development. And, although a sentence attributed to

former US President Bill Clinton ('to boost a territory's economy it is necessary to build an airport and a university'), still permeates political agendas at the local administration level, universities seem no longer to be the central hubs in social and economic networks or, at least, the number of universities which are able to play this role is diminishing. We are thus witnessing a process of continuous concentration (with, for instance, only a very limited number of universities which can play that role at the European level and only two or three which can play it across the full range of disciplines which would characterize the university as *universitas studiorum*).

Relations among firms and universities are getting more and more difficult. There are non-systematic examples of these difficulties that we collected in discussions with our colleagues in several European countries. For instance, in many cases, firms are not prepared (or willing) to put resources into institutions following complicated logics of action. Small and medium-enterprises (SMEs) are not always able to gain support from universities in basic and/or applied research. Where SMEs are the fabric of the business system (as is the case in Italy), the difficult relation between universities and SMEs results in a lack of private resources for research. Due to public finance constraints, these countries are experiencing a dangerous reduction of research funds, primarily affecting underdeveloped areas such as the Italian Mezzogiorno.

As a kind of reaction, universities themselves are interested in incubating and developing new firms rather than supporting existing ones. Bureaucracy does not help the understanding of reciprocal needs. Universities-firms relations are often based on personal ties and there is no central co-ordination of possible actions, and thus the same firms are contacted by the same university several times but through different people representing different disciplines and departments.

What then are the challenges that today's university faces? First, assessment exercises and rankings for research and teaching create cross-border competition between single universities and also amongst national or continental university systems. The intent of homogenizing educational systems behind the Bologna process is also aimed at boosting comparability of single institutions and educational systems. The increasing mobility of students (for example through the Erasmus programmes) and researchers (for example through the Marie Curie Actions) will generate flows of intellectual capital from the less appealing to the most attractive systems and institutions. The brain-drain may turn into a large-scale problem for some countries and, at a local level, for single universities.

Of course this might be an opportunity for highly legitimated institutions and for fast movers in the field. The emergence of education hubs in Europe for specific disciplinary domains is already under way in some areas

and merits careful investigation. For instance the Madrid area is becoming the European hub for executive management education, hosting at least three campuses of top level European business schools. This process is going to jeopardize the survival of many universities with poor teaching and research performance and social legitimacy.

The centrality of the university in (re)producing elites and the survival of *genius loci* are also challenged by the emergence of new institutions in the field. The role of the university is challenged by other organizations entering the educational domain such as consulting firms and, more interestingly, university-like organizations, such as private business schools and corporate universities. Business schools are reproducing university strengths in terms of educational purpose and *genius loci* while their private market nature allows them to adapt to competition quickly. In an institutional adaptation vein, many universities have developed their own business schools internally. At the same time, the Bologna process is pushing business schools towards developing undergraduate education. A possible outcome of these dynamics could be the convergence of universities and business schools towards a more competitive educational field. As for the diffusion of corporate universities, it reveals the interest of firms in the internalization of tailor-made executive education (Antonacopoulou, 2002). Even though there are often partnerships among companies and universities/business schools, corporate universities are increasingly perceived by firms as an effective alternative to the educational offer of universities.

These are some of the challenges putting university systems in the current transition stage. Of course, other challenges belong to the tensions in the world economy resulting from the new role played by China and India and the economic restructuring undertaken in largely industrialized countries. In particular, the increasing number of graduates in scientific fields coming from these countries and the admission of Chinese and Indian students in EU and US universities are going to deeply affect the brain-drain phenomenon. In the next section, we will try to describe how the university may persist after the deep transformations that states, policy makers, students and firms are calling for.

THE PERSISTENCE OF THE UNIVERSITY AS INSTITUTION

The role of the university in society has changed several times since the thirteenth century and the university has very little in common with the old *universitas studiorum* in Bologna and Padua. However, the existence of the

university has remained taken for granted and has spread (and is still spreading today) as an institutional model in several countries (Frank and Gabler, 2006).

The institution is currently under pressure and, as many of the contributions in this book suggest, there are various calls for its reform, especially in Europe, in order to make it more in tune with current demands from society and the economy. The way in which the university is coping with these challenges may prove useful to understand how it has persisted historically as an institution despite the deep transformations occurring at the societal level during its lifetime.

The emergence of the challenges illustrated above has been accompanied by the spread into the university domain of managerial practices which are new to this institutional context, which has traditionally been self-managed, regulated and governed. We are witnessing an interesting professionalization of roles which invests all the areas of the university's activities. It is not uncommon nowadays to have universities with Vice-chancellors who have a business rather than an academic background even in traditional and old universities such as the University of Oxford. Managerialization and professionalization are also creating the distinction of research vs. teaching which would be considered as aberrant nonsense from the point of view of the traditional *universitas studiorum*. These are instead constructed as the optimal response to the varied demands which come from various forms of assessment exercises and from the new figure of 'student-as-customer' which populates business schools and increasingly colonizes other degrees and programmes.³ Even one of the clearest forms of academic independence in one of the most emblematic ivory tower universities (Oxford) represented by the selection of undergraduates through a process which sees the university don as central is challenged in the name of professionalization.

All of these changes can be seen as forms of shifting power from Academia to a vast range of professional bodies (administrators, recruiters, assessors and so forth) and practices (accounting and accountability as amongst the most pervasive ones). In part this is right. However, they can also be seen as a more subtle response that the university is providing in order to persist as an institution. They mainly concern three areas as described below.

First, they concern the standardization of the structure of educational offer, which, especially in Europe, goes under the label of the Bologna declaration (EFMD, 2006). Looking at standardization in detail, it can be seen that the Bologna declaration is still a process towards standardization rather than a well established outcome (see Nicolas Mottis' contribution in this volume). The way the content of the accord has been translated in the

different countries is not yet homogeneous. If then one looks at the case of PhD programmes, variance seems even greater, with programmes adopting the American model of courses followed by a thesis preparation and others where the doctorate is based on a close interaction between supervisor and candidate.

Second, these changes concern issues of governance which have forcefully entered the university domain, questioning current models of self-regulation and calling for the inclusion of members of the wider stakeholder community in the governance of the university. The majority of European countries are thus calling for new governance rules to be established, favouring access of external members, and new rules of appointment of Chancellors. This is not painless, as testified by the struggle over the new governance structure for the University of Oxford, which was highly contested and encountered the resistance of the Oxonian academic community and colleges.

Third, the innovations concern more sophisticated methodologies of assessment which operate either internally or at the system level to evaluate research, teaching and managerial performances. However, metrics of the actual social impact of the university on economic competitiveness and quality of life are difficult to devise and, not surprisingly then, still lacking. In spite of this, in some European countries the quest for efficiency and effectiveness of public funding for research and the university is paving the way towards hypotheses of university privatization. The features and genesis of these calls are interesting. In most of the cases, the debate is guided by stereotypical views of how 'foreign' university systems work. And thus, for example, in Italy the banner of privatization is used as the panacea for solving the structural under-performance of the system. The label of privatization though seems to be a visionary label with poor application feasibility. Yet, it is sometimes accompanied by mythical references to the US and UK universities as homogeneous entities which are all private, self-funded through high student fees, and linked to the world of business. A closer look would show that in the US most of the universities are still public, state funding is considerable, private universities have huge endowments and students' fees are often covered by effective systems of scholarships which reduce inequality. In the UK, all the universities are public. At Oxford, where the presence of the colleges (which have charity status) makes the institution slightly more independent from public funding, this difference is sustained by large endowments accumulated in a long history. And still this does not allow the colleges to provide their service economically within a system of capped fees which only some blind liberists intend to increase. Behind the rhetoric of privatization there is a lack of knowledge about the nature of the public good of education which

cannot be provided on economic grounds if it does not have the support of the state. The debate seems to ignore the fact that the game of effectiveness and efficiency of the system is not played through a market meant as an arena where private institutions meet and compete but through public systems of accountability. These systems of accountability (such as the RAE in the UK or some other kind of supplementary ranking system such as the ranking and fight for prestige in the US) link public and private funding to results in a context where, more in the USA than in the UK, only a few universities compete at a very high level in a culture of donations and endowment which is virtually absent in any other European country.

In this theoretical and practical space and debate, governance rules and administrative practices appear to be homogeneous and unitary bodies of procedures while they are not. Consistent with the arguments on the travel of ideas (Czarniawska and Sevón, 1996), in the application domain rules and practices appear as multifaceted boxes with very light contents. With the words of a key figure of a British university: 'we are all in favour of efficiency, aren't we? But if you tell me that in the name of efficiency we have to abolish the tutorial system and reform the admission procedure which allow a pondered selection of the future elite of this country, well, that is not the kind of efficiency I like' (in conversation with one of the authors).

Therefore, we hold that the university as institution has always encountered these highly institutionalized boxes and has always been able to fill them with situated meaning and contents. Not a functional adherence to standard norms then, but their appropriation and translation into something which appears stable and conforming to norms while it is different and open to the 'other'. On the one hand, a distinctive feature of institutions is to attract these boxes (whether practices, fashions, and so on) and to be actors of their production and institutionalization. On the other, persistent institutions are able to embed variety and diversity by translating these practices. Internal agency and interest dynamics shape the translation process within the institutions granting variety to be reproduced, given that practices may internally take different shapes. This capacity of embedding new practices into the institutional mission and giving them situated meanings is what has sustained the university in the past decades. In other words, persistence is about the translation of variety rather than the reproduction of sameness. Stability due to closure to variety may prevent persistence when the pace of field transformations is high due to new regulations or the spread of practices and norms from other fields.⁴

In this respect the British RAE is a good example: academics hate it not because they do not like to be assessed (in fact it is still a self- and peer assessment) but because it has become too bureaucratic and it has now

done what it was supposed to do, that is to instil a culture of research and accountability within the university.

As translation stands at the core of persistence, two general consequences may be drawn, particularly relevant for the university reform process.

First, from an agency viewpoint, seeing these practices as crystallized entities would paradoxically crystallize the institution. This would imply the reproduction of sameness rather than the inventive and creative production of knowledge as diversity, undermining the traditional core of the university as the locus where the production of innovation and new knowledge find an appropriate terrain for growth.

Second, if the process of translation stops because these practices are viewed as complicated and with a concrete rationale conflicting with a supposedly stable nature of the institution, then the persistence of this institution will be undermined. In this sense, the uncritical closure of the emergence and spread of these practices is equally as damaging as their uncritical acceptance. An example taken from the debate surrounding the case of the Italian university reforms is somewhat useful to understand what we are arguing. One of the authors of this piece was invited to speak about the brain-drain in a meeting with representatives of the Italian Government, the Italian university and the Italian community of scholars living in the United Kingdom. The position of these three constituencies was pretty clear, also with clear reciprocal reactions. The spokesperson of the Italian university had to institutionally defend the system and was ferociously attacked by the audience (whether these arguments were defensible on empirical or political grounds counted very little). One of the speakers from the Italian community of researchers in the UK (not one of the authors of this piece!) strongly attacked the Italian system and received a strong critique from the institutional defenders. The only one who managed to attract the interest and respect of the entire audience was, probably because they were a professional politician, the representative of the Government, who listened, acknowledged the problem and promised a solution. Given the Italian situation and tradition, this solution will probably never arrive, or it will arrive with a content which will be malleable enough to leave things as they are. In any case, strong opposition or a-critical acceptance of reform processes have a limited life and prompt reactions.

In conclusion, our main argument is that at the root of university persistence we can find the ability to attract legitimated practices and rationales and translate them into tools to sustain the universities' role. Both uncritical acceptance and hypercritical refusal prevent translation. Without translation, the persistence of the university is at stake in the longer term, especially its peculiar characteristic of *genius loci*. These arguments deserve

to be scrutinized by thorough research. So, we encourage scholars to use the university as a meaningful example to bring the issue of persistence back into the debate on institutions.

THE CONTRIBUTIONS IN THE VOLUME: RATIONALE AND CONTENT

This volume aims to illustrate the different perspectives and elements characterizing the debate on the evolution of the university in Europe. We gathered contributions adopting different theoretical approaches, from institutionalism and organization theory to accounting and history, and dealing with different empirical contexts both geographically (France, Italy, UK, Scandinavia) and institutionally (PhD education, university, business schools). The *fil rouge* of the volume is the exploration of the aspects and impacts of the reform under way. For this reason, we have structured the volume in three sections: Issues, where the rationales of institutional reforms are discussed, Models, where practices and rules introduced in the university domain and their outcomes are described, and Cases, where examples of specific institutions and institutional contexts are illustrated.

In the Issues section, Nigel Thrift from the University of Warwick, meaningfully explores the tension of the current processes of reform of the university systems in Europe. Lars Engwall, of the University of Uppsala, illustrates the evolution of the relationship between the university and the media and how it affects the legitimacy of the university as social institution. Marie-Laure Djelic, from ESSEC – Paris, explores the evolution of PhD programmes in Europe and the possibilities of a European PhD to tackle the problem of brain-drain. Anthony G. Hopwood, from the Saïd Business School – University of Oxford, describes the latest trends in business education and in business schools evolution and relates these to the broader changes in university reforms.

In the Models section, Nicolas Mottis, of ESSEC – Paris, critically analyses the state of the art of the Bologna process, outlining some unintended consequences of the standardization under way. Tina Hedmo and Linda Wedlin, of the University of Uppsala, describe the new trends in the governance of universities. Julie Callaert, Bart Van Looy, Dominique Foray and Koenraad Debackere, of the University of Leuven, and Gilles Van Wijk, of ESSEC – Paris, attempt to illustrate how research assessment may have an impact on the university institutional model.

The Cases section is divided into two parts. The first contains cases on the application and unintended consequences of the new models of governance and performance measurement. Suzanne Ryan and James Guthrie of the

University of Sydney, and Ruth Neumann, Macquarie Graduate School of Management, Macquarie University, and Ian Creagh and Richard Verrall, of the City University of London, illustrate two cases of changes in governance structure. Tom Keenoy, of the University of Leicester, and Michael I. Reed, of the University of Cardiff, critically analyse the introduction of performance management in the UK, and Eliana Minelli, Gianfranco Rebora and Matteo Turri, Università Carlo Cattaneo, discuss the assessment exercise introduced experimentally in Italy.

The second part deals with the relation between universities and economic development. In particular, Stuart Macdonald and Pat Anderson of the Sheffield Management School and Dimitris Assimakopoulos of the Grenoble Ecole de Management study the diffusion of innovation in SMEs with the help of educational programmes and testify to the change in the knowledge creation arena with a move from universities to the private sector. Paolo Emilio Signorini, of the Italian Ministry of Economic Development, offers the point of view of a non-academic and policy maker by illustrating some features of the connection between regional development and the role of the university system.

We hope these contributions will be twofold. On the one hand we hope that policy makers, reformers and administrators will reflect on the kind of recipes that they propose or are provided with by all kinds of consultants and too liberalist thinkers, normally economists. These are normally too simple, too abstract and often refer to absent idealized models which exist only in the minds of those who have never really understood what the university has been and is. On the other hand, we hope that those who react to the call for change become aware that change, diversity, adaptation and translation is what the university has always been doing. Stopping this would mean the ultimate loss of the legitimacy of the institution as has already happened in some national contexts. The solution, as is always the case, must be *in between*, that is in that liminal space which the university has happily inhabited in its long persistence as an institution.

NOTES

1. As a mere example, in the last Italian Government, out of 24 Ministers, ten (including the Prime Minister, Romano Prodi) play (or have played) an academic role in the university system.
2. We refer to movies such as 'Dead Poets Society'.
3. As Willmott rightly notes, the British Research Assessment Exercise (the 'infamous' but effective RAE) creates a fictitious market where the provider of financial resources (the state) acts as a monopolist and is able to fix the price for the services provided by

academics, with a perverse game which leaves them to decide who is good and who bad (see Willmott, 2003). The consolation is that it could be worse and the assessment could have been left to non-academics with dubious consequences.

4. If one thinks of long-lasting institutions and organizations (say religion and religious Orders) they appear to be the same across time while actually they are highly flexible and manage to combine heterogeneous rationales with the apparent homogeneous institutional role they play or are supposed to play (see Quattrone, 2004). Yet, if we think of one of the oldest banks still in operation (the Monte dei Paschi di Siena in Italy) its persistence as organization is due to its ability to translate various calls (civic, political economical, religious and pagan) in a series of governance rules which extend beyond the boundaries of the bank to expand across the city of Siena and the whole region of Tuscany.

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PART I

Issues

1. University reforms: the tension between form and substance

Nigel Thrift

It is not just the top slot at Harvard I would turn down. It is the head of any university, in particular a successful one (Kellaway, 2006).

INTRODUCTION

It seems to me that the bulk of current commentary on the higher education system either consists of normative discussions of the nature of the university (of the kind that have been going on since at least the time of Cardinal Newman) or of simply elaborating on what is going on in universities currently, whether that be internationalization or quality assurance, the latest twists and turns of government policy on research, or what it means to be entrepreneurial. I want to take a somewhat different tack by focusing on why the ‘management’ of higher education has become such a hot topic in Europe. University reform is clearly in the air in Europe. It is apparent that university systems are going in roughly the same direction in many European countries, although against the background of sometimes radically different national higher education systems. The general direction is well put in several European Commission documents that have been published recently, all of which argue for the modernization of European universities and all of which espouse better ‘management’ as a necessary nostrum to achieve an exalted modernized economic state.

But why does ‘management’ have such a central place as part of this modernization agenda? I want to begin to explain the centrality of management by addressing in a slightly different way the furore that has followed the simple piece by Lucy Kellaway that appeared in the *Financial Times* in 2006, an op-ed that opines that universities are, in effect, unmanageable and yet are run by ‘people who are trying to embrace what they see as modern management techniques’, people who are generally – she makes no bones about this – of poor quality.

Both these issues – modernization and better management – matter, not least because Europe is going through a kind of higher education convulsion at the moment as European governments chase the Lisbon dream of a knowledge-led society in which universities have a leading place as key actors in the economic renovation of Europe. They see universities as employers in their own right, as suppliers of innovations, as producers of skilled labour, as transnational businesses, and as founts of a generalized creativity, in other words as prime pieces of economic real estate as well as hallowed cultural entities. So, under the influence of the European Union, European governments are busily engineering national research elites (explicitly in the case of Germany), designing regions with universities – or collections of universities – as central nodes, composing charters for researchers, setting up a European Research Council,¹ even trying to broker a European Institute of Technology that will somehow ape MIT, in a generalized bid to become the United States. This primarily economic agenda explicitly suggests that European universities need to be more heavily managed so that they can become obvious nodes in a war of productivity with the rest of the world (Wolf, 2002).

As I have already noted, the agenda is set out in a number of recent European Commission documents. But it is well summarized in Luc Soete's recent (2005) influential paper for the UK Presidency, 'Activating knowledge'. Soete points, surely correctly, to the dramatic underfunding that characterizes so many European universities, with the United States spending roughly 2.6 per cent of its GDP on higher education, compared with the EU's paltry 1.2 per cent.² Yet, at the same time, as Soete goes on to point out, the EU has about the same number of higher education establishments (around 4000 as opposed to 3300 in the US), receiving generally fairly evenly distributed research funding – in contrast to the United States.³ For Soete, the solution is to activate university knowledge by opening up and stimulating the twin channels of private sector funding and citizens' own resources through a combination of targets, tax policy, and increased competition between universities. The output would be clear: a more lively, more productive, university sector able to be understood as a key node of the innovation system, based on a model of private assets for private returns.

Let me set aside for the moment the undoubted difficulties of this agenda, one which itself might be understood as part of an endless sequence of fashions in regional development (cf. Czarniawska, 2005) and one that I think is all too likely to end in tears as it becomes clear that most universities are unlikely to fulfil the function of being regional economic powerhouses (at least in the direct sense that politicians expect, in which public money has an easily determined relationship with outputs).

However, before setting out I need to make two caveats. First, I do not want to argue that universities are necessarily being polluted by commerce.

Whilst this can be a problem, it is important to state that universities and the pursuit of money have always gone together (Clark, 2006). The idea that they are or ever have been pristine founts of wisdom is fairly easily given the lie to, though it is a narrative that many academics would like to cleave to, I think. I always fondly remember the Fellows of University College, Oxford hanging out a banner to welcome Queen Elizabeth I to the city in the August of 1566 in a fairly obvious, not to say blatant, attempt to curry favour – and it worked: the College was able to pull in extra endowment from Lord Leicester. It is an invention of the nineteenth century and of state education systems in which universities held pride of place to believe that higher education can somehow be cut off from commerce: but it has become fairly obvious from the UK experience that becoming reliant on any one funder, like the state, is equally likely to condemn universities to an uncomfortable and usually draining dependence. British universities have been chased from pillar to post by a constant stream of government initiatives, competitions, regulations, calls for data, and just plain ministerial (or higher civil servant) whim which have had an ultimately corrosive effect, for example through the need to set up large internal bureaucracies to cope with all that stuff. Surely, one of the arts of running a modern university has to be the ability to call on several funding streams from several different funders – commerce, the state, endowments, and so on; it is only in this diversity of interests that some measure of freedom can be found.

That does not, of course, mean that everything in a university is or should be up for sale. It is easy for Derek Bok, former and now again (if only for a year) President of Harvard (Bok, 2004), to warn against habits that may produce a slide into rampant commercialism. After all, with its endowment and federal research income, Harvard has some choice, but that does not mean that universities should not exercise the greatest care in chasing commercial income to the point where it may fundamentally alter their character. Obvious conflicts of interest can arise and indeed have done so in a series of well-documented cases. But equally, as I think Warwick University shows, it is possible to have a considerable commercial operation and to use that to concerted academic ends.

Second, I am not against management *per se*. The pressure to take more students and raise more research funding has been a constant one across most of Europe and, as a result, many universities have gradually and seemingly inexorably become large organizations with complex budgets, substantial workforces and numerous stakeholders. As a result, they cannot simply be left to their own devices. Neither are they inherently unmanageable: it rather depends, as I hope to show, on what is meant by management.

However, I should state right at the beginning my firm belief that universities are fundamentally there for the *public good* and not as a system of

private investment for private return. Indeed, I think a strong argument can be mounted that they should be understood not just as public goods but as so-called global public goods; 'goods with benefits that extend to all countries, people, and generations' (Kaul et al., 2003, p. 23). The problem with the current conjuncture is that this is too often forgotten. Robert Reich (2004, p. 5) is talking about the United States but he could easily be talking about numerous other countries when he states that

If you listen to the pronouncements of public officials, people involved in education, university presidents, university executives, people in the not-for-profit sector, when they talk about higher education, there is less and less reference . . . made to the public good that comes from higher education or comes from a populace a larger and larger proportion of whom have access to higher education.

Reich lists several reasons why this shift has taken place, including: the increasing likening of higher education to a rivalrous personal service industry consisting of brand-based corporations competing for students and recognition in the marketplace; the rise and rise of league tables; the move to vocational education; the increasing disparity in academic salaries, and so on. This likening of public higher education to a producer of private assets that produce private returns has obvious consequences and most especially a migration towards applied knowledge, a migration which is often portrayed as an obvious and sensible move but may actually have detrimental effects in terms of generating the kinds of broad-based people and basic research that are needed for broadly based problem-solving and innovation regardless of application, which is probably a nation's real intellectual-economic strength. Yet, the way in which at least some European governments have now begun to think of the university as being firmly in the private sector begins to belie this vision, with obvious detrimental consequences.

So I want to strike out in a slightly different direction. What I want to do is to place the debate on university reform and management in a particular context: that of the circulation of ideas about what a university is and in what way it is a manageable entity. Why? Because universities are meant to be about the production and circulation of ideas, of course, but also because we now know a lot more about ideas and how they circulate than we did. This is no longer a backwater of intellectual endeavour.

The first part of this chapter therefore focuses on the growth of a higher education industry in lockstep with the general growth of higher education. Higher education has become the subject of a large industry of consultants, think tanks, media and others who form a cultural circuit which is expanding constantly and which has real grip in dictating what the future of the sector will be. I want to document the way in which this sector has grown and the way it has reinforced managerial tendencies by assuming that the

key challenge facing universities is management, usually in order to produce economic benefit. It is important to realize that there is no reason to think that this circuit is any less trendy or fashionable than any other, just because it is linked to higher education. Indeed it might even be more so. In the second part of the chapter, I will then attempt to show how the notion of what counts as management is often taken from the private sector, or at least one understanding of it. In the concluding part of the chapter, I will then come back to the vexed topic of the idea of the university and offer some rather cavalier comments on the nature of the knowledge that universities generate.

THE GROWTH OF THE HIGHER EDUCATION IDEAS INDUSTRY

The micro-physics of movement between contexts is now an accepted part of the social science tradition. It consists of many different but often inter-related traditions. These traditions include the work of Gabriel Tarde and others at the turn of the nineteenth century on ideas acting as a form of imitative contagion which is now rapidly regaining favour, the body of research known as social epidemiology which now takes in more than just the spread of health ideas and innovations, the work in management on what is understood as innovation, on how innovations spread through different communities of practice, and on different cultures of innovation, the kind of neo-Darwinian work on ‘memes’ that has become popular in some quarters, and, of course, the massive increase in work on the economics of knowledge.

What I want to argue is that since the late 1980s in particular, an industry has grown up around higher education, an industry that has come to have a formative influence on its course and content by promoting the notion that management is itself a solution and by diffusing many management ideas. This ‘cultural circuit’ (Thrift, 2005) increasingly influences the general perception of what higher education is and how it should be managed. It consists of at least the following actors. To begin with, there are numerous consultancies. These range from the education and non-profit arms of the large consultancy firms through specialized higher education consultancies (some of them run by universities themselves and often coming complete with MBAs in higher education) through to small single person operations. Most of these consultancies were established comparatively recently, mainly in the late 1980s and 1990s, and they have become increasingly influential in the sector. These consultancies often cross over with various specialized policy institutes and think tanks which

are devoted to higher education and which not only issue reports but also themselves carry out consultancy. Then, there is the media. This takes a number of forms. There are the large circulation newspapers like the *Times Higher Education Supplement* or *The Chronicle of Higher Education*. These were chiefly founded in the 1960s. They were followed in short order by the various weekly supplements and inserts to be found in the mass media, for example, in the UK, *The Times* or *The Independent* or *The Guardian*, mainly founded in the 1980s or 1990s. These general outlets have been bolstered by a series of intermediate ‘trade magazines’ like the highly influential *Research Fortnight* (founded in the 1990s) and websites, such as ResearchResearch.com. Then, there is a large academic hinterland of journals that specialize in higher education affairs, many but not all of which have grown up in lockstep with the rise of higher education management. Finally, there is a constant hum of conferences, workshops and seminars, some of them run by mixes of consultancies and the media, but some of them also set up by specialized firms, which provide a catwalk for ideas. Added in to this brew, of course, are a series of institutions which have periodically attended to higher education, such as think tanks.

The point is that these institutions are not just reporting on what is transpiring in higher education – they are constitutive of what higher education, and the management of higher education, actually is. Take the current mania for ranking universities, which is in addition to various government and para-government rankings (for example Educational Policy Institute, 2006). In the United States, the US News and World Report has provided a ranking of US universities since the 1970s. Now, other ‘world’ rankings are appearing, for example from Shanghai Jiao Tong University and now the *Times Higher Education Supplement*. All manner of prizes are following on. The point is that universities are reacting to these rankings and being managed accordingly. In the United States, there have been a number of famous scandals around various universities trying to manipulate figures so that they appear higher up the US News and World Report ranking. In the UK, some universities have set up special committees to concentrate attention on changing their position in the indicators used. And so on.

This ‘cultural circuit’ has intertwined with three other dynamics to promote the cause of management in universities. One is the endless government and other initiatives that have tried to ‘solve’ the problems of higher education by promoting better management. A good example is provided by the UK Leadership Foundation, launched in 2004. It runs a series of training programmes for managers in the UK higher education sector, including the Top Management Programme which is intended to train the bulk of the higher education sector’s top managers. It has many similarities to the kinds of programmes run by Harvard since the 1960s.

The second dynamic is the growth of a workforce with stakes in the expansion of management functions. An excellent example is provided by the growth of a quality assurance industry, devoted to assuring that teaching outcomes are satisfactory. This has not only produced a large additional shadow bureaucracy in many European universities but has also produced its own 'cultural circuit'. Another good example is provided by the growth of mentoring as an activity definable in its own right. Again, mentoring is producing its own bureaucracy. Yet another example is provided by training: training has now become an integral part of the bureaucracies of universities. The final example, and perhaps the most obvious, has been research assessment. Research assessment is now a global industry, populated by purveyors of league tables, by its own gurus (such as Gareth Roberts), and by specialized consultancies. In turn, this industry has also produced parallel university bureaucracies. In each case, these activities are not necessarily in error but they unerringly provide further constituencies for management per se.

The third dynamic is that the epistemic character of universities has changed. McLennan et al. (2004) have shown how institutions such as the London School of Economics (LSE) have already taken on some of the characteristics of type 2 knowledge organizations like think tanks. Though they still cleaved to many traditional values, these institutions had also imported managerial values through these kinds of type 2 functions. Part of this internal managerial impulse often also comes from the presence of a university's own business school (although the LSE is a notable exception) but part of it also comes from a turn to more general entrepreneurial and media-led models.

Within and between these four pillars, management ideas circulate constantly, ideas which involve inventing both problems and solutions. These ideas come from five sources. First, they come from the higher education cultural circuit itself. It is now large enough that it can generate as well as simply receive ideas. Then, they come from business, and especially the cultural circuit of business. A good example is provided by 'leadership'. Much of what counts as the practice of leadership in higher education has been directly transferred from the pages of journals like the *Harvard Business Review*, and then tweaked for local consumption. This process of cultural cloning is not new or remarkable, and it is, truth to tell, more a process of translation between parties than a process of direct transmission, but it is much more widespread than formerly and it is often adapted for new audiences by one and the same actors (as in the case of large consultancy firms). Third, they come from an 'audience' of higher education managers who are in search of energizing, powerful ideas that they can work with, ideas that will induce 'change' through the aura of their name. Fourth, ideas create

their own demand. As more and more organizations become attached to them, so they generate a corresponding infrastructure of products and practices (for example, software) that confirm those ideas' existence. Fifth, ideas travel and diffuse because imitation is a fundamental process in human societies. Tarde identified a number of ways in which imitation functioned. The most obvious was simple association: densely populated settings (like cities), social networks and organizational fields are just some of the mundane associative frameworks that facilitate and encourage imitation. Then

The inventions and innovations that are imitated are allegedly superior . . . on the grounds of their qualities (Tarde called these 'logical reasons'; I would call them pragmatic). The other reason is their provenance in time and place (Tarde's 'extra-logical' reasons; in today's parlance we would call them power-symbolic). It is impossible to tell the difference between the two at any one time, as the power-symbolic superiority tends to masquerade as a superiority of quality (Czarniawska, 2005, p. 132).

The point about these ideas is that, not least because they are imitative, they follow fashions. This is not a pejorative statement. Since the time of Tarde, this tendency has been clear. And there are fashions in organizing just as there are in any other realm of life. Indeed, there is some evidence to suggest that these fashions follow determinate cycles of imitation, as they diffuse across the world and then subside. Fashions, then, are key means of pattern recognition, not just passing fads. Indeed recent work suggests that cycles of imitation, accelerated by modern media, are a key to understanding modern societies.

But these fashions are not necessarily all good, of course. Shattock (2003, p. 68) has argued persuasively that their impact has often been negative: '[An] absence of research evidence has led to university organization being driven as much by fashion or by received ideas deriving from industry or the public sector, as from coherent thought about organizational fit: it is very rare in fact that educational change is driven by educational ideas'. Now it is, of course, extremely difficult to say what is not fashion, as my preceding comments have made clear. But it is surely noticeable how fashionable higher education is. For example, Birnbaum (2000) documents a series of fashions that have swept the sector, none of them noticeably rooted in much in the way of evidence.⁴

WHAT ARE UNIVERSITIES MANAGING?

But now we come to the normative part of the chapter. For, although we can recognize that fashion is a crucial element of how modern societies

proceed, it does not follow that all fashions are necessarily appropriate or necessary. Some – and I include here a number of the management ideas that have circulated in universities – may indeed be wildly inappropriate or completely unnecessary. If a number of inappropriate and unnecessary ideas have circulated, why might this be? I think this stems from an act of misrecognition. It might be argued that the content of what universities manage and how they manage it is different. Universities are not just businesses in a competitive marketplace. Nor can they simply be categorized as nonprofits, as often happens in the United States.

This is not to say that I am against professional management. But I am against top-down management of the kind decried by Shattock (2003, p. 31) which tries to equate universities with certain business models; ‘many universities seem to have adopted structures that owe a great deal to an earlier industrial age where top management teams, answerable to external boards, adopt a strongly top-down, non-participative, non-empowering style of management’ which usually implies the passive acceptance of funding decisions made outside the institution. There is no evidence to suggest that this style of management can work in universities, except in the short term, and a good deal of evidence now to suggest that it can be actively damaging, especially so far as academic success is concerned.

Of course, given the sheer scale of many modern universities, it is hardly surprising that these universities now include a set of professional administrator-managers who are in charge of process activities like student registration, finance, legal recourse, and the like. Nor is it surprising that with the diversification of funding sources, there are many activities to administer and manage that are not primarily concerned with teaching and research: when Shattock (2003) likens modern entrepreneurial universities to city states, no longer dependent on any single funder, he is surely correct. But, so far at least, these administrator-managers have not, on the whole, become the main managers of universities. Nor, in Europe at least, do most university managers move on to a separate administrative track early on (as in the United States),⁵ nor, on the whole, do they tend to be drawn from business. Rather, a good deal of management in universities tends to follow a different, more collegial model. It arises from the activities of ‘player-managers’ or ‘hybrid professional-managers’ who combine the role of producing and managing in an organization which still includes many self-managers.

What is interesting is how little this fact has been acknowledged, yet it seems crucial to me as an indicator of what keeps universities different and why they have sometimes proved such reticent adopters of some management practices and such manically over-enthusiastic adopters of others: the wrong top-down management model has often been applied by managers

who scan the organization from on high. This can be especially damaging to research-intensive institutions which demand high intellectual performance and are oriented to long-term results. For universities like these are full of self-managers who contribute large amounts of 'discretionary effort' which cannot be extracted by fiat but has to come from the drive of curiosity and from intangibles like loyalty and commitment.

This gathering of effort arises, in part, from a flat organization without much in the way of middle management but which instead distributes management across a wider spectrum. In part, it comes from the fact that you cannot order up good ideas by rote. And, in part, it comes from the kind of suspicion of leadership that is only to be expected amongst self-managers. Whatever the case, it seems crucial to me for universities to insist on the right to be run collegially by player-managers who are subject to some of the same disciplines and incentives that pervade the academic workforce. Interestingly, there is a substantial management literature on player-managers but it is hardly ever invoked in the university sector (Augar and Palmer, 2002). That literature shows that it is possible to both produce and manage, although it also shows that too many player-managers receive little in the way of training and support. But this literature also shows that player-managers have considerable advantages as means of running organizations, not least because they can articulate values like stewardship, can enable their peers directly by example, and tend to be large reservoirs of the practical knowledge that managers can too easily forget.

So, to finally answer Lucy Kellaway, universities are not inherently unmanageable but they require a different kind of management from the model of management that is usually identified and one that from the outside may sometimes appear a hesitant or stumbling one (de Wit, 2002). In fact, of course, even collegiate universities like Oxford and Cambridge – often cited as the worst of all specimens so far as efficient management is concerned – have sometimes been remarkably decisive over the last few years. Take, for example, Oxford University. Despite all the negative publicity of the last five years or so, Oxford has managed to completely change a considerable part of its organization, has produced one of the world's top fifteen medical sciences divisions, and has generally forged ahead.

CONCLUSIONS

I want to end by turning to the question of the kind of knowledge that universities impart, thus also implicitly returning to the idea that universities are or can be economic powerhouses. To do this, I will turn to the figure of Karl Polanyi. For Polanyi understood scientific knowledge as something

that could not be planned. Against those like J.D. Bernal and others who argued for a planned society with science at the helm and who often

maintained that scientific research proceeded by the observance of stipulatable rules, Polanyi insisted that it was far more a matter of skills. In practice, science proceeded by the inculcation of tacit knowledge, which is to say, by congeries of unspoken techniques, preferences and even norms. It resembled a tradition, far more than a rational system (Johns, 2006, p. 152).

There was, in other words, no rational algorithm that could predict which discoveries or inventions would succeed,⁶ and universities are needed as spaces that provide the leeway for all the failures necessary to produce a serious evolutionary success (Ormerod, 2006). That network effect has been one of the rationales behind the enormous growth of scientific research in universities since the nineteenth century, consequent especially on the invention of the laboratory and the technological doctorate in the late nineteenth and early twentieth century,⁷ a growth which has always involved an uncomfortable compromise between national state and economic imperatives and supposedly more elevated concerns.

In certain senses, universities could claim to be public goods, even indeed global public goods (Kaul et al., 2003). They certainly satisfy some of the criteria to be thought of as such, in that they produce and distribute complex knowledge that is in the public domain and benefits many people around the world. They are – or should be – available to all to consume, just as they affect all. It might be argued that some of the older research-intensive universities have always followed this model and that it has become an increasingly generalized one. It might be added that this quality may well have become a more important function too, notwithstanding all of the grossly exaggerated statements about the power of the Internet, because the spaces of freely accessible knowledge are being shut down, for example by the growth of certain kinds of intellectual property regime, and by the action by states to close down certain kinds of knowledge. Thus, in a remarkable paper, Galison (2004) sets out a global history of growing secrecy and calculates that the classified universe of documents the US public cannot access is four to five times larger than the open literature that finds its way into libraries.

Whatever the case, it is clear that a very different notion of discovery is being worked with in universities from the model that is found in a large segment of modern management thought which is involved with stimulating ‘breakthrough thinking’. In effect, this managerial model involves attempts to rationalize the process of discovery so as to increase its predictability and incidence by operating on and rationalizing the circulation of ideas. However odd these corporate attempts to spur on and package creativity may sometimes appear, they are given considerable weight by

many business organizations now, and range all the way from various kinds of social engineering to new forms of spatial organization.⁸ But it is important to note that they are often involved with the generation of innovation, rather than invention (Lyotard, 1979), with producing chains of incremental innovation to existing products which, as Johns (2006) has pointed out, have coloured our view of invention itself. That is, they are usually concerned with working within the orbit of an already prevailing style, rather than changing the style itself.

But, in the end, universities must surely be about the unforeseeable discovery and this is necessarily a long-term business, involving a different kind of circulation of ideas in which fashion exists, but always accompanied by an institutionalized scepticism. For all the rhetoric about creativity and democratizing innovation to be found in the private sector currently, few firms really want to work at the limits of predictability and even fewer want to share their discoveries:⁹ that is what universities do and must do to keep on doing what they are doing. That kind of basic research is still, for me, along with close teaching, at the heart of the university's mission. And it is, and I cannot stress this enough, co-operative. In most research-intensive universities scientists co-operate more with colleagues in other universities than they do with colleagues in their own university, often in vast and complex networks that stretch across the globe. It is this different kind of co-operative intellectual *atmosphere* that I would ultimately call a global public good that is for the global public good. It is an atmosphere made up of vast numbers of interlocking networks working emergently towards often poorly specified goals which gives scientists the kind of latitude that allows them to take the structured risks that are absolutely central to good science (such as the late Gareth Roberts).

Yet universities have made this point very weakly over the last few years. They have let the national economic powerhouse argument win, partly by default and partly because it has been a means of levering extra resource. There is no tremendous surprise to this, given the political background: the global public good and the long term and the unforeseeable and the risky are difficult concepts to convert into numbers that nationally oriented Ministries of Finance can understand and work with. On the whole, such ministries are not in it for the duration. Further, they tend to see all goods as having rivalrous and excludable properties.

But, at the same time, it often seems as though universities, prompted by simple but effective devices like league tables, have been more interested in competing with each other than in presenting a common front. In the UK at least, I think that phase is starting to come to an end. The competitive benefits of the Research Assessment Exercise (and there undoubtedly were some) are increasingly unclear, and what is needed now is some serious

thinking about the UK university system as a whole and how to provide a future which can preserve its public good qualities without inducing genuine inefficiencies. It may be that some other parts of Europe still need to go through this competitive shake-out before they can address this problem – or it may not.

In any case, it seems to me that if the case is ever to be made properly for protecting and extending the co-operative intellectual atmosphere which is at the heart of the knowledge that universities produce, it will need enhanced and innovative forms of co-operation between existing universities, forms that have so far eluded them.

NOTES

1. The European Research Council is, I hasten to add, a good idea.
2. It is certainly an irony that the United States, which so many European commentators like to criticize as shallow, consumerist and generally meretricious, spends more money on higher education than Europe (even given that the US figure actually contains a good deal of defence spending).
3. In the US 95 per cent of total research funding is spent in no more than 200 universities. Only 215 out of some 2000 degree-awarding bodies award postgraduate degrees.
4. One of the saviours of the sector may well prove to be the kind of evidence-based policy studies of universities that are now becoming more common.
5. Though the top universities still tend to retain active academics, as in the case of Shirley Tilghman at Princeton.
6. Although, as Johns goes on to point out, Polanyi was surprisingly keen to produce a system for protecting patents.
7. In particular as a result of the work of Steinmetz at MIT and Klein at Göttingen (Kittler, 2004).
8. Indeed, some of these spurs have turned up in universities, for example in the design of science buildings (Thrift, 2006).
9. Indeed many of them want to remove knowledge by invoking all kinds of patents (cf. Galison, 2004).

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2. Minerva and the media: universities protecting and promoting themselves¹

Lars Engwall

1. UNIVERSITIES – BETWEEN POLITICS AND MARKETS

On 18 September 1988 in Bologna, Vice-Chancellors of European universities signed the ‘Magna Charta Universitatum’. One fundamental principle of this text is that ‘research and teaching [in universities] must be morally and intellectually independent of all political authority and economic power’. A closer look at universities, however, reveals that this may be wishful thinking. Many universities have long since been heavily dependent on governments. First, governments protect them from competition from other knowledge organizations by authorizing their charters. Although the term ‘university’, unlike ‘bank’, is not a protected label, trust in academic institutions greatly depends on the government giving them legitimacy. In addition, universities in many countries are greatly dependent on public financing for their operations. In addition, there are an increasing number of signs that universities are also subject to pressures from the market. It is thus highly relevant to look closer at the conditions to which universities are subject, existing, as they do, at the intersection of politics and markets.

The distinction between politics and markets is basic in the political science literature (see for example Lindblom, 1977), and the issue at hand is whether decisions should be made by elected politicians or via market mechanisms. Similarly, economists have focused on the most effective way to organize transactions, that is via markets or hierarchies (cf. Williamson, 1985). Like all dichotomies, the one between politics and markets and the one between markets and hierarchies leads to discussion concerning intermediary cases; this led Ouchi (1980) to propose the clan as a convenient concept to handle such cases. As an alternative I here propose professions, which are characterized by being legitimated by the political system at the

Table 2.1 Three governance systems

	Governance system		
	Politics	Professions	Markets
Force	coercive	normative	mimetic
Signals	rules	norms	models
Mechanism	coercion	socialization	imitation

same time as they operate in markets (for further discussion, see, for example, Abbott, 1988).

The distinction between politics, professions and markets may conveniently be linked to the work of DiMaggio and Powell (1983), who argued that organizations are subject to three types of pressure that tend to make them similar: coercive, normative and mimetic force (see Table 2.1). Coercive force is associated with *rules* (laws or regulations) that must be followed and the violation of which leads to penalties. Normative force is associated with *norms* that are developed in certain cultures, such as professions, through socialization, that is those entering the organization gradually adopt the dominant norms. In markets, finally, signals to the actors are constituted by the behaviour of others as manifested in phenomena such as prices, product design and organization, which provide *models*. Since most markets and organizational fields are concentrated, governance via markets tends to lead to mimetic pressure, i.e. *imitation*, which in turn reinforces homogeneity.

In terms of the above framework, universities belong to a governance system that could be considered a profession. They are largely governed by norms, and organization members are gradually socialized through activities such as teaching, seminars, evaluations and referee reports. This is also in the spirit of the cited principle of the Bologna declaration. However, as already indicated, universities are also subject to other forces. As a matter of fact, present-day university governance constitutes a mix of the three types presented in Table 2.1. This is also consistent with the reasoning of Gibbons et al. (1994), according to which knowledge production has shifted from a focus on scientific relevance only (Mode 1) to an increasing consideration of external factors (Mode 2). Nowotny et al. (2001) even plead for the significance of 'socially robust knowledge'. In the same vein Etzkowitz and Leydesdorff (1997) argue that a 'triple helix' has emerged, that is a relationship between government, universities and industry, while Rooney (2005) describes what he calls the knowledge economy and Drori et al. (2003) the scientification of society.

The arguments outlined here imply that modern universities are part of organizational fields consisting of not only seats of learning but also government bodies and corporations. In the interaction between these actors we can expect that governments, universities and corporations first mimic their own type of organization. Corporations look at other corporations, primarily those that are large, visible and successful. The same goes for governments and universities. In this process consultants and others who move between different sectors play important roles as carriers of ideas (Sahlin-Andersson and Engwall, 2002). This can be said to constitute a *demand explanation* of homogenization, that is various organizations require certain attributes or procedures in order to match their counterparts.

In addition to the demand explanation, however, there is also a *supply explanation*, which is closely related to the development of modern university systems. Through the development of various disciplines associated with management, there has been a flow of ideas between academic institutions and practice in both the private and public sectors. In this way new graduates become carriers of modern management ideas. As these graduates are hired they promote their ideas and projects, which in turn leads to a need for still more such graduates (McGill, 1988, p. 152).

Furthermore, the professionalization of communication can be observed to have resulted from the continuous expansion in recent decades of higher education in the fields of journalism and communication. As a result there are more and more graduates with such training in the labour market. Just as business graduates have promoted their ideas, those with journalism and communication training have stimulated the demand for their own services and those of fellow graduates.

Moreover, demand for professional communication services has been stimulated by an interaction between journalists and corporate communication experts. This was started by critical media coverage of corporations and executives, which in turn led to an increasing demand for communication expertise in corporations. As a result it has become more and more common for corporations to create *boundary spanning units* to handle their external relationships. These units are reactive, that is responding to external signals, as well as proactive, that is trying to influence external actors. The latter implies the diffusion of positive images and efforts to change the rules or the scrutiny exercised by journalists. For these purposes corporations have hired journalists, who have, so to speak, 'shifted sides', as well as other communications experts (for further discussion, see Engwall, 2006).

The mimicking processes discussed earlier reinforce the tendencies for the creation of information units. The dominant actors provide templates

for the less-dominant ones, which in turn adopt – or mimic – the behaviour of the former. Interestingly enough, politics seems to have been a forerunner in the use of professional communication.

This world characterized by the diffusion of management ideas and professional communication does not only encompass corporations and politics. Universities also belong to this world and are not protected from the forces just summarized. Management ideas are increasingly penetrating universities, through management accounting systems, strategic planning and a market orientation. A significant feature of this process is the increasing role of media and public relations. To explore this relationship this chapter will address the following question: *how and to what extent have information activities become significant features of modern academic institutions?*

A research design to answer this question is presented in the following section. Results of empirical studies of Swedish universities are presented in sections 3 and 4, while explanations and conclusions are provided in sections 5 and 6.

2. RESEARCH DESIGN

The research question has been studied with reference to the 40 Swedish institutions of higher education and research. The study categorized them as being of three types: (1) traditional (*old*), (2) nineteenth century (*semi-old*), and (3) twentieth century (*young*). For each category two types of empirical studies have been undertaken: (i) analysis based on university calendars of one institution in each category, and (ii) interviews.

The analysis of university calendars aimed to capture the development of information activities, while the interviews additionally aimed to identify strategies. Two types of actors were interviewed: (a) *university leaders* (Vice-Chancellors (VCs), deputy VCs and registrars), and (b) *information officers* (information directors, press officers and public relations officers (PROs)). As seen in Table 2.2, the 23 interviewees were distributed between the three types of institutions, seven interviewees belonging to each category and two being non-university employees (an editor of a science magazine and an information director). Fourteen of the interviewees were or are university leaders, while nine used to or now work with information activities. In terms of coverage in time, approximately half the interviewees have over ten years' experience in university leadership or information activities; the longest such experience dates back to the 1970s.

Table 2.2 Selection of interviewees

Category	Type of institution				Total
	Old	Semi-old	Young	Outside	
University leaders	4 (IP 4, 16, 20, 23)	4 (IP 1, 5, 10, 11)	6 (IP 2, 6, 9, 12, 18, 19)	not applicable	14
Information officers	3 (IP 3, 21, 22)	3 (IP 14, 15, 17)	1 (IP 13)	2 (IP 7, 8)	9
Total	7	7	7	2	23

3. ORGANIZING

In terms of the organizing of information activities, the data provide evidence of three simultaneous processes: *expansion*, *professionalization* and *upgrading*.

3.1. Expansion

The analysis of calendars from three case universities indicates that the amount of resources devoted to information activities has increased considerably since the 1960s. In the *old university*, information activities began in the late 1960s when an information officer was appointed. This was followed by the creation of an information unit with three employees in the early 1970s; by the end of the decade the unit had doubled to six employees. Twenty-five years later, in the spring of 2006, the number of employees had more than doubled to fourteen: an information director, a deputy information director, seven PROs, one editor, one journalist, one project leader, one web developer and one information assistant. Public relations officers can also be found in the secretariats of disciplinary domain boards, and the university has a marketing, liaison and recruitment unit consisting of nine people.

Similarly in the *semi-old university* the information unit grew from three employees in the mid-1970s to ten by the mid-1980s. Two decades later, in the spring of 2006, thirteen people were employed in the Unit for Communication and Cooperation. The department is also using consultants to a certain extent (IP 14, 15). Moreover, individual faculty offices have hired people responsible for information activities. This first occurred in the Faculty of Social Sciences in the mid-1990s and then in the Faculty of Natural Sciences in the late 1990s. Nowadays the Faculty of Law also employs an information officer (IP 5).

A corresponding growth in information activities can be observed in the *young university*, which started out with just an editor for the university magazine in the 1970s (IP 13). However by the mid-1990s the information unit had increased to approximately 15 people dealing with information and university publications. At the same time individual faculty offices also started employing information secretaries. The young university currently has a special office for external relations in a broad sense (encompassing media, alumni, external courses, contacts with industry, conferences, fund raising, research grants, and so on) employing almost 60 people, 16 of whom work with communication and media. In addition the university uses consultants to a greater extent than it did in the 1990s; these are media consultants, branding consultants and advertising agencies, but not public relations consultants (IP 13).

Growth of information activities, as observed in the three case universities, was confirmed by interviewees from other institutions. In an institute of technology the number of such employees trebled from three to nine between 1975 and 1988 (IP 7). Similarly two interviewees identified an increase in the number of PROs as a general trend in all universities and university colleges (IP 14, 15). A VC also underlined the tendency for information activities to spread downwards in universities to the faculty and departmental levels (IP 4), thereby making the expansion even stronger.

3.2. Professionalization

Parallel to the growth in information activities has been increasing professionalization. This is evidenced by changes in the *backgrounds of employees* dealing with information. In 1980 the old university thus employed its first employee with a degree from the Institute of Advertising (IHR). In the early 1990s the unit also recruited journalists. Likewise in the early 1980s the semi-old university recruited an IHR graduate to be its information director. As of the spring of 2006 the professionalization of the unit was quite clear. The information director and press officer both have basic social science degrees and communication training as well; they have also earlier practical experience of professional communications. Most members of the group possess professional profiles similar to this (IP 14, 15).

Further evidence of professionalization is provided by *changes in job titles*. In the 1960s and 1970s employees in the information unit of the old university had the usual bureaucratic titles: *byrådirektör* (deputy director), *byråsekreterare* (deputy secretary), assistant, and so on. In 1981 the title *informationschef* (information director) was introduced and in 1990 the

earlier titles were replaced by that of *informatör* (PRO). Similarly the semi-old university changed the job titles of its information staff in 1992: one was labelled research journalist and four *informatör* (PRO). As early as 1977, however, the semi-old university had taken the step of calling the head of the information unit *informationschef* (information director). In the young university such professionalization was further indicated in 1999 when their information officers' task began to be described as 'media relations' rather than 'press relations'. Interviewees from other institutions confirm the above observations and point out that information department employees increasingly have training in communication or journalism (cf. IP 2, 7, 13, 14, 15). In addition, such staff increasingly tend to be externally recruited, in contrast to former practices (IP 14, 15). This implies that those recruited will have more competence regarding communications than the working conditions of universities (IP 7).

3.3. Upgrading

The analysis also identifies difficulties that universities may experience in finding adequate, long-term organizational systems for dealing with their information activities. Media relations have thus been linked to a variety of other activities. For example, in the mid-1980s the old university created a new division of public relations. In this way university management tried to gather all external relations (information, international relations, publications, corporate relations and courses) into one unit. Similarly the semi-old university for some time had a unit dealing with internationalization and information. With the passage of time, however, media relations has moved up the organizational hierarchy to become a strategic resource working close to the VC and significant in relation to crisis management (IP 4). In the old university this was manifested in 1990 when the VC brought in the former information director of the university to be his spokesman.

Such upgrading is also evident in the other two case universities. In the young university, after a reorganization a few years ago, the information director became part of the VC's office, while the information department in the semi-old university now works closely with the VC (IP 14, 15). This latter instance emerged gradually; in the early 1990s the information director was allowed to take part in the meetings of the university board, and her successor in the late 1990s was also admitted to meetings of the top management group (IP 17). In this way the information director was able to report on emerging or potentially problematic cases (IP 1). In addition to supporting the university leadership, the information department is helping departments in their contacts with media (IP 14, 15).

4. INTERACTING

After having considered the development of how media relations are organized, the next step is to analyse the processes by which the actors have been interacting with the media. We will first turn to *exposure*, that is the treatment of universities in the media, and then move on to two strategies universities use in dealing with the media: *protection* and *promotion*.

4.1. Exposure

The interviewees basically feel that they have been well treated by the media (IP 5, 9, 13, 16, 18). At the same time some interviewees have noticed increasing media scrutiny of academic institutions, which used to be somewhat of a protected zone. Universities have responded to this growing scrutiny by increasing their accessibility (IP 14, 15).

There is also evidence that most media interest is directed towards the research done in universities. One VC estimated that 80 per cent of media coverage focused on research, 10 per cent on education and 10 per cent on scandals (relating to equal opportunity, sexual harassment, research fraud, dubious financing, and so on) (IP 2). A study from a young university similarly found that of the almost one thousand media exposures in a given quarter, 85 per cent were related to research and almost all were positive. Half of this coverage resulted from proactive efforts (IP 13).

This strong coverage of research and positive attitude towards universities can be seen as reflecting the great confidence modern societies have in academic institutions. Accordingly public opinion surveys in Sweden (www.som.gu.se) indicate positive attitudes towards universities and research. In addition a survey of journalists found that nine out of ten journalists have great confidence in researchers (www.v-a.se).

The relationship between academic institutions and the media varies, however. Thus two interviewees pointed out that media interest is positively related to the significance of the institutions to the local community (IP 2, 5). This observation was confirmed by a VC of a university college, who even mentioned that media scrutiny underlay the resignation of the former VC. The present VC has also been subject to critical coverage but has been better able to handle it, and now continually feeds the local media information and commentary concerning upcoming events (IP 12). A third VC, of a new university, also expressed a rather critical attitude towards the media, describing them as a necessary evil. He finds them hostile and lacking respect for quality, often reporting in a negatively biased fashion using headlines such as 'The University Criticized' (IP 6). A colleague of his at a university college, on the other hand, reported that it was very easy

to get his message out: local media were very supportive and helped the institution to strengthen its prestige (IP 18).

Some, like a VC of an old university, even consider the local newspaper as insufficiently interested in university matters (IP 4). The same is of course true for institutions in metropolitan areas as well. Institutions so located, however, have the advantage of being closer to large media companies; researchers from these institutions are therefore more likely to appear as commentators on television (IP 17).

4.2. Protection

Even if most media coverage is positive and actually promotes universities and their research, academic institutions need to prepare themselves to handle the estimated 10 per cent of news coverage that is negative (most such coverage questions the behaviour of faculty members and administration); the handling of such coverage, according to one information officer, is mostly ad hoc (IP 3). The interviews identified three strategies academic institutions use in dealing with negative media coverage: (1) rules, (2) training and (3) buffering.

4.2.1. Rules

The interviewees report that their institutions have developed rules governing how information should be handled (IP 6, 14, 15). These are gathered into documents called information policies, which deal with the distribution of information responsibilities within the organization. In recent years these policies have tended to be linked to crisis management plans (IP 1, 4).

A basic problem in relation to these policies in universities is that the leadership, due to the freedom of communication and of speech in public agencies, cannot control information in the same way as corporate leaders can, something that may be particularly annoying during crises (IP 3). According to the interviewees, in such situations academic organizations are generally seen 'as leaky sieves'. This is particularly problematic in cases of conflict between the VC and faculty members who are willing to talk to the press (IP 5). Media contacts, such as those mentioned, can of course not be stopped in a university. However, as pointed out by one VC, it is important for the leadership to make it clear that discussing management issues is not part of academic freedom; only university leaders can provide information in the name of the university (IP 9).

At the same time several interviewees stressed that when presenting research results, which, as pointed out above, constitute most news coverage, it is important that those involved in the research should take part

(IP 16). In the words of one VC: ‘Nobody can talk about research with authority but those who are doing it’ (IP 6). However even the presentation of research can involve problems. One such case arose at a Swedish university in 2002, when findings concerning the health effects of acrylamide in potato chips were publicized. The results were questioned, particularly by the potato chip industry, which for some time lost a considerable part of their sales (IP 17). A basic question in this case was whether research results should be communicated through the media before they are peer reviewed and published in a scientific journal. The researchers responded that it was important for them to warn the general public of potential health risks.

4.2.2. Training

A second strategy used by the interviewees’ institutions is media training (IP 2, 3, 5, 6, 13, 16). The semi-old university, for example, has long provided voluntary and subsidized media training twice a year for university leaders and researchers (IP 14, 15). The existence of such media training implies that those giving the training have been collecting material in advance and then giving interviews based on this information. Using such real-life examples they have been able to demonstrate in concrete terms how different members of the university leadership have taken contradictory positions on critical issues. Media training provides various kinds of advice on how to handle media relations (IP 5). These media training courses have become very popular and it is nowadays common for new deans to contact the information director to get such training immediately after their appointment (IP 13). One VC also provides media training for the heads of departments based on the rationale that ‘sooner or later they will be subject to media interest’ (IP 2).

4.2.3. Buffering

The third strategy identified is buffering. One VC pointed out that it is important that the information department first handle questions put to the VC’s office. In this way time is gained and answers can become more balanced (IP 2). Similarly PROs at the semi-old university said that they deliberately keep negative issues away from the VC (IP 14, 15). The registrar of the same university put it even more straightforwardly: ‘We want to save the VC for the positive things; I take care of those things that are not so positive’ (IP 5).

4.3. Promotion

It is evident from the interviews that promotion is a significant task of university information departments. A recurrent theme in the responses of the

interviewees was the importance of strengthening the university's image (IP 1, 9, 13, 14, 15, 16). This is done via promotional activities primarily directed towards actors outside the university, namely the local community, the general public, interest groups, decision-makers, employees, students and alumni (IP 13). However, such activities also seem to be significant in creating a spirit of community and pride inside the university. We can therefore identify two functions of promotion activities: (1) branding and (2) boosting.

4.3.1. Branding

It has become a basic function of media contacts to provide a favourable picture of the university (IP 4). Thus branding is nowadays a common concern of university leaders, a concern closely allied to efforts to formulate distinctive profiles (IP 14, 15). For younger institutions with limited areas of competence this is considered easier than for larger, often older, universities with extremely wide-ranging operations (IP 16). One branding method used by most institutions has been to develop and use logos; they feel that this approach lets them strengthen the brand without moving too far in the direction of business ideology (IP 16).

Branding work implies that universities are being proactive. Some may even develop permanent relations with selected journalists or media outlets (IP 5, 16), though arrangements such as these are exceptions. More normal is the use of press releases and press conferences, and in recent years the web has also become an increasingly important means of communication (IP 16, 17). A particularly interesting application of this technology is a blog started by one of the Swedish VCs, which has turned out to have attracted a large internal and external readership. The blog has even induced journalists to write about issues the VC has discussed in it, and has prompted them to contact him for interviews (IP 14, 15). This clearly illustrates the observation of one interviewee, who pointed out the difficulties of getting heard in a world of information redundancy: 'You need strategic ideas to cut through the noise' (IP 7).

4.3.2. Boosting

Although the main reason for investing in media relations is to spread positive news externally, promotion also fulfils another significant function: internally creating a sense of pride. Interviewees report strong internal responses and employees becoming more conscious of their value in response to internal promotional or 'boosting' efforts (IP 5, 14, 15). One VC particularly stresses the importance of developing internal communications in order to develop organizational culture and strategic thinking in the university. In the same vein it is crucial that university leaders be visible

both inside and outside the organization (IP 3, 7). Internally, meetings with department heads and visits to departments are means to this end (IP 17).

Another channel for communication with university employees, and to some extent with outsiders, is university magazines. All the three case universities have published such publications. However the young university has recently decided, despite good readership figures, to terminate their magazine and rely on the Internet instead (IP 13). Although the other two still publish their magazines, one interviewee from the semi-old university identified the increasing significance of the Internet (IP 5).

Although university magazines are primarily published for university employees, they are also used for external promotion. One old Swedish university has thus for a long time published a magazine that is widely read outside the university, even in the Ministry of Education (IP 16).

4.4. Conclusions

Our analysis of the processes involved in the interaction between Swedish academic institutions and the media reveals that the resulting media coverage is mainly positive. Most positive coverage deals with research, and it is estimated that only approximately 10 per cent of all coverage is negative. Nevertheless, universities have developed strategies to prepare for any negative coverage, by means of rules, training and buffering. To promote their images, universities use branding for external audiences and boosting for internal ones.

5. FORCES UNDERLYING THE CHANGES

The above results indicate significant changes in the academic field, changes that merit explaining. This will now be done using the framework presented in section 1, that is in terms of *coercion*, *socialization* and *imitation*.

5.1. Coercion

In terms of coercion the interviews clearly identify three significant measures taken by the Swedish Government that have encouraged the developments described in the two preceding sections. These measures incorporate (1) demands for popularization, (2) competition for students, and (3) competition for research resources.

In the 1960s and 1970s the government started to demand the *popularization* of research results. This was followed up in 1977 by the creation of the Coordinating Board of the Swedish Research Councils (FRN), one

task of which was to promote the popularization of research (IP 16). In addition, the popular presentation of research results was listed as a criterion in evaluations for promotion. Funding bodies also started asking applicants about their plans for popularizing their research results. Later on it even became a provision of the Higher Education Act that institutions for higher education and research should 'collaborate with the surrounding society and inform it of their activities' (Högskolelagen, ch.1, sec. 2). The Swedish Government can thus be said, through these steps, to have promoted – although relatively lightly – a Mode 2 type of research.

The second government action that has contributed to the expansion of information activities in Swedish academic institutions was an initiative promoting *institutional competition for students*. This has its roots in the 1970s and 1980s when the Swedish higher education system was expanding through both growth in the university student population and the creation of university colleges (IP 16). However, the real coercive element, which in fact pushed universities closer to the market, was a change in the resource allocation system in 1993. At that time the government introduced a system, still in existence, in which universities and university colleges are funded based on the number of students that they attract and that pass through the system. This change has been a strong factor underlying the investments in information activities (IP 2, 5, 6, 7, 8, 13, 16, see also Lindqvist, 1999).

Since the late 1990s a third coercive force has begun operating in the Swedish academic field: increasing *competition for research resources*. Such resources were traditionally distributed by allocations to universities. Since the 1940s these resources have been supplemented by project grants from research councils, and in recent decades two important changes have taken place. First, the traditional resources allocated to universities have become less specified and are provided as block grants distributed to different areas. Second, the share of research resources allocated as block grants has decreased considerably, while the share of project grants increased from approximately one third in the 1980s to more than half by the beginning of the century. Thus applying for research grants and evaluating these applications have become two significant features of the Swedish academic system. Since prior performance and the profile of a research environment are influential factors when grant applications are being evaluated, this change in funding has stimulated efforts to be visible. In the words of one of the interviewees, 'If you are not noticed, you have no position!' (IP 7).

The decreasing proportion of block grants and the simultaneous expansion of the higher education system have led to drastic growth in the number of applicants to the various funding bodies. To handle this flood of applications several funding bodies have decided to emphasize the

support of large programmes. ‘Strong research environments’, ‘centres of excellence’ and ‘critical mass’ are all buzzwords spreading from one financing body to the next. According to the interviewees these developments have significantly influenced universities to allocate more resources to external relations, in order to strengthen their profiles and brands (IP 5, 6, 8, 13). In the words of one interviewee, ‘It is a question of visibility in the media and appearing to be progressive and being forward looking [. . .] when different research funders draw attention to strong research settings’ (IP 5). This is equally true of institutions and individual researchers (IP 17).

5.2. Socialization

At the same time as government has indirectly required universities to promote themselves publicly, there has also been a considerable *change in norms* in Academe. This is well illustrated by the case of one VC, who before he took office was very critical of public relations activities. However after his inauguration he realized that universities were now working in a market-like situation, which dramatically limited their ability to abstain from marketing themselves. This led him to initiate collaboration with industry and the local community, to create understanding of the university’s working conditions. A fund-raising project was also launched in collaboration with a consulting firm. All these efforts were well received within the university and the surrounding community (IP 6).

Attitude changes have not been limited to university leaders, however. Interviewees who have been observing these developments describe a radical change in attitudes among researchers. Formerly deeply sceptical of cultivating a public image, they are now keen to be visible (IP 13); what had formerly been considered ‘mercenary’ is now seen as a standard operating procedure of ‘branding’ (IP 5). Similarly there has been a considerable change of attitudes towards popularization; formerly this was looked down upon and those who did it were considered to be making fools of themselves (IP 8).

It is apparent that there is considerable variation both between and within universities in terms of these changing norms. One interviewee hypothesized that information activities would be more difficult to implement, the larger and the older the university and the more famous its professors (IP 7). This seems reasonable, as such institutions can be expected to have had longer traditions of research and therefore stronger norms. Likewise famous professors may not be as dependent on competing for students and research resources.

Interviewees also believed that branding and other information activities in universities would be easier to introduce in market-oriented professional

faculties such as engineering, management and medicine (IP 13). Similarly natural scientists are mentioned as more interested in information activities than faculty from the humanities and law (IP 14, 15, 17). It is also considered to be a question of age, young scholars being more positive than older colleagues towards such activities (IP 17). Furthermore students tend to be very positive and are eager to see their professors in the media (IP 17).

5.3. Imitation

5.3.1. Comparing

It is quite clear from the interviews that universities watch each other in terms of their organization of and investment in various activities. One former VC remembers how he was under pressure ‘to transfer resources from research and education to information activities, since the other universities, one in particular, were very active in that regard’ (IP 11).

Similarly interviewees with extensive experience in the field also refer to comparisons with others (IP 5, 16). They pointed out that other universities, particularly specialized schools and university colleges, have made considerable investments in media relations, leading to counteracting steps in response (IP 5). Or, in the words of two people active today: ‘We look at each other for inspiration’ (IP 14, 15).

Comparisons are not only made regarding *investments* in information activities; through the services of media analysis companies, most academic institutions can also continuously monitor their *success* in the media (IP 14, 15, 16). A university does not only seek information about itself, but also about other significant actors in the field. Such success is analysed in absolute as well as relative terms, that is in relation to research funding (IP 13). Comparisons between institutions seem to indicate that medical research attracts particular attention, so universities without medical schools have lower media success scores than those with such schools (IP 14, 15).

5.3.2. Exchanging

In the diffusion of new practices it is also very important to note the exchange of ideas between actors in the field. At an international level organizations such as OECD, COIMBRA, UNICA and the League of World Universities bring university leaders together for conferences, workshops and the like. Similarly for the Nordic countries and nationally in Sweden there are networks for different kinds of academic staff (for example the Academic Convent of VCs in Stockholm and the Association of Swedish Higher Education). It is not even necessary that these meetings be officially devoted to modern practices in academic institutions. Just the

fact that academic staff from various institutions are coming together provides opportunities for the informal exchange of ideas and inspiration.

Furthermore the professionalization of the information field has led to the creation of various organizations in which ideas can be exchanged. In Europe there is the European Universities Public Relations and Information Officers Association (EUPRIO), which organizes people who work with information in academic institutions. Similarly there is a Nordic network of information officers and annual Nordic University Administrators (NUAS) conferences. Information officers in Sweden can participate in the activities of the Swedish Information Society and the Swedish Marketing Association as well as annual conferences held by the Swedish Agency for Higher Education (IP 5, 13, 17). In addition, information directors at research universities meet every semester via their professional network, and a corresponding network also exists for university colleges (IP 13). Interviewees also mentioned the existence of e-mailing lists established to allow the sharing of experiences and to create a network of public sector media officers (IP 14, 15).

5.4. Three Forces in Interaction

As we look at the three forces from the model in Table 2.1 in relation to the above empirical findings, we note that all three have contributed to the growth of information activities in universities. It is also worth noting that these forces have not been working in isolation but rather have been interacting. The coercive forces exerted by government have been especially important in changing norms and in stimulating imitation.

6. CONCLUSIONS

This chapter addresses the research question: *how and to what extent have information activities become significant features of modern academic institutions?* It answers this question referring to the particular situation of Swedish universities, as follows:

1. Information activities in academic institutions have expanded considerably in terms of the number of involved employees and have undergone professionalization as well as upgrading in status.
2. Media coverage has primarily been devoted to research results and is mainly positive.
3. Information activities of academic institutions have been directed towards both protecting and promoting the organization.

4. The growth, professionalization and upgrading of information activities represent the outcome of interaction between coercive, normative and mimetic forces.

Since the results presented here are based on empirical studies of the Swedish university system, it is relevant to ask whether they would be likely to apply in other national contexts. A strong reason for believing this to be the case is that the coercive, normative and mimetic forces discussed in section 5 are observable in many other countries. The results are also consistent with the reasoning of the researchers cited in section 1 regarding concepts such as new knowledge production, the triple helix, the knowledge society and the information society. Universities worldwide thus appear to have become increasingly embedded in their environments, a development that in turn puts increasing demands on their communication abilities. The findings presented here may thus only mark the *beginning* of a trend toward the growing significance of media for academic institutions.

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3. PhD education – challenges and opportunities of Europeanization

Marie-Laure Djelic¹

The European Union projects itself as becoming ‘the most competitive and dynamic knowledge-driven economy by 2010’ (European Parliament, 2000). Policy pronouncements advocate, beyond national specificities, a European model of economic development where knowledge drives collective and individual welfare. As a consequence, the European Union identifies as key policy priorities the development of knowledge-production and knowledge-exploitation capacities. And the European Union vouches to ‘contribute to the development of quality education by encouraging cooperation between Member states and if necessary by supporting and supplementing their action’ (European Parliament, 2000). This applies at all levels of the education chain but takes particular significance at the level of higher education – where knowledge is not only to be reproduced but also produced.

European universities hence are in the eye of the storm. Having traditionally been at the core of knowledge production within nation states, they are expected to play a role tomorrow in the ambitious move towards a European knowledge economy. This implies that universities have to change. First, they need to reach a European – if not global – scope and progressively deploy European identities. Second, they have to see themselves in close and tight interaction with their surrounding socio-economic environment. The knowledge they produce cannot be only knowledge for the sake of knowledge. It should also be knowledge for welfare and collective wealth. Concretely, this means that the university increasingly needs to work together with – and not in isolation of – key socio-economic actors. In particular, the nexus between the university, business and government, otherwise known as the triple helix (Etzkowitz and Leydesdorff, 1997), becomes a crucial one. Universities in Europe are in profound transition, indeed; Europeanization and the particular form it is taking today are at least a partial explanation.

In this chapter we focus on doctoral education. As the highest stage of the higher-education rocket, the doctoral level is very much at the core of discussions about and around knowledge production and knowledge

diffusion. This is so for essentially three reasons. First, doctoral or PhD programmes are or should be themselves the seat of production of new, cutting-edge research and knowledge. Second, doctoral or PhD programmes are or should be powerful intellectual magnets. They should mobilize and crystallize the dynamism of more established research communities, challenging them in the process. They are or should be powerful attractors also for different kinds of external actors and play a role in the diffusion and exploitation of new knowledge. Third, doctoral or PhD programmes deserve specific attention as they are responsible for the social reproduction of researchers and research trainers and hence have a long-term impact.

In this chapter, we propose a reading of the challenges and opportunities of Europeanization for doctoral education in Europe. First, we consider what is at stake today in European doctoral education, particularly if we keep in mind the project of a European knowledge economy. Second, we propose a broad stroke picture of doctoral education in Europe and its complexities – with a particular focus on the field of management studies. Finally, we try and suggest what the Europeanization of doctoral education could mean. We build here upon recent, budding and still fragile initiatives while pointing also to possible further transformations.

EUROPE – WHAT IS AT STAKE?

Sheer Numbers

The ambitious ‘Lisbon objectives’ imply that Europe should produce, retain and attract more researchers (European Parliament, 2000). Knowledge implies research, which itself implies researchers. The issue of sheer numbers is made more acute as the current population of researchers is aging. In France, for example, an expected 50 per cent of researchers are due to retire over the next ten years (Harfi, 2005).

These parallel trends – an increasing role for research in our knowledge societies and an aging population of researchers – create intense pressure. How can we produce more PhDs and more researchers over the coming years (quantity) without sacrificing, and in fact if possible while increasing, quality? This will certainly depend upon our capacity to render PhD studies more attractive, within the background of the societal capacity to enhance the status of research careers. In turn, this hangs on the willingness to invest and to use resources effectively.

Brain Drain – Myth or Reality?

Those questions are burning ones in a context where ‘brain drain’ trends don’t always work to the advantage of Europe. We should naturally beware of catastrophism; there is often a degree of mythology associated with debates and discussions around the ‘brain drain’. The simplistic scenario goes something like this. The United States and its higher education system are powerful attractors – draining the best minds from around the world, including from Europe. This attraction, furthermore, can also play a role for more mature researchers and American universities and firms, with their prestige and resources, can seduce the best knowledge producers around the world at a later stage in their career, when they are most productive. There is a reality indeed to the ‘brain drain’ phenomenon and Europe needs to face it. It is important, though, not to exaggerate the threat and we should in particular differentiate between the ‘brain drain’ and mobility and diversity of experiences.

Overall, the mobility of graduate and postgraduate students has significantly increased over the past 15 years or so in OECD countries and this is a trend to be encouraged. Across Europe, the number of students choosing to study abroad is going up. American universities remain powerful attractors. In 2002, 32 per cent of all foreign students in the OECD zone were in American universities. But Europe is also ‘draining minds’, and 34 per cent of all foreign students in the OECD zone go to Britain, Germany or France (Harfi, 2005, p. 2; OECD, 2002). In 1985, there were 3500 French students in American universities while the number was nearly double fifteen years later in 2000 (Harfi, 2005). Still, this represents only around 12 per cent of the entire population of French students who chose to study abroad. The big winner over the past 12 years or so has been intra-European mobility testifying to the success of European programs such as ERASMUS.

On the other hand, we need to look at other dimensions of current evolution. Over recent years, the number of Asian students has exploded in OECD countries – in 2002, Asian students represented 45 per cent of the total pool of foreign students. This Asian presence is stronger in the US, though, than in Europe – in France for example, the Asian contingent represents a mere 14 per cent of foreign students, Africa being still the main source of foreign students. Another dimension to note is that foreign students in Europe will often study humanities, social sciences or languages while American universities remain particularly attractive for those targeting scientific and management studies. In 2001, 36 per cent of all PhDs in science and engineering delivered in the United States were given to foreigners. Out of a total of 9200 diplomas, 1420 went to Europeans (and 2400 to Chinese citizens!). Furthermore, 32 per cent of those foreign PhDs had

a stable project to stay in the United States – the percentage had been only half that in 1990. Forty-nine per cent of those foreign PhDs in the United States wished to stay if they could – here again a significant increase over the percentage in 1990. In contrast, only 3 per cent of American citizens with a PhD were planning to work abroad in 2002. Undeniably, this points to more than healthy mobility. ‘Brain drain’ there is, and even though Europe is benefiting to an extent, American research and research institutions or organizations are still powerful attractors, particularly in science, engineering or management.

Intellectual and Structural Background to Attractiveness

If we take a hard look at the possible reasons why, several explanations come to the fore. Material conditions for PhD education naturally play a role. Students find in American universities large, integrated and well-structured PhD programmes embedded in intense research environments. Those research environments are richly endowed, and material conditions are generally good, including for graduate students. Material conditions, furthermore, often come together with great intellectual conditions. Richly endowed universities can bring together several stars in a field, turning a department into a powerful intellectual magnet on the world scene – the virtuous circle here is quite easy to see. A third type of explanation has to do with the opportunities for PhD students after they graduate. In the United States, the market for postdoctoral positions and starting positions is much more structured, transparent and open to foreigners than is the case still in Europe. Hence, studying in the United States makes sense as such, but also as a way to enter a qualified labour force and to find interesting job and career opportunities. Finally, a last set of explanations may have to do with the possible difficulties of coming back into European academic and research institutions and networks when you are no longer an ‘insider’ to those institutions and networks. An Italian going to the United States or for that matter to any other country to go through doctoral education may find it much harder after several years to come back to Italy and find a job than if he or she had never left. Obstacles can go all the range from the rigidities of administrative systems to individual expectations that have become divorced from local conditions.

PHD EDUCATION IN EUROPE – WHERE DO WE COME FROM?

Doctoral education is naturally quite diverse across Europe. Any attempt at description is bound to be schematic and we should be conscious of the

limits of the exercise. The typology proposed below is built in part from the conclusions of a brainstorming meeting on doctoral education in Europe. This meeting was organized by the author in her capacity as member of the Scientific Committee of EIASM (European Institute for Advanced Studies in Management). It took place in March 2006, in Brussels, and brought around the table the Directors of doctoral programmes (or their representatives) from ten business schools and universities across Europe. The first part of the discussions during this meeting focused on the key features of the different programmes and of their current evolution.

Doctorate in a European Tradition or Americanized PhD?

What is the situation of a graduate student who is intent on an Academic career in the university? In order to understand the particular nature of circumstances in Germany, it will be helpful to proceed comparatively and to see how matters stand abroad, above all in the United States, which in this respect presents the sharpest possible contrast with us (Weber, 1918 [2004], p. 1).

This claim was made by Max Weber in 1918 during his lecture on Science as a Vocation! Ninety years later, it remains valid as pointing to a persistent contrast between two quite different ways to think about and organize doctoral education. If we focus on management studies, we find that the current situation is, in Europe, one of cohabitation between two different types of doctoral programmes and doctoral programme philosophies. On the one hand, a number of European doctoral programmes in management studies are structured and organized according to what Weber called a 'German tradition' – or more broadly a 'European tradition'. On the other hand, an increasing number of institutions across Europe have built PhD programmes or are transforming their doctoral programmes into highly structured PhD programmes, very much inspired by an 'American model'.

Doctorate in a European tradition

Within this tradition, the doctoral student is essentially an 'academic trainee'. He/she is associated with a particular professor and receives his/her training mostly in and through this single association. This tradition is sometimes referred to as the 'apprenticeship model' (EUA, 2005, p. 17). In certain cases, one could provocatively argue that the doctoral student 'belongs' to the professor with whom he/she is associated. In fact, the apprenticeship model is sometimes described in a less than complimentary way as the 'master-slave' model (EUA, 2005, p. 17). In the ideal-typical version of the European tradition, there is no formal course, let alone programme. The graduate student gets his/her intellectual training only through the direct tutoring of his/her mentor.

This has a number of consequences. First, it obviously generates heterogeneity as each training is likely to be unique and we could be in a situation where there is no common base in the education of doctoral students in a particular field across Europe, within a country or even within a single department or school. This is bound to create obstacles to exchanges, mobility or collaboration. This type of organization of doctoral studies means great variability, furthermore, in the quality of training – with respect to theory, methods or the pragmatics of research and publication.

A professor, in this model, has generally a small team around him (mostly) or her, made up of doctoral students and postdoctoral researchers or young academics waiting either for their *habilitation* or for a permanent job to open up. One risk is that the team becomes self-centred and closed-off – exchanges and debates become mostly endogenous with little external stimuli and challenges. A doctoral student who undertakes a dissertation under the supervision of a single professor and remains in the team of that particular professor as a postdoctoral researcher will lack intellectual diversity in his/her training – however brilliant and unique his/her supervisor might be. Another, associated risk is that doctoral students become overly dependent upon their supervisor – intellectually but also with respect to status and resources.

Americanized PhD

The 'Americanized' PhD programmes that sprout up these days in Europe have a number of common features. First, these programmes have an intense period of structured coursework – generally two years. This period is associated with grades, evaluation and processes that make it possible to measure whether knowledge has been acquired and assimilated. Students are recruited into a programme and not directly by a professor; the choice of supervisor may in fact happen quite late.

There is a varying but real degree of collective and even cohort interactions in and around the classes and class work but also quite often in ancillary activities. PhD students meet and intermingle regularly, together and with the faculty as a group, for example in research seminars or workshops. The interaction between students and faculty members is likely to be much more egalitarian and collegial than would be the case in the traditional European model. Structured PhD programmes are often found in institutions with some degree of collective functioning at the level of the faculty; the PhD programme, its construction, the development of courses and the creation of articulations between those courses imply themselves a fair amount of collaborative work.

Structured PhD programmes have a tendency to be more internationally-oriented than doctoral programmes in the European tradition, in a number

of different ways. First, language is an important dimension. PhD programmes tend to allow for a significant presence of English in courses, exams and in the writing of the dissertation. English sometimes co-exists with the national language; in some cases the programme has moved to being delivered entirely in English. Another dimension of internationalization is expressed through the pressure to attend international conferences and to consider early publication in international outlets. Structured PhD programmes tend to integrate these either as requirements or as strongly encouraged activities. Varying degrees of support exist – financial but also intellectual in the form of courses or coaching on publishing and conference presentation. Finally, because basic coursework is at least in part homogeneous with what is being taught elsewhere in the same discipline, structured PhD programmes are a better platform for different forms of exchange and mobility – mobility of students or invitation of foreign faculty members to teach in the programme.

National Training for National Markets

While there are signs that the structured PhD format is making headway in management studies in Europe today, the European tradition probably remains dominant if we consider sheer numbers – and in particular the overall number of graduates trained.

Beyond the format of the programmes, though, and its current evolution, the model of doctoral education in management studies in Europe is still strongly marked by national differentiation and fragmentation. Instead of European markets for doctoral education and for doctors, we still very much find in Europe the co-existence of several national markets. Europeanization is limited and at an early stage still. Sometimes, we even find that the markets for doctoral training and for doctors are really regional, not even national (Doz et al., 2004). Departments or faculties produce doctors who stay on as postdoctoral researchers and may even take over as the next generation of professors in that same department or faculty.

There are still many obstacles to going beyond national training for national markets – language, strong national embeddedness of intellectual communities, heterogeneity of intellectual and research traditions, administrative and financial hurdles, tight connections and links of dependence between supervisors and students amongst others.

While *national training for national markets* hence remains the rule in European education in management studies, it is worth pointing to another trend that undeniably has had an impact on the field. Going back to the period of the Marshall Plan and its associated Technical Assistance

Program, the United States has been both a model and an attractor (Djelic, 1998). When it comes to management, management studies and management studies education, Europe has consistently, over the past 60 years or so, looked up to the United States (Amdam et al., 2003; Sahlin-Andersson and Engwall, 2002; Furusten and Bäcklund, 2000). There has been a regular and significant flow of bright European minds finding their way to a doctoral programme or postdoctoral experience on the other side of the Atlantic. Some stayed on but a number have returned and significantly contributed to building the field of management studies and management studies education in Europe. As an addition to national training for national markets, hence, US training for (maybe!) national markets has been an important part of doctoral education in management studies in Europe.

EUROPEANIZATION OF PHD EDUCATION: WHAT DOES IT MEAN?

European ambitions to become a knowledge power make it urgent, we argue, to seriously consider doctoral education. We need to work in three main directions. Firstly, we should increase our capacity, at the aggregate European level, to produce but also to attract and retain quality researchers. Secondly, we should be working on finding a satisfactory balance in the opening of the university, particularly in its doctoral and research functions, to pressures of accountability, relevance and productive applicability. Thirdly, we should take the necessary steps to increase not only mobility of different kinds within Europe but also to really develop a more fluid European doctoral and research space.

European Doctoral Education: Facing many Dilemmas

There are multiple dilemmas to consider when thinking about doctoral education in Europe and its necessary evolution in the context of the Lisbon objectives. Firstly, as we saw before, there is an issue of sheer numbers. Europe needs to produce large numbers of researchers in the coming years. Everybody agrees, though, that this should not come to the detriment of quality. Quite to the contrary, quality should increase (Doz et al., 2004; EUA, 2005). And this should all happen while keeping costs reasonable!

The focus on quality translates, on the whole, into a much more structured curriculum integrating multiple requirements. The move from the apprenticeship model towards formalized requirements in structured

programmes should be encouraged (EUA, 2005). At the same time, limited resources and various forms of accountability pressures call for a reduction of ‘throughput time’ – that is the time necessary to complete a doctoral degree. The objective of greater quality combines with the target of reasonable speed. This also means that there is a need to ensure a balance between continuity of supervision and a de-multiplication of intellectual and learning opportunities.

Greater structuration of doctoral programmes and a more systematic formalization of requirements should come together, having Europe in mind, with greater compatibility and comparability across borders (EUA, 2005). We should be wary, however, not to fall into sterile homogenization and we should insist on maintaining the richness that stems from a degree of diversity. Doctoral education should provide an individual with the skills and the tools to become a researcher, and as often as possible a good one! At the same time, the doctoral programme should also take seriously the challenge of having to prepare students for a job market. The competencies needed in both cases are not the same and doctoral programmes should here again find the right balance.

Academic and scientific rigor is at the very foundations of quality research. Still, the vision of Europe as a knowledge economy means that knowledge has to become socially relevant and that the researcher should be accountable to a broad set of stakeholders. We bring together in Table 3.1 this set of seven dilemmas. They characterize, we believe, the contemporary evolution of doctoral education in Europe.

The Europeanization of doctoral education, furthermore, is not a process that can be considered in isolation. It is tightly interconnected with the necessary Europeanization of academic and intellectual communities. It also begs to be associated with the issue of a European job market and its necessary fluidity. While neither of those issues are at the core of our argument, it is clear that they matter.

Table 3.1 Seven dilemmas of Europeanization for doctoral education

Increase quantity BUT Increase quality
Increase quality BUT Keep costs reasonable
Put in more requirements BUT Impose shorter throughput time
Work towards greater compatibility BUT Maintain richness stemming from diversity
Ensure continuity of supervision BUT Provide a de-multiplication of learning opportunities
Produce good researchers BUT Prepare students for a job market
Ensure scientific rigour BUT Consider relevance and accountability

Moving towards a European doctoral space should come in tight inter-connection with greater Europeanization of academic and intellectual communities. In management studies both movements can be felt; they need and reinforce each other. A tighter academic community at the European level will facilitate the Europeanization of doctoral education. The progress of a European doctoral space will, on the other hand, naturally reinforce in time the European scope of academic and intellectual communities. Hence, those policies and activities that stimulate European research and academic communities also impact positively, albeit more indirectly, on the construction of a European doctoral space. They should not be neglected.

In the same way, those policies and activities that contribute to cross-border mobility of researchers and to the fluidity of job markets also have a positive impact on the structuration of a European doctoral space. There are still too many logistical, administrative and financial obstacles to the cross-border mobility of labour in general and, of particular interest to us, of knowledge labour and knowledge 'trainees' (that is doctoral students). To take one example – the lack of convertibility of retirement systems across Europe is a major obstacle. To take another example – there are still many administrative barriers in and around public universities across Europe that constrain and limit access for foreigners (including nationals from the European Union). The leverage one can gain from acting at that level should not be neglected.

Relevance and Accountability

Europe needs to produce more researchers, to increase quantity without sacrificing quality. Europe also needs to take a hard look at its capacity to attract and retain good candidates for the PhD adventure and for research careers (Europeans and non-Europeans). Another important challenge for Europe, however, if knowledge is to turn into welfare, is to think about issues of relevance and accountability. The production of knowledge and the production of knowledge producers cannot take place in total isolation from and ignorance of the questions and needs of socio-economic actors.

Gaps and challenges

Europe needs to rethink its training of knowledge producers to create a culture of connectedness, impact and relevance. Naturally, knowledge and scientific production imply processes of internal validation. Still, there is also a need to think about bridges – linking the world of knowledge to broader societal preoccupations. Knowledge producers themselves should in fact be socialized to take that role on as a dimension of their duties and responsibilities.

There are different kinds of gaps and hence we need different kinds of bridges. Firstly, there is often an apparent gap in higher education between research and the production of knowledge on the one hand, and its diffusion on the other – we call this the *diffusion or relevance gap*. The academic world has an increasing tendency to become self-centred and self-sufficient. The complexity of scientific expression, in hard as well as social sciences, has a tendency to reduce the direct impact of new ideas and new knowledge. Diffusion requires a fair amount of translation and scientific popularization. But activities around this form of translation are rarely valued within academic and scientific communities and hence are rarely given pride of place by individual scientists. If knowledge is to become socially relevant and if it is to have an impact on welfare and wealth production, then this should change. And bridges should be invented linking the newest and most original scientific ideas to diverse groups of societal stakeholders that might find those ideas interesting and relevant to their own needs and questions.

A second, and in part related gap, is the gap between fundamental new ideas and knowledge and the possibility to apply and transform them into artefacts, products or practices that can potentially improve collective welfare and wealth. We call this the *application or transformability gap*. Here, the focus should be, beyond showing relevance, on the practical interpretation of new knowledge. The challenge is not so much popularization as implementation. The scientist can him- or herself play a direct role but he or she can also rely upon partners whose task it will be to invent the pragmatics of an idea.

A third gap has to do with accountability and we call it thus – *the accountability gap*. The research activity calls for resources well before its products can themselves lead to resources. Time is an important intervening variable and there is likely to be a decoupling between those institutions, organizations and individuals producing knowledge, and the institutions, organizations or individuals transforming it into material and monetary value. Hence, research needs funding and funding organisms – whether public or private. Increasingly, those funding organisms ask for clear and detailed information on the ways in which their investment is being used. This is true today not only of private funding organisms but also of public ones. Knowledge-producing institutions and universities in particular, have therefore to adapt to a culture of accountability. This trend is reinforced by the increasingly inquisitive eye of civil society and the media. While researchers have traditionally always had to be internally accountable (to their own peer-communities), accountability to external actors with different goals and value-frames is on the whole quite new within the university. It is bringing along deep questioning and a significant challenge.

The limits

Issues of relevance and accountability are indeed important in our world and cannot be avoided when we ponder upon the place and role of research and doctoral education. Still, we should be careful not to go too far. The capacity to innovate and to generate new ideas requires, we know, a space for exploration, irrationality and playfulness (March, 1991). In fact, we should take seriously the hypothesis that relevance may be 'entirely irrelevant when it comes to the pursuit of (new) ideas' (March, 2006).

We need to convey this to our doctoral students. We have to find the ways to underscore the importance of finding a balance between the necessary reaction to relevance and accountability stimuli and the serious challenge of preserving a space of freedom and irrelevance in our research activity. We run the risk, otherwise, of sacrificing our medium- to long-term relevance on the altar of short-term reactivity and adaptability.

Many doctoral programmes across Europe will need to progress in their capacity to convey to graduate students the importance of being relevant and accountable. And relevance and accountability should be understood here both with respect to the academic community and to a much broader set of stakeholders. This implies, first, that doctoral students should understand the importance of turning research into published results that can be broadly accessible to the academic community as well as to other interested communities. At the same time, we should stop short of turning our graduate students into either publishing machines or consultants. Graduate students should be socialized as researchers who need to publish; not as mere A+ journals contributors who reduce research to what can appear in those outlets. Graduate students should be socialized as researchers open to the real issues of the world they live in; not as mere practical problem solvers. The challenge ahead, indeed, is not small!

Towards a more Integrated Doctoral Space: Different Strategies

We now turn to the issue of the emergence of a more fluid doctoral and research space in Europe. We build upon existing experiences that show the way and suggest what could be done to stimulate greater integration. We also go one step further and envision bolder moves that may appear overly ambitious today but are not impossible in the long run. We identify in fact three main types of strategies. Those are brought together in Table 3.2 and described below in greater detail.

Strategy A: Ad hoc collaboration and external Europeanization

The first strategy points to what exists already in a number of doctoral programmes across Europe. Strategy A is simply the fostering of ad hoc

Table 3.2 *Three strategies to Europeanization*

Strategy A	Ad hoc collaboration and external Europeanization
Strategy B	Development of tighter networks
Strategy C	Integrated European PhD programme

collaborations and exchanges and the use of existing opportunities and forums.

Faculty members have research networks across Europe and they can use those networks to provide their students with the opportunity to spend some time in another institution, individually or in groups. A visiting professor may come in from another institution and be asked to offer a course or part of a course in the PhD curriculum. Two institutions that have been working with each other for a while may decide upon the setting-up of one or a few common courses for their doctoral students.

Those are, on the whole, ad hoc moves that reflect the personal networks of a given faculty member or group or some chance interconnection between two or more institutions. Those types of ad hoc and spontaneous initiatives should not be neglected; in fact they should be encouraged and facilitated, if at all possible, by the universities involved, national governments and European institutions. The strategy to let individual initiatives bloom is an important one – at least as a first step. Quite often those initiatives are relatively cheap to sustain. In reality a great share of the costs is absorbed and taken on by the ‘entrepreneurs’ – the faculty members who build the initiative together. The stabilization of institutional links later on will be all the easier that those institutional links build upon interpersonal social networks (Djelic, 2004). The fostering of ad hoc collaboration and exchanges can come together with the exploration and exploitation of the financial support provided by the European Union, in particular through its ERASMUS programme and the Marie Curie Actions (Curie, 2006).

A second dimension to that strategy is to exploit a number of existing opportunities to stimulate internationalization and Europeanization. Some institutions in Europe have course and workshop offerings that represent real opportunities for programmes that remain on the whole national. Let us focus here on management studies. EIASM (European Institute for Advanced Studies in Management), EDAMBA (European Doctoral Programmes Association in Management and Business Administration) and EUDOKMA (European Doctoral School on Knowledge and Management) organize, for instance, courses, workshops and seminars that are open to students from PhD programmes all around Europe. Over the past ten years, furthermore, we see a de-multiplication of

summer schools, workshops and graduate courses organized by groups of researchers, open to all interested graduate students in Europe (with a varying intensity of selectivity) and often financed by European institutions and programmes such as the TMR (Training for Mobility of Researchers) programme or the European Science Foundation (TMR, 1999; ESF, 2006).

Those courses and workshops are places for cross-national encounters and discussions. They are a relatively cheap means towards the internationalization and Europeanization of otherwise local programmes. They generally contribute to an increase in the quality of knowledge acquired by PhD students, particularly those coming from programmes functioning within a European tradition. Since many doctoral programmes across Europe are small and locally bound, the strategy of mutualization solves many problems at the same time. It is a way to go around limited resources (intellectual and financial) at the local level. It is also a way to ensure collectively, at a European level, that graduate students are confronted with knowledge and techniques that none of them could have encountered locally. Finally, it is a way to bring graduate students into European and international networks and communities.

There are, at this stage however, a number of problems with this strategy. Firstly, communication and the circulation of information are neither fluid nor systematic. Not all doctoral programmes and doctoral students across Europe know what courses take place, when and where. We lack information hubs by discipline that would give an overview, easily accessible, of what is taking place, where, when and how. Secondly, the offer at a European level, albeit interesting, remains irregular and patchy. It is not structured into curricula and coordination is weak, including in the overall offer of any particular institution. A doctoral programme, as a consequence, that would want to systematically outsource, every year, parts of its curriculum would find it difficult to do so. Courses may take place only every other year or else at different time periods of the year. They may be cancelled or redefined with little advanced warning. And in any case the overall offer will not be a structured and stable pattern with a curricular logic. This could change, naturally, but it would call for some attempt at coordination at least within and between the institutions that contribute most to the offer of courses and workshops. Finally, there are issues of costs. It is, in all likelihood, much better financially for small-sized doctoral programmes (most programmes in Europe) to send a couple of students to a European course rather than to open the same course locally. The two types of costs, though, are not the same. On the one hand, there is a need for direct cash outflows. On the other hand, costs may be higher but they are hidden in the overall university structure and

hence relatively invisible. The reality is that, today, many doctoral programmes across Europe would find it difficult to earmark the amounts in cash necessary to finance the participation of their doctoral students in European courses and workshops.

Strategy B: Development of networks

A second type of strategy is more ambitious and more demanding in terms of resources and institutional investment. The idea here is that several European schools or university departments, across national borders, build a long-lasting network around doctoral education. Partners come together and agree to create different kinds of bridges between their respective doctoral programmes.

The network could represent an opportunity for students to benefit from a co-supervision of their dissertation work. It could allow graduate students to move around and spend some time in different programmes across Europe. The network could also lead to a stable collaboration on parts of the curriculum or more simply to a division of labour where different partners offer different courses to the entire pool of students. This type of complex strategy does not yet exist in management studies. It does exist, however, in economics (as well as in other disciplines, more often in natural sciences). We can definitely find inspiration in what has been achieved by our colleagues in economics by considering the case of the ENTER programme.

The ENTER (European Network for Training in Economic Research) programme is a cooperative venture between seven European economics departments from seven different countries. The partners are Universitat Autònoma de Barcelona, University College London, Universität Mannheim, Université Libre de Bruxelles, Stockholm Universitet, CentER at Tilburg University and MPSE at Université des Sciences Sociales de Toulouse. Doctoral students in the programme spend one or two semesters in one or two institutions of the network on the same footing as local students. They either take courses or pursue dissertation research under the additional supervision of another faculty member at the host institution (co-supervision). Typically, students will take the first year of courses in their original institution. Then a selection process will direct some of those students towards the ENTER programme, on the basis of academic excellence. A student who has fulfilled the requirements for the PhD in his or her original institution and has spent, in addition, at least six months in another ENTER partner institution, will also be awarded a European PhD degree in economics jointly delivered by the seven ENTER partner institutions.

The ENTER programme also implies an annual network-wide meeting

(or ‘jamboree’) where students and faculty members come together to present their current research and results. Both the exchange of students and the annual jamborees have been funded under the European Union ERASMUS and TMR (Training and Mobility of Researchers) programmes.

This type of strategy is receiving a lot of attention and increasing support from European institutions as well as national governments (for other examples of parallel initiatives see EUA, 2005, p. 38). Recently, the European Union launched the Marie Curie Research Training Networks with a view, precisely, to foster the type of stable doctoral networks exemplified by the ENTER programme (Curie, 2006). The European Union and nation states are also taking steps to formalize co-supervision or *co-tutelle* in French. A graduate student who has shared his/her time between two European departments and has worked under the close supervision of two advisers, one in each of those departments, may obtain a double doctoral degree. More often than not, though, a graduate student involved today in a structured European network will obtain a doctoral degree from his or her home university and an additional ‘European certificate’, vouching for the European dimension of the training. As we will see below, the ‘Doctor Europaeus’, a single doctoral degree and diploma delivered at the European (and not national) level, has been discussed since 1991. It is not yet reality, though.

Strategy C: Integrated European PhD Programme

This third type of strategy remains for the most part a vision, a projection into the future – but a future that may be getting closer. The idea, here, is to build from scratch integrated programmes that will have a European scope and identity.

This could mean for an existing network of partner institutions to go one step further than they already do. Let us take again, as a matter of example, the case of the ENTER programme in economics. The move towards an integrated programme would mean a number of things. Firstly, partner institutions would need to agree on a single recruiting process that could then be locally decentralized and administered. Secondly, partner institutions would need to agree on an overarching and common curriculum, which they would then ‘share’. Parts of the curriculum would be run in one department, others elsewhere. Thirdly, co-supervision would probably be systematized together with the generalization of mobility across partner institutions. Finally, candidates would all have to go through the same requirements and the defence would have been collectively formalized. A successful candidate would obtain, as a consequence, a single degree and diploma with a European scope and identity that would be functionally equivalent, everywhere in Europe, to the national doctoral degree.

Another way to move towards an integrated European PhD programme would be for existing departments or universities to build an entirely new programme. One could obviously also envision the emergence (either through ‘mergers’ or outright creation) of new departments, universities or schools with a European identity and scope. Although evolution in this direction is slow, it is not impossible and INSEAD Business School (located in Fontainebleau, France) or the European University Institute (located in Florence, Italy) were early harbingers (Barsoux, 2000, www.iue.it). Let us start, here again, from a concrete case – the CLEI International PhD programme (Center for the Comparative Analysis of Law and Economics, Economics of Law, Economics of Institution).

The CLEI programme was created from scratch in 2003 by a group of European institutions – Polytechnique-CRG (Centre de Recherche en Gestion), France; the Law School of the Centre of Advanced Studies in Law and Economics at the University of Gent in Belgium; Università degli Studi di Torino in Italy – together with an American University, Cornell. This is an innovative three-year doctoral programme combining coursework and dissertation projects on the comparative analysis of law and economics, economics of law, economics of institution with a strong interdisciplinary orientation. Recruiting is being done locally by the different partner institutions but with common grids and criteria. Then, the first year is a year in residence in Turin, Italy, for all recruited students. At the end of a year of intensive coursework, they go through preliminary exams. Starting from the second year, graduate students work on the development of their research and dissertation work at one of the partner institutions. The choice of institution is closely related to the nature of the topic they focus on. They may spend time in several partner institutions. At the end, the doctoral degree is awarded by the University of Turin.

The evolution towards the integrated PhD programme is closely associated with debates and discussions around the European Doctorate degree – ‘Doctor Europaeus’. The idea of a European Doctorate originated in 1991 from an informal initiative of the Confederation of European Union Rectors’ Conferences. This group identified the following requirements (EUA, 2005, p. 39):

1. At the PhD thesis defence, at least two professors from higher education institutions of two European countries other than the one where the thesis is defended should provide a review of the manuscript.
2. At least one member of the jury should come from a higher education institution in another European country other than the one where the thesis is defended.

3. A part of the defence must take place in one of the official languages other than the one(s) of the country where the thesis is defended.
4. The thesis must partly have been prepared as a result of a research period of at least one trimester spent in another European country.

The debate on and around the European Doctorate is still open. An obvious issue is whether and in what conditions such a diploma could represent an added value for the graduating student looking for a job in European institutions of higher education. Going one step further, the question could be whether such a degree could replace (and not come on top of) a national degree.

CONCLUDING REMARKS

The European Doctoral space is going through a challenging period, with questions and transformation all around. Firstly, the double challenge of providing graduate students with better training and of producing altogether more graduates is a real one. This challenge is putting pressure across Europe on most doctoral programmes and institutions of higher education. Secondly, the European Doctoral space as part of the European research space has to face the double pressure of accountability and relevance. Not only do European researchers have to be accountable to their peers and take into account the criteria of their own communities with respect to relevance and quality, they also have to take into consideration broader sets of stakeholders. Thirdly, doctoral programmes need to evolve in order to acquire progressively a more European identity. There are different paths towards Europeanization. Those different paths imply different kinds of resources, networks, ambitions and self-projections. We suggest, though, that more structured forms of Europeanization (Strategies B or C) are likely to gain ground, building upon and going beyond simpler ad hoc initiatives.

When we think about doctoral education in Europe, we also need to think in parallel about what happens after. Firstly, it is important to consider the question of job markets. How can we make job markets in Europe more fluid and more . . . European? How can we improve communication and the circulation of information on research jobs and vacancies? How can we move towards professionalized, merit-based selection processes at a European level? Secondly, we need to envision postdoctoral opportunities as an important and interesting first step towards the job market. Here again Europe is late. The overall offering of postdoctoral positions across Europe remains limited. When they exist, those positions are associated

with either too much teaching and pedagogical requirements or else with low remuneration. Still, one should mention here a recent initiative of the European University Institute in Florence that undeniably moves us in the right direction.

In 2005, the European University Institute launched the Max Weber Programme, the largest postdoctoral programme in the social sciences in Europe. Funded by the European Commission, Max Weber Fellowships are open to candidates who have received their doctorates in the last five years, in economics, social and political sciences, law or history and who wish to pursue an academic career. Fellows are selected on the basis of the excellence of their research accomplishments and potential. They have the opportunity to work in close cooperation with the various departments and faculties of the European University Institute. Fellowships are granted for 12 or 24 months and there are each year 40 Fellows in residence. The stipend amounts to 2000 euros per month to which are added some family allowances when applicable. The Fellowship programme is associated with a number of postdoctoral activities – writing and presentation workshops, conferences and research seminars. The time of the Fellows, though, is mostly devoted to research and publication. On its website, the European University Institute has created a virtual job market, posting the profiles and curricula of those Fellows who are looking for a position in academia.

The European PhD landscape is changing. A lot of things still need to be done but there are positive transformations. In 1988, a small social network of Scandinavian ‘friends’ decided together with James March from Stanford University to move towards the formalization and institutionalization of their collaboration. They obtained the support of their respective institutions, and Scancor (Scandinavian Consortium for Organizational Research) thus opened its doors in 1989 at Stanford University (Scancor, 2006). Scancor was conceived as a hub, where researchers and doctoral students from all across Scandinavia could come for different lengths of stay – working on their theses, research projects and interacting formally and informally. In hindsight, Scancor has played a significant role in the development of Scandinavian management studies. It has also been a conduit for the diffusion of Scandinavian ideas and contributions. Our challenge for the coming years, is that a parallel initiative emerge between one or several institutions in Europe and universities from other parts of the world. We, as Europeans, should become intellectually and logistically attractive enough that the best researchers and graduate students from South America, Asia or Africa would want to spend time exchanging with us. We ourselves would greatly benefit from this opening to other worlds. The challenge is on us!

NOTE

1. The author is also member of the Scientific Committee (SC) of EIASM (European Institute for Advanced Studies in Management). Although the author thanks the Institute and other members of the SC for engaging discussions and many insights, the positions expressed here do not engage that institution.

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4. The role of business schools in the process of university reform

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As innovations often occur at the margins of organizations and bodies of knowledge (Miller, 1998), business schools can be interesting institutions to observe in times of intellectual and institutional change. For there can be little doubt that when they are situated in university settings, many, if not most, business schools operate as frontier posts of the academic world, mediating between differing values, conceptions of knowledge and bases for action.

Perhaps for this reason, historically business schools have had a complex relationship to universities, particularly in Europe. The teaching of and research into administrative practices seemingly was accepted as part of the canon of legitimate knowledge when those practices involved the State and more particularly the Princely State. Certainly instruction in what was regarded as rational administration was taking place in some German-speaking universities in the eighteenth century. But the emergence of interest in commercial administrative practices caused more difficulties. So, for example, separate institutions were established in Italy in Venice (albeit now a full university) and Milan. In France instruction in commercial and governmental administration developed in the *Grandes Ecoles*, outside the traditional university setting. Similarly in the Nordic countries separate institutions have played a disproportionately significant role, at least in the early years. Bergen, Copenhagen, Helsinki, Stockholm and Turku all had separate institutions for instruction in business and commercial skills with the neighbouring traditional universities often distancing themselves from involvement in the business arena. Spain also had and still does have a series of separate educational institutions in the business area.

The potential for a more central institutional positioning was suggested by Germany where the earlier interests in public administration were followed by the emergence of research and teaching into both the application of economics to business and commercial problems, and systematic and rigorous bodies of knowledge in the area of industrial psychology. Indeed the latter knowledge proved to be highly influential in American business

schools and social science departments at the end of the nineteenth and in the early decades of the twentieth century. Albeit much later, British universities also demonstrated that they could develop interesting and useful understandings of the business area. Prior to the establishment of business schools, British universities had already pioneered the intellectual development of operational research, continuing the work undertaken by mathematicians during World War II and subsequently in the newly nationalized industries, particularly coal and steel. Important research had also been conducted into issues of organizational design, with the basis of what is now known as contingency theory being developed at Aston and Edinburgh Universities, and Imperial College, London. Outside the university sector, the Tavistock Institute for Human Relations had succeeded in mobilizing insights from anthropology, psychology and sociology in order to develop a very original socio-technical systems view of organizations that was to have enormous influence throughout the international academic community.

But although such exciting intellectual developments were taking place in British universities, there was still a great deal of unease about more fully incorporating business studies within the traditional university framework. So, for instance, such a development at the London School of Economics and Political Science in the 1930s petered out despite the early promise offered by Ronald Coase's research on the theory of the firm and costing, and the varied contributions of Ronald Edwards and Arnold Plant. It therefore should be of no surprise to learn that when a government inquiry into the need for the establishment of business schools in the United Kingdom recommended the creation of two new major schools, great difficulty was experienced in locating these in suitable institutions. Cambridge, Imperial College, London, the London School of Economics and Political Science, and Oxford all declined the funding. While Manchester accepted it, the desire to locate one of the new institutions in London resulted in an independent school having to be established – what is now known as the London Business School. Having a loose relationship to the University of London – an 'institution having recognized teachers' – but awarding its degrees, the then London Graduate School of Business Studies had to have representatives of the more sceptical Imperial College and the London School of Economics and Political Science on its governing body in order to establish some degree of academic legitimacy. In other words, the new establishment in London was forced to have a similar stand-alone status as the similar institutions in Italy, the Nordic countries, Spain and indeed INSEAD, an institution established by business interests in France but completely independent of the French university system.

That traditional universities were so cautious of business schools despite their very real intellectual achievements in the business area in Germany, the United Kingdom and most likely elsewhere, not only reflects unease with business values and practices but also a critical view of the intellectual development of business schools and education in the United States of America. American business schools had been established with a strong trade school dimension. I can personally remember standing on the steps of a much reformed Chicago Graduate School of Business in the 1960s watching box after box of stopwatches being carried out of the premises for disposal. In earlier times they had been used in time-and-motion studies when the intent was to produce practitioners of the craft rather than intellectual critics of its consequences. The resultant anti-intellectualism was such that it stimulated the establishment of a number of committees of inquiry, notably those of the Carnegie and Ford Foundations, and from the 1960s these resulted in a virtual revolution in business education and the academic positioning of many key American business schools. Business knowledge started to become much more embedded in the wider social sciences, particularly economics and psychology.

The Harvard Business School, most likely by far the best known such institution in Europe, had a different trajectory of development. Founded with a strong belief in the value of case study learning, Harvard had always had an ambiguous commitment to the creation and use of explicit and public knowledge, and still does. Contrast the approach to the dissemination of knowledge at Harvard and, say, Chicago. If one could not afford to study at the latter, a potential student could, with due diligence, care and a great deal of effort, replicate the greater part of the body of knowledge conveyed in the Chicago MBA programme in a good public library. Albeit often focused at the moving edge of contemporary knowledge, Chicago is nevertheless committed to conveying a rational form of social science knowledge that resides in the public domain in books and journal articles. Harvard is very different. Yes, it has made distinct and important research contributions. But its approach to the educational use of knowledge is not the same as Chicago. Of course one can access the cases and the texts used on its courses in a public library, but many of the volumes that it uses are not like conventional textbooks. Rather they consist of collections of its own cases and brief teaching notes. In contrast with other educational materials, a reading of these does not convey the knowledge itself. To obtain that, one has to attend the course, sitting in on the case analyses to gain access to the less explicit, often more subjective and certainly less public bodies of knowledge that are being conveyed internally in the institution. It is as if the real knowledge is a mystery – and a rather expensive one – that is only available to the insiders on the programme. It is as if their

knowledge was being privatized, packaged and commercialized. Given this, it is hardly surprising that the Harvard model and its copies at some of the European stand-alone business schools created a sense of unease in more traditional academic minds. The likes of Cambridge, the London School of Economics and Political Science, Oxford and many German universities did not want to go down this route.

But the world of business education was to change. In America the impact of the Carnegie and Ford Foundation reports was great and immediate, with many US business schools investing in serious scholarship. Rather than propagating untested ideas and contemporary business practices, they started a continuing process of investing in more rigorous and public understandings of the business world – both of the internal operation of the business firm and the functioning and implications of its external context. Even the Harvard Business School had partially to invest in this change as its prestige showed signs of declining both internally in its own home institution and in the wider community.

These developments were watched with interest in Europe. Moreover at the same time different developments were occurring in the European setting. With a huge expansion of interest in and demand for university education generally and business education in particular, and not wanting to miss out on the possibilities that this created, traditional universities in most Western European countries started to move into the business and management studies area, some slowly and others very rapidly. With few exceptions, it was the newer institutions who were the early enthusiastic movers but many of the older ones followed. As we shall see later, even Oxford, the oldest university in the English-speaking world, managed to get there just before the end of the twentieth century!

In many respects the incorporation of business studies into the university has resulted in a normalization of its academic profile as this is seen in terms of both teaching and research. While there are still stand-alone institutions that glorify forms of guru knowledge which invest heavily in a strategic vagueness and highly abstract visual representations, in the main there are now more rigorous and demanding expectations for the form that knowledge takes. Although there can be and are different approaches to knowledge generation ranging from that of the social sciences to more engineering and design oriented ones, all now are much more likely to put an emphasis on the rational explication and serious verification of knowledge claims. In other words, within the academy there is now quite a widespread desire to differentiate business school approaches to knowledge from those of the consultancy boutiques where fashion and acceptability are much more important considerations. Of course there are a multitude of exceptions, but as a strong tendency, an institutional commitment to formal

grounded knowledge is a quite significant one in the modern business school.

With the study of business having become an established part of many European universities, I now turn to focus on some of the more distinctive characteristics that business schools can bring to the functioning of the modern university and thereby its reform. For in many cases the idiosyncrasies of their past development have now been replaced by some quite interesting modes of functioning in a part of the modern world that is noted for both its rapid rate of change and the demanding nature of its expectations.

CHARACTERIZING THE MODERN UNIVERSITY-BASED BUSINESS SCHOOL

While some aspects of the path of development of the modern business school can be seen in terms of a normalization as aspects of conventional university functioning are adopted, that should not imply that business studies units in a university are in the process of becoming the same as their host institutions. They are not. A number of important differentiating features tend to distinguish university-based business schools from many other parts of their university setting.

Practising what they Preach

I would never claim that all business schools are well managed. They are not. Like every other institution, they are subject to the normal human vagaries. But at least more sophisticated understandings of good management exist in such institutions and at times are applied. Possibly foremost amongst these is an awareness that better management is the right management in the right circumstances, that is to say that there are contingencies in the application of the managerial art. This understanding alone enables business schools to either resist the application of the latest managerial fads that unthinking host institutions or consultants of governments are prone to impose on them, or at the very least are better able to isolate themselves from such impositions.

But more than that, business schools have had to pay more attention to marketing their efforts, often in a highly competitive market context. Branding is an increasingly important consideration, often requiring quite subtle approaches to the differentiation of one institution's offering from those of others. Advertising has become ever more important, with business schools increasingly operating at the new frontiers of internet

marketing. The management of alumni relations is another area that has become of vital importance since membership of an active post-qualification network is now one of the key offerings of a business school. The creation of lifetime knowledge communities has become a very important activity for business schools. Of equal significance, operating with a mature and sophisticated group of students who frequently have paid a high fee for the services they are receiving requires a degree of what essentially is a form of customer orientation, something that is still an alien concept in most traditional universities. Whether it is in relation to MBA students or participants in executive programmes, the modern business school unquestionably has to function as if it has demanding clients, because that is precisely what it does have. Expectations for course delivery and administration are high. Teaching has to be professional in style. School facilities have to be well managed and up to date, as do a school's relationship with a broad range of constituencies such as potential employers and corporate clients. The modern business school has to operate as if it believes in a stakeholder model. It cannot hide behind the legitimacy and often the tradition of detachment of its host institution. Its other constituents expect and can demand more.

All this results in many business schools being quite dynamic institutions, managed in a modern and open manner. They are strategic in outlook, often spending the time to reflect on the changes in the contexts in which they have to operate. Equally they have the insights to enable them to be sceptical and questioning of many fashionable managerial recipes that are prone to be imposed on the traditional university sector. Business schools tend to distance themselves from mission statements and elaborate strategic planning procedures, usually recognizing that it is more important to continually be strategic. In many cases they have directly recognized the need to build internal cultures that value innovation, experimentation and service.

Such an outlook, where it exists, is a vital attribute for the university sector as a whole. Ever more subject to pressures to conform to what are seen to be modern standards of management, universities are frequently in a weak position to resist such demands. External parties, be they the government, the media or other interested parties, have found it easy to characterize universities as unaccountable and old-fashioned institutions that are in need of modernization. And that modernization is so frequently expressed in terms of either the managerial practices of commercial enterprises or the recommendations of prestigious international firms of consultants. Neither is necessarily appropriate for high-level academic institutions but often the central university authorities find it difficult to say so. Their criticisms are likely to be seen as excuses. Appeals to both the

knowledge base and internal operations of the business school could well be of use in such circumstances.

At one institution with which I have been associated, academic insights into the functioning of managerial vocabularies were able to seriously problematize calls for greater efficiency on the part of the institution and its members. An awareness of the deeply ambiguous nature of the concept of efficiency itself enabled the creation of a counter-language that could undermine the positivity of the conventional vocabulary. What was previously a statement of the obvious was made into a statement of opinion, indeed a statement of opinion with a very limited evidential base. Equally significantly, in the same institution members of the business studies part of the academic community were able to seriously question the introduction of a newly proposed resource planning and management system. The assumptions on which it was based would have facilitated the imposition of cuts on nearly all parts of the organization at a time when there was no economic imperative for them. The pressure behind the anticipated cuts emerged from the central directorate which wanted to instil a culture of scarcity in order to rebalance the allocation of power in the institution. Lost within the myriad of technical details of the proposed new scheme were some extremely arbitrary assumptions. It was these that the specialist academics were able to identify and expose. But they did not stop there, moving on to design and implement a new resource planning and management system that gave a much more accurate insight into the resource base of the institution, maintaining a greater degree of influence at the departmental rather than the central level and in so doing attracting a high degree of support and legitimacy.

With the growing sophistication of modern research-based understandings of managerial practices and processes, the potential for business schools to be creatively involved in the sensitive and sympathetic reform of the university is an ever present one. At a time when there is an increased likelihood of calls for different governance structures, modes of accountability and even processes of academic work, it is ever more important that ways be found of conducting an informed dialogue that pays attention to the true complexity of organizational processes and the frequently unintended consequences of managerial action and administrative reform.

Interdisciplinary Potential

The research cultures of business schools vary enormously, even though most now express an explicit interest in the role which research can play in understanding and developing the managerial art. Sometimes, however, it is tempting to see the interest as a relatively superficial one directed at satisfying the criteria of accreditation agencies and ranking studies. Wider

expectations are now such that the establishment and maintenance of a reputation in business education requires some involvement in knowledge creation as well as its dissemination, although there are still a few exceptions in the international community.

In institutions where the commitment to research is a superficial one, this translates itself into an emphasis on careerist rather than curiosity oriented research. Faculty talk of journal 'hits' rather than knowledge finds. A great deal of emphasis is placed on the prestige of the outlets in which research is published rather than the content. Walking into one such institution in the United Kingdom not too long ago, the first four faculty members that I met all told me of their journal hits, proudly naming the outlets, but none discussed the nature and direction of their research. It reflected a very different intellectual culture than that prevailing in another institution in the same part of the country and subject to the same regulatory regime. It is moreover a culture that encourages mainstream lower risk research, the creation of a faculty that forsakes research on obtaining promotion, retreating instead to more lucrative consultancy and textbook writing or striving to achieve the status of a business guru by trying to simplify, codify and market the knowledge that they have acquired. Such processes are indeed fascinating to observe and much in need of serious investigation in their own right, but they stand removed from the normal processes of knowledge accumulation that takes place in academic settings.

But there can be and often is a much more positive aspect of knowledge creation in business school settings. Such schools have undoubtedly changed what we know of the business and organizational worlds. They have done this in a number of ways. First, at times they have provided a home for the further development of knowledge initially developed outside the university setting. Operational research would be one such area, coming into the university world from military and commercial settings. Second, they have encouraged research into aspects of business life that would otherwise not have readily found a home in the university world. Marketing, operations management and in somewhat more complex ways accounting and finance come to mind. All of these represent areas of immense practical importance that have gained from being subjected to the more rigorous analysis that can occur in the academic rather than a commercial or consultancy setting – and where the further potential for such insights remains a very large one. The significance of this is highlighted when one compares the knowledge context of these subjects with that of those that have not entered the academy. Project management comes to mind, a subject only now being explored in a more systematic manner where the knowledge base remains largely experiential and uncoded, thereby constraining both its transference and application. Third, business schools have had a significant

impact on subjects where researchers from other institutional settings have moved into the business school environment. One clear case of this is economics, particularly in the USA. With business schools under pressure to increase their research profile and students shifting their interests from social science departments to business studies, increasing numbers of economists started to be employed in business schools. Of course some of the intellectual content of their subject remained the same but equally there were pressures for it to change in a variety of subtle ways. Clearly there was more interest in microeconomics, the economics of the firm, rather than macroeconomics, and research interests started to shift accordingly. Within microeconomics there was less interest in regulatory issues and more in understanding and increasing the effectiveness of the firm. So profit was no longer taught as being an indicator of the misallocation of resources. Rather bodies of knowledge started to arise about how to increase corporate profitability by securing rather than constraining market advantage. Moreover active consideration started to be given to understanding the constitution and governance of the firm in terms of rational economic processes, this giving rise to today's highly influential understandings of agency theory and the economics of corporate governance. While the intellectual history of these developments remains to be written, the probability is that at least aspects of these understandings have become constitutive of the very circumstances which they seek to explain.

A further way in which business schools have impacted on intellectual developments is by the ways in which they have facilitated interdisciplinary endeavours. Not that they have always done this. Very clearly they have not. The majority of business schools are characterized by some degree of interdisciplinary strife, invariably between the economists and the rest. On occasions this results in open warfare and there have been instances of the victorious economists ejecting their colleagues from the other disciplines, usually to the longer-term detriment of the institution concerned. The reasons behind these internecine disputes have never been systematically probed but most likely include the different attitudes to intellectual diversity in different subjects and the differing temperaments of the scholars involved. However, side by side with such disagreements there has been a much more productive bringing together of different bodies of knowledge.

Business schools have given rise to a number of new and very interesting areas of investigation. Modern finance is clearly one, created at the interface between an earlier more institutional understanding of finance and microeconomics. Indeed there was a period when I was a student at the Graduate School of Business at the University of Chicago when the old and the new financial knowledges stood side by side, still not fully integrated, with the two groups of faculty offering their own courses to

students. But that was a transitional situation, with old-style finance soon dying out with the retirement of its professoriate. The reformulated subject has gone on to be one of immense influence, attracting Nobel Prizes and changing the operation of the financial markets (MacKenzie, 2006), the skill sets of their practitioners, and through the encouragement of more meritocratic and knowledge-based recruitment, their social composition.

Still having no commonly agreed name, the body of knowledge that is frequently referred to as 'organizational behaviour' represents another intellectual contribution of business studies departments. While there had been a long-standing tradition of intellectual inquiry amongst sociologists into the functioning and setting of the business organization, this was to develop rapidly with the expansion of business schools. Physically bringing together psychologists, social psychologists, sociologists and, on occasions, anthropologists and political scientists, business schools offered the potential for a new intellectual configuration of knowledge around the organization. Moreover, this has occurred in a pluralistic way with the emergence of a number of differing perspectives and approaches. Unlike their colleagues in the more monocentric discipline of economics, scholars of the human and social sciences have been appreciative of a polycentric body of knowledge. The behavioural theory of the firm developed at Carnegie Mellon University brought together understandings from economics, psychology, political science and computer and systems science. British contingency theories of the firm derived from psychological and sociological bodies of knowledge, also incorporating anthropological ones when it was further developed at the Manchester Business School. Very distinct Scandinavian traditions of organizational inquiry have had their origins in anthropology and sociology. Influential work at the University of Michigan which subsequently spread to Yale and various locations in California was derivative from social psychological traditions. Indeed it is fair to say that psychology has been more influential in the USA and sociology and sciences of the collective in Europe, in all probability reflecting the prioritization of individual action in the American setting and the less controversial recognition of the significance of the civil society in Europe.

There is no doubt that we are wiser as a result of these endeavours, disparate as they are. Ranging from the more instrumental inquiries into areas like executive compensation and human resource management, through both facilitative appreciations of the processes conducive to organizational change and more sceptical insights into the reasons for and consequences of organizational reform, to explicitly critical insights into the wider social and political positioning of the business enterprise, all have enriched our understanding of the modern organizational form. A very new body of knowledge has been emergent.

The above developments, significant as they are, do not exhaust the intellectual contributions of the business school in the course of the last few decades. The entirely new discipline of strategy has been created from an uneasy mixture of economics and the newly created organizational behaviour. Providing both an analytic for exploring the competitive and strategic positioning of the firm and a basis for understanding the processes implicit in more strategic patterns of corporate behaviour, the modern study of strategy is still an emergent area of investigation, albeit one that is attractive to both students and management consultancies, the latter presumably hoping that it provides an understanding of the corporate recipes that they already provide! Although not constitutive of new disciplines, research developments in accounting, marketing and operations management have been no less significant.

Take the research on the organizational and sociological analysis of accounting. Since the late 1960s there has been a large and cumulative body of research in this area. For despite the significance of accounting as an influential form of economic calculation in modern society, it had been subjected to little investigation by sociologists or other social scientists. Indeed rather than seeing it as an intriguing and deeply problematic phenomenon, there had been a tendency for social scientists to take accounting at its face value, accepting its own rationales and knowledge claims. This was most likely because social scientists knew very little about the subject, its seeming accuracy intimidating those who otherwise might have sought to question its pretensions. So it was left to a group of sociologically oriented accounting academics to pursue the quest. It has been one that has resulted in a very substantial and still growing body of knowledge, a number of specialist international research journals, specialist gatherings and an increasing recognition of the significance and potential of the work in the wider social and human science community.

Such interdisciplinary achievements are of great importance not only because of the significance of the knowledge that has resulted from them but also because of the very real difficulties that almost all academic institutions face in stimulating such cooperative intellectual endeavours. There is at least a possibility that a more careful examination of their emergence and functioning might provide some understandings of the processes that are involved in both the challenging and erosion of traditional disciplinary boundaries.

Relating to a Wider World

As new organizations, business schools have had to positively create their relationships with the wider world. This can be far from an easy task.

Consider the dilemmas facing a newly created London Business School. It had been created because of the perceived managerial inadequacies of the business community in which it had to operate. As if to reinforce the accuracy of that judgement, initially the major customers of its executive programmes were the nationalized industries that had long championed modern knowledge-based approaches to management and had had an impressive track record of investing in education and training. They were joined by the older imperial trading companies that also had a history of taking training and development seriously, particularly in the days before modern communication technologies when their overseas representatives had to adopt the corporate mindset when faced with problems and crises in distant parts. But the interest of those parts of British industry that most needed the skills and knowledge of the new institution was initially very small. It had to be slowly created on the basis of experience and reputation – a task that continues to this day. Having to invest in the creation of a network of relationships can be an enabling thing to do, however. Business schools have had to take the cultivation of a wide range of contacts very seriously. Initially these were for clients for executive education and employers for their graduates but over time there started to emerge an interest in locating research partners and benefactors who could enable the development of the school in ways that current funding regimes would not allow. Business schools have had to constitute themselves as open, listening and responsive institutions.

Of course wider involvements in research and knowledge creation can create patterns of dependency that can impinge on the academic freedom of the faculty. That indeed has happened, but much more so at the stand-alone business schools than at those embedded in wider university settings. So in the United Kingdom, while the stand-alone institutions have not invested in critical scholarship, those business schools that are part of a university most certainly have. Indeed, as we shall discuss later, a prolific and quite distinguished tradition of such research has emerged, incorporating political economy and critical sociology into managerial understandings. The university-based business schools also have tended to be less involved in the creation of managerial fashions and fads, be they in accounting, organizational development or strategic thinking and practice. This suggests that although there are not inevitable outcomes to the creation and management of external relationships, some notion of balance is important. The protection of independent judgement is vital. I am convinced that being embedded in a wider university setting is beneficial for the creation of new managerial knowledges because it ensures a greater independence of mind and might enable a longer time perspective to be adopted in the research process.

Despite the dangers, I think that the wider university authorities have much to learn from business schools in the area of the management of external relationships. Often dependent only on the support of the State, many higher educational institutions have had a relatively isolated existence. But almost everywhere there are now pressures for change. Whether these are of a financial nature or are calls for wider accountability, universities are being asked to behave in ways that have become part of the everyday life of business schools. If only to learn what not to do and what is difficult to achieve, the experiences of academic business institutions are likely to be of value.

Other achievements of the modern business school could be enumerated. They have had a very positive role to play in the area of instruction, in experimenting with new approaches to teaching, in creating new administrative structures and in investing in the professionalization of the administrative cadre of the school. But the above examples should be sufficiently illustrative of the innovative capacity of business studies units. Rather than continuing with such a discussion, I prefer to focus on one topic of particular significance, namely some of the issues at stake in moving to a more interdisciplinary intellectual environment.

STRIVING FOR A MORE INTERDISCIPLINARY MODE OF ORGANIZING

The power of academic disciplines is widely known. Although they have been created across time, once in place, they seemingly have a power of their own, if not actively policing their boundaries, investing in mechanisms and practices that serve to maintain an element of autonomy. Departmental structures, journals, review processes, career ladders and the current modes of organizing academic dialogue and interchange all tend to reinforce the power of the established disciplines. Although they were often created in quite complex ways, once in place, they have proved to be very resilient to change. In the vast majority of cases interdisciplinarity has remained an ideal to be achieved rather than a readily obtainable state of the world.

So, for example, the collegiate form of organization of Oxford and Cambridge should have provided a facilitative environment for the generation of interdisciplinary linkages and bodies of knowledge. But in the main it has not. Although people from a wide variety of disciplinary backgrounds are brought together in the common room and over the dinner table, social constraints on acceptable modes of conversation have tended to restrict the creation of new intellectual ties. Certainly in times past it was not deemed to be desirable or indeed socially acceptable to

engage in discussion about work-related matters. That was the behaviour of the bore rather than the intellectual dilettante. But in all probability more than such social constraints have been involved. Even at the London School of Economics, an institution that has not historically attached so much importance to social considerations, a record of interdisciplinary collaboration failed to emerge, at least until very recent times. Despite very close physical proximity, the disciplines have maintained their autonomy. Of all places, it should have been the London School of Economics that gave rise to an interdisciplinary approach to history, bringing together psychological and sociological understandings to the understanding of the historical record. But that did not happen. History has remained a relatively uncontaminated subject. Even in the case of economic history, the archive holds more cases of conflict and disagreement than cooperation and collaboration.

Yet everyone knows that the world is not so divided. Indeed, if anything, it gets ever less so. There are indeed more and more calls for interdisciplinary understandings of the complex problems that are emerging in the organizational and social world.

As I have already implied, business schools have had some degree of success, albeit far from complete, in moving in this direction. Distinct new directions of inquiry have emerged in a relatively short period of time. Different lights have been cast on very real sets of issues and problems in the areas of accounting, finance, organizational decision processes, the creation of cultures of consumption and the very pressures inducing the expansion of the organizational world.

A desire to create such an ethos around the issues of management stimulated the adoption of an innovative framework for the reintroduction of business and management studies to the London School of Economics and Political Science in the early 1990s. Aware that earlier attempts had petered away most likely because of concerns about the academic integrity of the research being undertaken and faced by the failure of a more recent attempt to re-establish the subject, appeals were made to the very successful organizational arrangements that had underpinned the University of Chicago's 'committee' system. With existing faculty at the London School of Economics being doubtful about the intellectual ability of people likely to be appointed to any new initiative in the business and management area, the more indirect approach of that committee system had a very real appeal. In the case of the early influential days of units like the Committees on Social Thought, New Nations and Mathematical Biology – all units that changed the intellectual landscape – faculty assigned to a committee had also to hold a position in an existing discipline. Complex though it may be, this dual affiliation created the basis for the establishment of a degree of trust

in the academic integrity of the appointments being made in the new more interdisciplinary area. Certainly this arrangement was deemed to be acceptable to the wider faculty of the London School of Economics and Political Science and resulted in the establishment of its Interdisciplinary Institute of Management. That, in turn, has provided the basis for the creation of a new Department of Management on the same basis as other subjects.

Such new arrangements are being appealed to increasingly, with business or management subjects often playing the role of a catalyst. In a number of institutions the study of finance, for instance, is now being organized around the bringing together of economists, finance specialists, mathematicians and sometimes physicists. Investigations of corporate governance structures and processes are moving in a similar direction, albeit that these often adopt too exclusively an economic orientation. Law, economics and finance are starting to explore their linkages. The Stockholm-based Scandinavian Consortium for Organizational Research powerfully illustrates how such an approach can work in the less economically oriented social sciences. Bringing together sociologists, historians, political scientists, anthropologists and others, it has resulted in an amazingly rich environment for the better understanding of contemporary processes of organizing. The mixing of intellectual frameworks has eliminated any tendency to view managerial practices on their own terms and on the basis of their own pretensions. Rather consideration has had to be given to their processes of emergence, their conditions of possibility and their actual modes of functioning. A detached but inquisitive eye was able to be cast on the managerial terrain, an approach that is still producing surprising and important insights.

Such approaches to the organization of inquiry are growing in significance throughout the academy. Quite explicitly implicating the study of business processes in a wider context, the establishment of the 'D' – for Design – School at Stanford University is particularly exciting. Bringing together faculty from the business school, engineering, psychology, the humanities and others into a new institution committed to developing a human approach to all aspects of design in the modern world, the D School provides a space, both physical and intellectual, for collaboration and innovation. It is also a space and an institution that is open to a wider world, quite consciously recognizing the salience of more pragmatic and experiential knowledge and wanting to incorporate it and its practitioners into the mainstream functioning of the School. The establishment of the D School and that of an increasing number of similar institutions, particularly in the sciences, is an explicit recognition that today's intellectual organization of knowledge can only provide a very partial basis for inquiring into today's problems, let alone those of tomorrow.

Acutely conscious of the need to move beyond existing subject boundaries, trying to stimulate greater collaboration across disciplines and aware of the need to relate to a wider set of interests, a number of aspects of the above agendas entered into the development of the Saïd Business School at the University of Oxford. Its newness was very facilitative in this respect. A faculty had largely to be established. While students and colleagues had quite clear expectations of what a business school required, there nevertheless were possibilities for reflecting upon and learning from the experiences of others. And the youth of the institution also provided a basis for some modest innovation. In a number of subject areas an explicit attempt was made to recruit a more diverse faculty. In the area of strategy for instance, a historian is now working with a sociologist, colleagues with a background in organizational behaviour and one with more philosophical interests. Perhaps more significantly, in the areas outside economics and finance an attempt was made to recruit faculty who might share an interest in the understanding of the functioning of organizational processes and practices in their particular area of expertise. So across the subjects of accounting, marketing, operations management, organizational behaviour and strategy there is a faculty with a similar intellectual orientation. While business schools had traditionally been good at developing analytical schemas and bodies of knowledge that could facilitate decision making, they had invested much less in understanding and helping to improve the basis for organizational action – for actually doing things. This was an area where economic frameworks were of limited value as economics as a discipline had invested very little effort in delineating a theory of economic action or praxis. The Saïd Business School now has the capability to move forward in this area, although it is far too early to know whether it will be able to realize the potential that has been created.

Another factor influencing the intellectual design of the School was the view that really effective management was management that related to and was sympathetic to the context in which it operated. But traditionally business schools had been very weak in understanding the varying business contexts. They had tended to emphasize and propagate a more abstract and generalized version of managerialism – a form of management that was claimed to be, whether implicitly or explicitly, appropriate in all circumstances. It was my view that this had the potential to harm rather than improve the organizations in which it was applied. So I sought to create an institution that invested in understandings of selective business contexts and their relevance for the application of the managerial art. To this end, the Saïd Business School started to create a series of interdisciplinary applied centres around its academic core. A process that hopefully is still

under way as financing emerges, the strategy has already resulted in centres exploring the management of professional service firms, social entrepreneurship, the management of major projects and the future scientific and technological environment of business. Others are on the drawing board. In all cases, the aim is to create centres of expertise in their particular arenas that draw on both the resources of the academic core and a network of relations in the wider world. Both the Oxford School and business schools more generally still have a long way to go in breaking down disciplinary boundaries and simultaneously establishing links with a wider knowledge community. But these are processes that have started and some of the early initiatives certainly offer insights to the university community at large.

SOME MORE PROBLEMATIC ISSUES

Despite the very real contributions which business schools have made to the reconfiguration of academic practices, they are far from being unproblematic institutions. Positioned at the boundary of the academic world, they are often subject to a multitude of tensions and conflicts, and some at least seem to live with an ever present temptation to retreat from academia, crossing directly into the world of business itself. Although the tensions to which they are subject can often be enabling, they also can result in the more radical transformation of agendas and aims.

The intellectual culture of some business schools can be rather minimally developed, a phenomenon that is more frequently observed in stand-alone institutions that do not have to live with the everyday expectations that result from being embedded in a wider university setting. When this happens, what should be means to a greater intellectual end start to become objectives in their own right. Publication in prestigious outlets becomes more important than the contents. Faculty talk about their 'hits' in 'A' journals; bonuses can be paid for publications in those journals that count in published rankings or in official research assessments; a culture of publication counting starts to supplant one of reading and dialogue – even the expectations for promotion can be stated in such numerical form. Less risky research strategies start to be adopted, with faculty engaging in projects that they know will be published rather than ones that might be. Research in the current academic mainstream tends to be favoured, making such institutions into places that are more reflective of what is known rather than being centres for the creation of new knowledge. Even hierarchies of legitimate knowledge start to emerge, with economics tending to be nearer the top and sociology and anthropology towards the bottom. An exaggerated emphasis is put on research methods so that the research conducted at least

has a superficial legitimacy; on occasions doctoral programmes devote more attention to methodology courses than more substantive discipline-based ones. Although such institutions obviously have no plans to change their academic culture, step by step a very different approach to knowledge and intellectual values can emerge. Although a much more instrumental attitude to research can develop, paradoxically it is often one that is less conducive to creating the insights which such institutions publicly articulate as one of their most important rationales.

Some of the pressures for conformity and the investment in more explicit indicators of academic endeavour stem from a deep sense of intellectual insecurity that pervades many business schools, particularly those that are not embedded in a wider university context. Both internally and in the world at large there is still an expectation that they should maintain a set of academic values and modes of operation, despite the other very different pressures to which they have to respond. For a long time I have seen business schools as institutions that are constantly looking over their shoulders, so to speak, seemingly conscious of their potential inferiority and as if they constantly need to be aware of what others are thinking of them. Of course having to operate in a setting where public rankings and accreditations are important reinforces such a tendency, but I also think that more is at stake. The equivocality which many such institutions see themselves as having in the wider academic community exerts a constant pressure on them to overtly demonstrate their commitment to a set of values that in practice are much challenged and tempered.

Colleagues from more conventional academic settings are quick to notice the very different intellectual atmosphere where it has emerged, although it should be stated that there is no inevitability about such a pattern of development, even in stand-alone institutions. The outstanding example of the Copenhagen Business School is a testament to that. Standing at the forefront of international business schools that have invested heavily and seriously in research, it is one of the relatively small numbers of schools that have made a lasting impact on the world of knowledge.

When intellectual values do decline, it is often the result of the rise of both an institutional and a personal instrumentality. Operating so close to business, there are very real temptations to become training and management development businesses rather than more mediating knowledge institutions. There is absolutely nothing necessarily wrong with this. Such a change could provide a basis for a very successful commercial enterprise, although it is interesting to note that those schools that are so tempted are almost invariably reluctant to explicitly announce the change, preferring instead to hold onto the trappings of an academic legitimacy. Perhaps the Swiss-based IMD is tending towards being one exception to this rule.

Similar pressures operate at the personal level. A lot of money can flow around some business schools, and faculty can constantly be tempted to become full-time consultants or executive education teachers, albeit whilst trying to maintain their academic positions. In such an environment, it is inevitable that some succumb to the financial temptations. Junior faculty of very considerable promise become wealthy whilst failing to gain tenure. Senior faculty start to develop an interest in securing that one academic publication a year that suggests that they are still research active, carefully selecting areas for inquiry that increase the chance of this being achieved. Add to this the fact that many other members of the faculty have a more instrumental approach to intellectual inquiry than is the case in other academic institutions. There are those who prioritize the establishment of their own consultancies before their academic reputation, those who focus on the packaging rather than the production of knowledge, prioritizing its marketability in consultancy and educational contexts, and even those who maintain an ambiguous relationship with the abstracting and conceptualizing tendencies that characterize the academic world. All this certainly makes for a diverse environment, although it is also one that can easily adopt a quite anti-intellectual stance.

CONCLUSION

Business schools are quite delicate institutions, bringing together, as they do, a series of very different interests and attributes. While it is that diversity that can create the basis for some of their more positive and forward looking aspects, equally it is a diversity that can quite easily dissipate the creative potential that is implicit within them. Business schools certainly need very careful management if they are to realize their knowledge potential and, in my view, a proximity to other centres of learning and academic advancement facilitate rather than constrain the achievement of their fundamental objectives in the longer term. I certainly read this as suggesting that the relationship between such institutions and a wider university is capable of being mutually productive if it is gently nurtured and sustained.

Given their rapid pace of development, business schools have had to invest a great deal in processes of internal learning and adaptation. It is these that should be of interest to the wider university community in times of changing expectations. The ways which business schools have found to inform themselves of the interests of external parties, the creation of innovative internal cultures, their openness to the interests and demands of students and the approaches they have developed to the creation of new more

interdisciplinary knowledges are all of very real relevance to the university sector as a whole. Having an internal source of information and advice on managerial issues should also be of value at a time when there are multitudes of external parties suggesting the latest fashionable schemas for the reform of the university as an institution. The ability to confront conformist pressures with real evidence, rational argument and positive experience can be of great importance.

But equally business schools can gain so much from being a part of a wider intellectual and institutional whole. At a time when knowledge is changing rapidly and when even corporate interests in it are developing to include not only knowledge that gives insights into the internal processes of the firm but also that illuminates its external social, political and technological settings, the relationship which a business school can have to a host university can become one of strategic significance. While we are unlikely to witness the demise of the stand-alone business school, I think that we are likely to see its embedding in a wider configuration of alliances with more knowledge-intensive institutions. That potential for synergy between the business and the wider academic worlds is one that should increasingly mobilize the efforts both of all types of business schools and of universities as a whole.

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PART II

Models

5. Bologna and business education: far from a model, just a process for a while . . .

Nicolas Mottis

INTRODUCTION

One of the drivers of university reforms in Europe over the last decade is the need for a better harmonization of degrees and pedagogical systems. Launched by governments with a clear political objective – improve the competitiveness of Europe on a world scale – the European harmonization process structured by European education ministers’ summits and formal declarations (Paris, Bologna, Prague, Berlin, Bergen) every other year has fostered many changes in most countries. It is widely known today as the Bologna process.

It is striking to observe how other sector regulation mechanisms, like accreditations (Hedmo, 2004) and rankings (Wedlin, 2004), also gained momentum over the same period of time. They have existed for a long time at national levels in many countries, but what has changed recently is their capacity to cross the borders and address issues and characteristics of institutions stemming from hugely different academic traditions. Leading players – like the American Association of Collegiate Schools of Business (AACSB) or the European Foundation for Management Development (EFMD) – have very actively promoted quality improvement approaches and recognition labels that end up significantly influencing decisions made by institutions in terms of recruitment policies of students and faculty, curriculum design or governance for example. The same is true with media via rankings, some of which pretend now to compare programs from incredibly different countries.

When analyzed carefully in practice, it is obvious that these three phenomena – Bologna process, accreditation and ranking – leave management education institutions much room to maneuver. A thesis of this chapter is that underlying factors, like the internationalization of students and faculty recruitments or the pressure on public spending, play an equally significant

role to explain the structural evolution of academic institutions. Hence, although accreditations, rankings and the Bologna process do contribute to an upgrade in the management of European higher education institutions, because of all the cross-country differences in the adaptation to these changes and very diverse academic traditions, a harmonized European academic landscape is probably not for tomorrow (see for example Bradshaw, 2006 for a debate related to this).

The sources used for writing this chapter stem from different origins: a literature review, the operational involvement of the author as professor and dean of a leading European business school and his involvement in many AACSB and EFMD activities as speaker, advisor or peer reviewer in many accreditation visits, and board member of the AACSB accreditation committee which had to process dozens of files covering all parts of the world.

In this landscape, the case of master's level degrees in business education – often called MBAs but not always – is a cornerstone of these evolutions. This segment is currently experiencing many structural changes and that is where the international interfaces certainly have a major impact due, for example, to the fact that many leading employers recruit their high potentials at this level, or that the increasing international mobility of bachelor's degree students (or their equivalent) creates new opportunities for institutions.

Focusing on this segment, section 1 describes the starting point of these European reforms in three countries, the UK, Germany and France, and compares them to a 'typical' American model, which, although it includes some real diversity and whose existence is even debatable (Kipping et al., 2004; Mazza et al., 2005), still remains a mental reference for most players in the field. Section 2 focuses on the characteristics of the Bologna process. Section 3 presents the current evolutions observable in the four countries studied and section 4 discusses the strategic dilemma many European institutions are currently facing.

1. HARMONIZE . . . BUT FROM VERY DIFFERENT STARTING POINTS

Academic traditions vary considerably from one country to another in Europe. For example, the way the selection of students is organized in a French Grande Ecole has little to do with what is done in a typical German university. In the first case, national exams provide a very competitive selection process at the entrance of each institution according to a pretty rigid national hierarchy, and graduation a few years later is almost a done deal

for admitted students; in the second case, though universities had until recently limited control over their admissions, continuing students' evaluations put a strong permanent pressure on their performance and de facto generate a selective ranking through the marks obtained.

Similar differences exist for factors such as professional experiences, overseas studies, specialization, job placements, and so on. The picture is to some extent much simpler on the world scene, where the dominant mental model for management education is structured around a three-stage architecture including a bachelor's degree, an MBA and a PhD. As academic boundaries between countries tend to vanish, a key question is what strategy national traditional systems should adopt vis-à-vis this BA-MBA-PhD international framework. Before addressing this issue in section 4, it is worth looking at the starting points (Figure 5.1) in three large European countries, the UK, Germany and France. What is seen as the American model plays a major role in influencing what is happening on the higher education scene since World War II (Üsdiken, 2004), and will be kept as a reference point for these three examples. In particular, the concept of MBA – Master's degree in Business Administration – designed in the United States at the beginning of the twentieth century and largely promoted after World War II thanks to the Allies' victory and the success of American multinationals, is still largely structuring the mindset of academics willing to reform their curriculum, or of potential students wishing to become recognized managers. Considering the huge diversity of these environments, the focus is put on elite institutions in each country.

To make it simple, what we would refer to as the American model for the master's level of education in management is called MBA, Master's in Business Administration. Although some institutions do offer Masters of

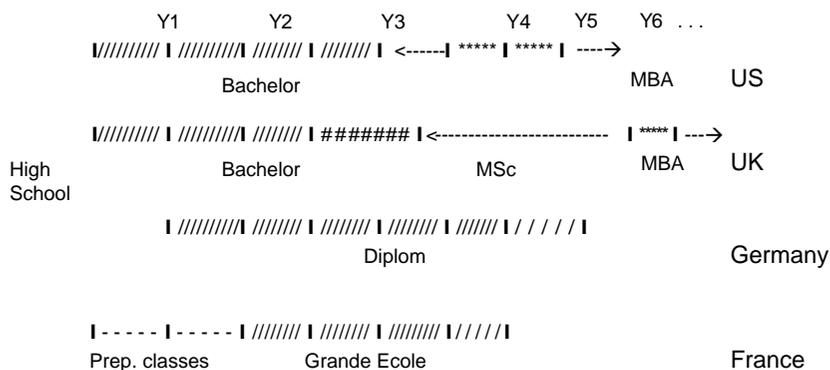


Figure 5.1 Different starting points

Science in Management (MSc), they are rare and most of those which did have recently transformed these degrees into MBAs (Thunderbird or Georgia Tech recently for example). By and large, there is only one master's level degree and that is the MBA, which is predominantly a two-year full-time program. In spite of all the changes that have occurred recently, notably the explosion of part-time and executive MBAs, the elite programme in top institutions like Harvard, Wharton, Stanford, Chicago and others, remains this two-year full-time MBA. These elite programs have a long history; most were created before WWII, and represent a widely recognized stage in a high potential career path. More than half of senior US executives possessing an MBA degree come from the top ten schools only (Lavelle, 2006). In this context, bachelor's degrees usually take four intensive years and provide the robust academic fundamentals that most students do not always have upon graduation from high school. Bachelor's degree and MBA programs are largely disconnected, leading to a sequential mode of education: professional experience is not part of the curriculum; it is done before and after the program, not during it. Most students quit the university after their bachelor's study to go and work in companies. Some come back a few years later to do an MBA. These MBA programs recruit bachelors from very different backgrounds: business, liberal arts, science, law, and so on, and start their business education from scratch.

The British system is quite different, usually starting with a three-year bachelor's degree. MBAs have developed much later than in the US; the first business schools such as the London Business School or Manchester Business School were created in the 1960s (Tiratsoo, 2004) and were not part of the traditional system to educate elite managers. These elite institutions comprise a select group of colleges (Oxford, Cambridge . . .) graduating students in liberal arts or scientific disciplines (literature, history, physics . . .) and letting them be technically trained in business by the companies they would work for at a relatively young age (21–22). Since the late 1970s, management education has become a real industry in the UK with its 150 MBAs and its Association of MBAs (AMBA) created in 1968. The number of MBA graduates jumped from 776 in 1976 to 10 889 in 2000. They recruit massively overseas: in 2002, nearly three quarters of all the full-time British MBAs came from abroad (Business Schools Advisory Group, 2002). MBA students are on average older, 30 years old versus 28 in the US (Houdayer and Shenton, 2005). As most students complete their bachelor's early and start their MBA later, they have de facto a much longer professional experience than in the US (Armstrong, 2005).

In Germany the concept of MBA is not part of the traditional higher education framework. It is still viewed as an American type of applied education that has nothing to do with the academic rigor of traditional

universities, even though some private schools (mostly seen as second-class institutions . . .) created some rather competitive programs of this kind years ago. The M-level is based upon a single degree – the ‘diplom’ – which would typically take 8 to 12 semesters to complete after high school. This degree offers classical, often purely theoretical, education that is common in traditional research universities still very much influenced by the Humboldt model (Erichsen, 2002; Kieser, 2004). No intermediate degree is granted after three years of higher education. In this traditional framework many students do work in parallel and develop a real maturity and robust professional skills. As a consequence, they sometimes take many years to complete their degree, well beyond the ‘normal’ five years. Interestingly, this professional experience is absolutely not monitored by universities (no tutoring by faculty, no credit given for the degree).

The French situation is intermediate. The higher education system is dual, with large public universities on one side, and public or private business schools (*Grandes Ecoles*) on the other side. The latter dominate the scene for the training of elite managers. MBAs have existed for many years within the *Grandes Ecoles* and university system but with a very limited legitimacy. In most cases their reputation is still far behind that of the ‘core’ degree, that is of the ‘historical’ *Grandes Ecoles*, which recruit the best students of every generation through a very competitive national exam after two (or often three) years of intensive preparatory classes. The dominant master’s degree is the *Grande Ecole* degree. It provides an education both theoretical, building upon the fundamentals (mathematics, literature, philosophy, history, and so on) of the ‘classes préparatoires’, and applied, notably thanks to strong links with industry and the involvement of many adjunct faculty occupying senior positions there. International and professional experiences are part of the degree requirements and are closely monitored by the schools. They offer many internship and placement opportunities, complemented by faculty coaching, and maintain a large portfolio of exchange and double degree agreements. This leads to a parallel and integrated model of education: professional experience is part of the system and the school monitors its interactions with the more classical academic dimension. This peculiar approach goes back to the roots of these institutions, created during the French revolution and the Napoleonic era to train the young elite the nation needed to fight its wars and run its empire, and who had to be both intellectually bright and immediately operational. As in Germany, the tradition is that of long educational tracks (a minimum of five years to get a master’s degree) with a broad scope of basic knowledge. ‘Classes préparatoires’ students do not get a degree. Once students have been admitted to a *Grande Ecole*, they have to continue until the end of the M-level to get their first official degree. Since the 1980s, *Grandes*

Table 5.1 Management education models: a comparison

	France	Germany	UK	US
Intermediate degree	None	None	Bachelor's degree (3yrs)	Bachelor's degree (4yrs)
Type of M-level degree	Grande Ecole degree	Diplom Kaufmann/ Kauf frau	MBA	MBA
Structure of the curriculum	Preparatory classes (2 or 3yrs) + Grande Ecole (4yrs)	Integrated Diplom (5 to 6yrs) with sub-parts	1 year program (after bachelor's)	2-year program (after bachelor's)
Average age upon graduation	24–25	24–25	>30	27–28
Acquisition mode of professional experience	Parallel and Integrated (monitored by the school)	Parallel and Independent (not monitored by the university)	Sequential (realized before joining the MBA program)	Sequential (realized before joining the MBA program)
Professional experience upon graduation	2 years	1–2 years	7–8 years	3–4 years
International experience	Mandatory (monitored by the school)	Optional (partly monitored by the university)	Optional (very limited in practice)	Optional (monitored by the school)

Ecoles have usually expanded around the core degree to create specialized master's, executive education programs, classical MBAs and so on.

The comparative Table 5.1 summarizes these differences and highlights the acquisition mode of professional experience by graduates.

Even though some authors seriously question the value of prior work experience¹ for academic achievement or selection of MBA students (Dreher and Ryan, 2004), this parameter keeps structuring many debates on the evolution of programs and the answers academic institutions can give to meet employers' needs. In other words, the duration of professional experience itself is not a sufficient parameter to capture its pedagogical value. What matters probably most is its mode of acquisition and its capitalization process.

In 2004, 5 per cent of MBA graduates had less than six months of professional experience; that figure went up to 7 per cent in 2005 (GMAC, 2004; 2005). However, beyond declarations (Knight, 2006) no precise data are available today on the experience profile of MBA students: statistics published by organizations like GMAC do not distinguish between part-time and full-time MBAs, between top tier and second tier schools. Nevertheless, current debates around MBAs always spot the same trends: difficulty in recruiting for full-time programs and interest from the younger profile, who often have a real academic potential and face a lower opportunity cost interrupting their career early to go back to school. This age parameter also has an impact on what is happening in Europe today.

2. THE BOLOGNA PROCESS AND SOME EVOLUTIONS IN PROGRESS

The European harmonization effort of higher education is a challenging process that is still in progress (Commission Européenne, 2005; 2006; Enders, 2002). Although major improvements have already been introduced, there is undoubtedly a long way to go before the initial political objectives behind these moves are achieved.

Surprisingly, Bologna is sometimes referred to as an 'Accord' or a 'Model'. These formulations are in fact quite misleading as a careful scrutiny of the key steps of the last decade does not allow us to identify clear and precise settings or models that European institutions should follow. There is still huge room to maneuver at the national level to interpret the general guidelines and principles defined during the successive political summits that have set the pace almost every other year since 1998.

In the 1990s the analysis which led to the launch of this harmonization process started from the identification of the many barriers Europe had to struggle with: diversity and complexity of the curricula and degree structures across countries; difficulty in comparing institutions for potential employers looking for a skilled and competent labor force; lack of labor force mobility. At the same time some elements of convergence appeared: pressure for shorter studies in some countries; adoption of systems for the transfer and accumulation of academic credits (ECTS – European Credit Transfer System); increased autonomy given to universities; emergence of initiatives for quality control and evaluation.

These initial thoughts were formalized through a political initiative of several European ministers of education which led to the Sorbonne Declaration signed by four countries (France, Germany, Italy, United Kingdom) on 25 May, 1998 in Paris. This declaration called for an 'open

European area for higher learning' and set several directions for future action (credit system, common frame for qualifications, quality assurance).

The next big move took place a year later. The spectrum was considerably broadened and made precise with the signature of the Bologna Declaration by 29 countries on 19 June, 1999. The four initial signatories were joined by 25 other European countries (EU or non-EU) desiring to be part of this process. This declaration had the same main primary objective: to create an 'open European higher education area' by 2010. The structural objectives identified included: to foster cooperation between higher education institutions; to facilitate staff, researcher and student mobility; to increase both the competitiveness of Europeans in the world labor market (employability) and the attractiveness of European higher education in the world (competitiveness) taking full respect for the diversity of cultures, languages and national education systems.

The convergence process relied upon different operational measures like the adoption of a system of easily readable and comparable degrees (through the diploma supplement), based on two main cycles, undergraduate (lasting *at least* three years and referred to as L-level) and graduate (referred to as M-level).² The L-level degree is relevant to the labor market. It also comprises the establishment of a credit transfer and accumulation system, more cooperation in quality assurance, evaluation and accreditation (development of comparable criteria and methodologies), and the promotion of the European dimension in higher education (curricular development, inter-institutional cooperation, and so on).

The following summit in Prague two years later (18–19 May, 2001) involved even more countries (32 signatories) and reviewed the major trends: insufficient attention for teachers' mobility; visible progress of quality assurance but an unclear relationship between quality assurance and accreditation; strong trend towards three-year bachelor's programs; but no similar effort towards convergence at the postgraduate level. Some progress made was already visible, notably the implementation of the LMD structure in an increasing number of countries; the unanimous support for increased mobility, recognition and transparency of qualifications; the attention given to the employability of graduates and the introduction of professional-oriented degrees (L, M); and the spreading of an ECTS-compatible credit system. Last but not least, issues of quality assurance systems and accreditation appeared to be on the public agendas, and various plans aiming at attracting non-European students had been forged. Hence, the three major Bologna goals were confirmed and future directions identified: increase the readability and the comparability of higher degrees (especially of the M-level); ensure high standards by developing quality assurance mechanisms; increase 'the attractiveness and credibility of

European higher education at the global level', notably through the development of modules, courses and curricula with 'European content', orientation and organization.

At the Berlin summit (17–18 September, 2003), the 33 signatories (one more) reviewed the progresses made: increase of mobility figures; generalization of the ECTS as a basis for the national credit systems; development of additional modules, courses and curricula with 'European content'. In Berlin, ministers also decided to accelerate the process thanks to the definition of short-term objectives to be achieved by the signatories in 2005 (Commission Européenne, 2006): having started to implement quality assurance systems, and having adopted a 'two-cycle system', deliver a 'diploma supplement'³ to every graduate at no cost and in a widely spoken language.

The following conference in Bergen in May 2005 stayed in line with these points:

The Ministers of Higher Education of the Bologna Signatory States adopted a communiqué taking note of progress made so far and confirming the priorities defined at the Berlin Meeting. As further challenges and priorities, Ministers identified: higher education and research, the social dimension, mobility and the attractiveness of EHEA⁴ and cooperation with other parts of the world (Commission Européenne, 2006).

As of today the document preparing the next step, London in 2007, basically reaffirms the objectives of this Bologna process. It now involves 45 countries and influences many others like Australia which is a major provider of higher education internationally attracting more overseas students than France with a fully market-oriented approach (Davis, 2006; Slattery, 2006).

It is noticeable that if some elements like the mobility of students and the use of ECTS made huge progress over the last decade, others like quality assurance systems or curriculum reforms faced many more hurdles. In particular, in terms of curriculum design, the more the Bologna process advances the fuzzier it seems to become: the LMD approach now refers to a 'two-cycle system' which says very little about the precise structure of the M-level and leaves a lot of flexibility to countries coming from diverse trajectories. The '3+2' (3-year L + 2-year M) or '3+1' or '4+1', and so on, are merely nothing more than national interpretations of these Bologna principles. We are still far from a homogenized model in this respect.

The changes that can be observed in the four countries analyzed in this chapter illustrate this diversity. One common characteristic of these four countries is that none of them is experiencing a stabilized environment; they all face structural issues and go through deep changes.

3. A CHANGE PROCESS STRUCTURED BY NATIONAL CONTEXTS

In the US, business education in general and MBAs in particular have recently been the subject of numerous debates and criticisms, the relevance of the education they provide being seen as a key issue (Pfeffer and Fong, 2002; Friga et al., 2003; Bennis and O'Toole, 2005; DeAngelo et al., 2005).

Over the last decade, MBAs have evolved considerably. The traditional two-year full-time program has faced rising competition from new part-time formats, whether they are called 'part-time MBAs' for similar target populations (25–35 years old) or 'executive MBAs' for more senior participants (30–45 years old). These programs have been launched in almost every major business school. Whereas the full-time MBA market is mature and saturated in most countries, they represent a booming market (Bradshaw, 2005; Lavelle et al., 2005).

One may argue that these changes in MBAs were simply generated by the negative effects of the Internet bubble burst of the early 2000s. As economic recoveries do not really seem to reverse the trend, some structural factors are also probably at stake. Among them, the need to recruit real academic potentials, who would not come back at 27 to do an MBA, is critical. Career management of high potentials today puts a much higher pressure on young executives: to some extent, someone who is spotted as a high potential at 27 does not need to do an MBA. If they really need some business education, an executive MBA, allowing them to keep their position, a couple of years later will be the perfect match. The slogans of Harvard, 'If you have the skills why wait?' or Stanford, 'We want people who come for a learning experience not for a social experience', illustrate this evolution. Their traditional full-time MBAs put more emphasis on academic potential than on work experience already acquired, which is probably a good bet to maintain the quality of their recruitment.

Another factor is the very high opportunity cost (addition of tuition fees, salary loss and cost of living) of doing an MBA at 30. The risk for business schools would be to recruit first and foremost students who can afford it instead of good academic potentials. The two dimensions are not necessarily strictly correlated. This tension has become obvious for many institutions, including in the top tier, and the temptation is great for program directors to lower academic requirements to cope with the economic pressure they have to stand.

More and more firms complain about the price to quality ratio of MBAs versus bachelors. In many cases, bachelors tend to have better scores than MBAs in academic courses (see the example of the Wharton School, Miller and Shachtman, 2002). Their expectations in terms of salary and position

in companies are much lower than those of their fellow MBAs, and firms appreciate their flexibility and the possibility to educate them to their own methods and procedures. In other words, the older you are, the higher your expectations; the younger, the better is your 'marketability'. Finally, some demographic issues, such as the balance between men and women, become more and more important. In MBAs targeting a 28–35 age range population, a mechanical selection bias against women occurs (Zupan, 2005). They very often give birth at this age, which makes it more difficult for them to combine personal and professional lives. An easy way to reduce this imbalance is to recruit younger students.

Interestingly, this dynamic of MBAs is creating opportunities for European institutions as the boundaries of the sector are redefined. But there are still many differences across countries in Europe.

The British Iceberg Syndrome

The UK is probably the country experiencing the least structural changes. It tends to stick to the 'old model': an MBA is a post-professional experience degree for participants around 30 years old or above. The first stages (L and M) of higher education are pretty theoretical and rather short compared to continental European countries such as France or Germany. In the Bologna jargon it would have a '3+1+1' model: a 3-year L + 1-year M + 1-year M, the first M being a 'Master of Science in Management' accessible straight after the bachelor's degree and the second M being the MBA putting a big stress on its 'post-experience' dimension.

In the UK, L and M students do not have any professional experience and the training philosophy remains fundamentally sequential: one studies first, then leaves university for 'real life experiences' and may come back for an MBA years later. Facing difficulties to recruit students in the 'old' traditional full-time MBAs these days, a clearer segmentation may need to be adopted between MBAs (below 30) and executive MBAs (over 30). Some major institutions such as the London Business School have recently adopted this approach. As in the US, part-time MBAs represent the majority of the system, with a kind of 'iceberg syndrome': full-time MBAs are still used as flagships by institutions notably to score highly in rankings and recruit overseas, whereas volumes (and profits) are realized in part-time programs.

The German Supertanker

In Germany, the bachelor/master system has been introduced in many universities of applied science, 'Fachhochschulen', often as a way to compete

against traditional universities and to gain access to M-level education (Enders, 2002). Nevertheless, even though the pressure is obviously mounting in favor of a more market-oriented type of regulation (Erichsen, 2002), the rhythm of change has been noticeably much slower in traditional research universities. Leading business education universities, like Mannheim, are just beginning to introduce their first bachelor's degree.

Even if the number of MBAs has exploded recently, this is still an emerging market and the implementation of a 'long' bachelor's/master's system may not really leave a lot of space for new full-time classical two-year MBAs in prestigious institutions. Simultaneously, the diffusion of an MBA-style education in large companies and the efforts made by research universities to propose more business-oriented programs may open wide avenues for the creation of part-time and executive MBAs.

Just as in the UK, professional experience is still not integrated into the curriculum, but the track to get an M-level degree is longer, requires the acquisition of a broad and robust knowledge base and, more importantly, is highly valued by society and employers. A major issue for German universities is the future acceptance of new bachelors by the job market.

The French Five-legged Sheep

In France, the situation is as usual hybrid (Kipping et al., 2004). MBAs have existed for many years. Grandes Ecoles have expanded around their core 'Grande Ecole degree' to create one-year specialized master's, classical MBAs, executive MBAs, Advanced Management Programs, and so on. The reputation of French MBAs, mostly traditional and inspired by the old American model, remains far behind that of the 'historical' Grandes Ecoles and they suffer from the skepticism that has emerged recently in the debates over American business schools.

Over the same period of time, Grandes Ecoles themselves have evolved tremendously, putting more stress on research, on mandatory professional and international experiences for students, the recruitment of international students and faculty, and the diversification of their funding resources to keep up the pace with their international competitors in a context where public funding is diminishing. Today, the convergence between 'new' Grandes Ecoles and full-time MBAs is obvious: their students are older (critical mass around 22–24 years of age) and much more experienced (on average two years of professional experience upon graduation at ESSEC today).

Looking at the Bologna two-cycle system, the situation is ambiguous. Still relying heavily upon the '*classes préparatoires*' system, the vast majority of Grandes Ecoles do not give any degree after the first year of their

programs. In practice, for accreditation or student exchange purposes, they grant a certificate of ‘equivalence to a bachelor’s degree’, but remain very reluctant to ‘cut’ their M-degree into two parts. Considering the efforts they made to be admitted into leading schools, very few students would in fact consider quitting their school after only one year. The intermediate cut promoted in the Bologna process is de facto not relevant in this context.

To sum up what is happening in these countries, one can have a closer look at the evolution of MBAs in leading institutions (Figure 5.2).

Executive MBAs capture a growing portion of high potential candidates at a later age (beyond 30), but even if they contribute to a market extension and meet new needs, they do cannibalize traditional MBAs. Consequently, the reaction of business schools most often turns around three options. First, recruit younger profiles in their traditional two-year programs (Hindo, 2002; 2003; *The Economist*, 2004; Gloeckler, 2006). Second, shorten these programs to reduce the opportunity cost for their potential targets: proposing a one-year format, which only INSEAD had been doing from the beginning, or a 15- or 18-month program with promotional materials putting a big emphasis on the possibility to fast-track, is a popular option. Third, develop part-time MBAs, offering courses in the evening or during weekends, to capture mostly local/regional candidates, as these formats do not suit those who have to travel long distances.

What is probably even more enlightening in order to understand these evolutions is to scratch the surface and identify some hidden agenda of institutions in these countries.

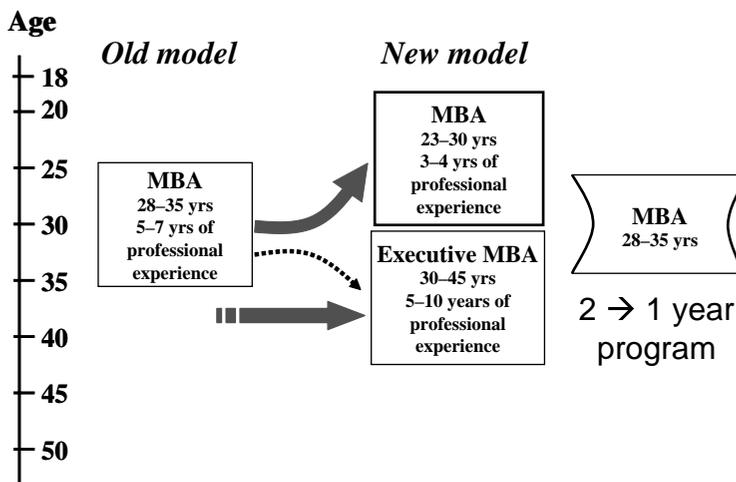


Figure 5.2 *MBA models*

For the UK, beyond the defense of an academic framework clearly distinguishing pre- and post-experience degrees, and trying desperately to reserve the MBA label for mature and solvable participants, the economic agenda is obvious: MBAs are a major source of cash and British business schools have aggressively developed these products to fund their operations in a higher education system that has felt the pressure on public funding long before its European counterparts. The will to preserve its influence and market share is obvious through the defense and promotion of some national rankings and moves like that of AMBA (the Association of MBAs) to start accrediting MScs (!), which is seen as a growing segment while traditional MBAs suffer.

In Germany the reasons are different. As politicians want to reduce the cost and length of study and bring more flexibility into the university system, universities have seized the opportunity to obtain control over levers they had long desired: the right to choose their students or at least the majority of them according to their own criteria (Erichsen, 2002), the opportunity to charge tuition fees and generate locally controllable revenues. Paradoxically, the slow and careful adoption of the bachelor/master framework has probably less to do with the will to join the 'Bologna process' than with national bargaining between universities and regional public authorities.⁵ Being cynical, for example, the introduction of a bachelor's degree is not a way to deliver employable graduates to recruiters but to acquire a tighter control on the entry into the master's programs . . . To some extent, the introduction of international 'standards' is just a byproduct of these national discussions. In this context, absorbed by the transformation of the *Diplom Kaufmann* and the struggle for public funding, players used the MBA segment to offer more applied programs, that are easily readable internationally and that create new streams of 'free' revenues with relatively limited additional fixed costs. The relative positioning of long renovated M and freshly introduced MBAs is still an open question.

This question of institutional positioning is also key in France but at another level. *Grandes Ecoles* always benefited from both an excellent academic reputation and strong links with the business world. The placement of their graduates has never been an issue and their semi-public status has long allowed them to develop alternative sources of revenues (tuition fees, executive education, fund raising). Being not-for-profit organizations and pretty small institutions, they do not look for big volumes. One of the major problems they face is the uniqueness of their model: few outside France understand this strange type of animal! If an international harmonization process is in progress, deciding where to position this animal is a tough question. Designed for inexperienced students, it is clearly not

comparable to British MBAs; it is much more applied than the German *Diplom Kaufmann*, and it has much more robust and larger theoretical antecedents than the American MBA. The debates around the evolution of the M-level degrees in this context fundamentally reveal institutional marketing options. Some institutions left their *Grande Ecole* program aside to bet on what they perceived as a standard MBA, which benefited from extensive marketing efforts to play the role of a Trojan horse, in the Anglo-Saxon media in particular. The objective there is to create a brand awareness vector for international markets. Acknowledging structural trends of the MBA landscape, other institutions upgraded their core ‘*Grande Ecole* degree’ to position it internationally as a Junior or Integrated MBA. In both cases, accreditations (Mottis and Thévenet, 1999; 2003) and rankings played a significant role in the decision. And the Bologna process provided a convenient exogenous music with many potential partitions . . .

Considering these political elements, strategic decisions on the positioning of programs are neither easy to make nor to understand in Europe today.

4. A STRATEGIC DILEMMA FOR INSTITUTIONS: ‘SIMPLY COPY’ OR ‘UPGRADE THE TRADITION’

As European higher education is becoming increasingly competitive, institutions face difficult strategic options and risks. The M-Level type of degree which represents today the most exposed segment to international competition, with its MSc, MBA, and others, is accumulating most of these constraints. Most institutions have to choose between two obvious risks.

The first risk is to compete with a ‘me-too’ product that is a pale copy of well-established MBAs with strong brand names (that is big American business schools in particular). Also observed and deeply criticized in the US (Pfeffer and Fong, 2004), this ‘me-too’ approach usually leaves aside some key assets of the ‘traditional’ system, such as the use of languages other than English, the design of long curricula (more than two years) covering a very broad spectrum of disciplines (sociology, philosophy, history, mathematics, literature, and so on) or mandatory requirements such as professional and international experiences.

The second risk would be to compete with the core of the ‘traditional’ system (that is the *Grande Ecole* degree in France, the *Diplom Kaufmann* in Germany, and so on) and lagging behind because it does not meet well-known and widely understood standards. This strategy is valid only if the visibility of the product can, at least partly, match some structural elements of ‘classical’ MBAs, such as students with professional experience, teaching

of applied disciplines immediately relevant for practice, and so on. The advantage here is to compete with the ‘heart’ of the system and the difficulty lies in the credibility of its differentiation on the market.

These questions have been largely addressed at the European level in the debates on the harmonization of degrees from La Sorbonne to Bergen and probably in London in 2007 again. As described above, the emergence of new formats like executive MBAs and the inevitable market segmentation that they are generating may leave room for a more fruitful combination of ‘national’ systems and international references. Europe in general could largely benefit from these evolutions of management education.

Looking at Europe through one lens, M-level programs, which apparently relate to stabilized standards on the international scene reveals in fact a huge diversity of contexts and strategies. Whether this diversity simply allows European institutions to capitalize on their traditions or weakens their visibility and ability to defend their interests is a key issue. To make it simple, there are basically three options for European business education institutions that start to reform their programs.

The first option is to stick to one’s national peculiarities. As this industry is becoming more and more global – faculty move easily, students’ mobility is increasing, employers shop everywhere, and so on – and the support public authorities grant is more and more constrained, this option would probably be the safest road to decline.

The second option would be to bet on a ‘faux nez’ (artificial nose) strategy. The principle is very simple: the easiest way to proceed is to create a light, high speed vessel that meets a series of targeted standards, concentrate key resources on it (research, marketing and so on) and make it wave the flag for the whole fleet, which may be composed of steamships of even rowing boats (anyway they are far behind, nobody sees them from abroad . . .). This artificial interface fulfilling GAMP (generally accepted MBA practices) can bring some international recognition and even benefit to the rest of the fleet. This is probably the cost optimal strategy for the short term. Those who play it can save their face for a while. It is actually followed by many institutions in Europe, a key success factor being the capacity to invest a lot of cash. But the key issue remains: how can one guarantee the future of the admiral (steam)ship if it is not modernized and at the forefront of the race?

The third option would be to build on the strengths of the traditional core and make it run with the best from other countries. Exposing the heart to the fiercest competition is risky and imposes dramatic reforms of key elements, but it is probably the best way to really modernize it for the long term. The ‘Bologna process’, which is creating a favorable atmosphere for reforms without imposing rigid frameworks, could be very helpful for that.

Hence, the constraints for implementing this option, which has the potential to maximize the value of European diversity, should not be overestimated and wrongly attributed to an abstract 'European standardization process'.

CONCLUDING REMARK

In a famous 2002 article, Pfeffer and Fong, two American professors, expressed very critical views against US business schools. Among other negative points, they argued that 'a large body of evidence suggests that the curriculum taught in business schools has only a small relationship to what is important for succeeding in business' (Pfeffer and Fong, 2002).

Many European universities today are devoting a considerable amount of time and energy to redesigning their curricula. As a famous economist (Keynes) used to say: 'politicians are often victims of economists who are already dead'. During this key transition phase, let us have a close look at our dominant competitors and, instead of copying them, identify what in our educational tradition is of great value for the future. And there are many . . . let us simply be creative and never forget that if market forces can certainly help introduce some movements and reforms in our often conservative academic institutions, education is fundamentally a public good which takes decades to build up and never benefits from 'quick fix' solutions.

Harmonization under the Bologna process spirit and national academic traditions are not antagonistic (Mottis, 2003). This process has already fostered many positive moves for European business education. Together with accreditations, and maybe one day more relevant signal providers (ranking or rating, competent media) it will undoubtedly keep accompanying a modernization process that is still in the making . . .

NOTES

1. Which is largely correlated, to our experience at ESSEC, with a very different vision and organization of students' experience.
2. Added to the D for doctorate, these L- and M-levels defined the so-called 'LMD' structure.
3. This document should be designed to help clarify the understanding, notably by potential employers and other academic institutions, of the degree obtained by each student and give some precise information, such as the academic specialization validated.
4. European Higher Education Area.
5. Universities are managed at the state level – Länder – in Germany, the Federal Government having only limited power compared to other countries.

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6. New modes of governance: the re-regulation of European higher education and research

Tina Hedmo and Linda Wedlin

INTRODUCTION

European higher education and research is currently in focus for much debate. At the European level, both national and supranational efforts are under way to set up new policies and priorities for constructing an attractive and competitive European knowledge society in which both higher education and research are believed to take prime positions. One political initiative is the Bologna process, paving the way for the organizing of comparable structures across national borders in European higher education. Another initiative is the political effort to strengthen European research by increasing public spending on, and setting up a new funding mechanism for, European basic research. From these and other current developments in Europe we thus note an increasing political interest for coordinating and controlling the production and organization of knowledge at the European level. At the same time, however, national political reforms during the last two decades have reduced the coercive impact of governments in higher education, with the effect of an increased autonomy left to the universities (Enders, 2004; Kogan and Hanney, 2000). The weakened political influence at the national level is also evinced by the reduction of state funding to research in several European countries, and the subsequent increasing importance of external financing for universities. As an outcome, we now experience a mixed form of funding, where students together with private, commercial, international and global actors are important financiers, replacing the principal role of state actors.

Following the decreased role of national governments in regulating and governing various societal areas such as higher education, researchers have identified an increased production and supply of 'softer' and more voluntary forms of rules, such as policies and standards, seemingly acting outside the jurisdiction of national governments (Mörth, 2004; 2006) and often at

the transnational level (Hedmo and Sahlin-Andersson, 2006). These rules are often organized in complex and interrelated patterns of relationships, covering a wide range of both private and public actors (Kooiman, 2000). Two central and early examples in European higher education, developed in management education during the late 1990s, are accreditation (Hedmo, 2004) and rankings (Wedlin, 2006). These systems have developed to form a network of regulation now governing the international management education field, including both professional organizations and private media corporations as actors in rule-setting and rule-following activities. In higher education such modes of soft rule systems introduce partly new means to compare and to scrutinize the quality of programs and their providers (Shore and Wright, 2000). In addition, and in line with political ambitions at the European level, such new regulations are often built on the logic of the market, encompassing principles for voluntariness, competition and the freedom of choice, and they are therefore distinguished from traditional, nationally delimited and governmentally run, regulatory forms (Enders, 2004).

The increasing production and use of soft forms of regulations imply that state de-regulation hardly means a reduction of rules and regulatory systems, but rather the contrary. It seems as if state de-regulation opens up an opportunity space for other forms of rules to emerge and proliferate, built on voluntary and cooperative forms of coordination and regulation, covering a multitude of various actors. Thus we witness not a decrease in the number of rules and regulations, but a significant change in rules and the type of rule systems applied. Accordingly, we argue in this chapter that it is more appropriate to talk about a re-regulation rather than a de-regulation of knowledge and of other sectors of society, fostering new means of organizing regulation and governance. In this chapter, we describe and analyze some of the features of this ongoing re-regulation of European higher education and research, attempting to better understand what this re-regulation contains and how it is formed. We do this by paying attention to current debates and reform initiatives within European higher education and research, both in the general policy debate and in the particular field of management education. We draw on three examples of such re-regulatory activities: the development of ranking and accreditation practices in the field of management education; the Bologna process in higher education; and the creation of a new European Research Council as a new funding mechanism for basic research. Before analyzing these three areas, we outline a theoretical framework for understanding the current European developments, focusing on the concept of governance and, particularly, networks of governance. Thus assuming a governance perspective on these current re-regulation efforts, we ask how these new regulations are

taking form and what they mean for the structuring of European education and research.

To track the development of the new governance systems in Europe, we draw on previous studies of the management education field (reported for instance in Hedmo, 2004, and Wedlin, 2006), as well as published sources and policy-documents that set out the major developments and debates in the EU policy-making processes. These documents are produced by the EU, national governments, working groups, non-governmental organizations and interest groups involved in the processes to set the new policies for higher education and research in Europe. Other resources include newsletters and web pages such as EURACTIVE and CORDIS.

NETWORKS OF GOVERNANCE

Issues of regulation have traditionally been viewed from a rational and state-centered perspective, focusing on national, intergovernmental (Moravcsik, 1998) or supranational actors (Sandholtz, 1992) exerting coercive power over a bounded territorial jurisdiction (see, for example, Rosenau, 2000). But this picture seems to be less valid with the advent of new forms of rules and regulatory systems in contemporary Europe. The formulation and implementation of new and softer rules in this context such as policies, recommendations and guidelines means that regulation is no longer solely the prerogative of central or local governments and their bureaucracies (Djelic and Sahlin-Andersson, 2006; Payne, 2000). Rather, such processes take place in and through interactive and horizontal governance networks that rely on interdependence, negotiation and trust and include a multitude of actors such as quasi-non-governmental agencies, inter-organizational networks, public-private partnerships and quasi-markets (Pierre, 2000; Sørensen and Torfing, 2005).

State de-regulation has not only changed the predominant role of governments in activities of governance, but it has also contributed to a fragmentation or pluralization of the unitary state into a multitude of relatively autonomous agencies that are scattered around the local, regional, national and European or transnational level. Furthermore, it has shifted the regulatory mode away from formal and legally binding modes of regulation, to more informal and non-binding forms of rules that are not dependent on the coercive powers of the nation state (Djelic and Sahlin-Andersson, 2006, p. 5). What follow instead are softer forms of rules, such as standards and guidelines (Mörth, 2004), but also an expansion of monitoring, evaluating and auditing activities that may be used to ensure compliance to normative rules and standards. This development has been noted particularly by

Power (1997) characterizing contemporary society as an 'audit society', in which many forms of audits are entering diverse sectors of society, also education, and where organizations and activities are increasingly structured in ways that make them 'auditable' (see for instance Shore and Wright, 2000).

Despite these changes state actors are still sovereign in a number of ways (Hirst, 2000; Rosenau, 1992), but they largely operate at a greater distance (Rose and Miller, 1992) or in constellations with other non-state actors (Hedmo, 2004; Jacobsson and Sahlin-Andersson, 2006). This means that new forms of governance bring together actors from the state, the market and the civil society forming into heterogeneous networks. Actors affiliate (formally or informally) to this network because they are dependent on others' resources, legitimacy, expertise and capacities for solving problems. But simultaneously, they operate independently in the sense that they cannot be forced to think or act in certain ways by other members in the network. As such, governance networks seem to provide appropriate and democratic means for formulating and implementing policies in the increasingly complex, fragmented and multi-layered character of modern society where policy problems become more and more tangled (Pierre, 2000; Sørensen and Torfing, 2005; Torfing, 2006). Accordingly governance in constellations of networks are valued for their ability, on a collective basis, to find proper solutions to complicated and challenging policy problems and they contribute to coordinated action spanning across different actors, policy sectors and regulatory scales (Hedmo and Sahlin-Andersson, 2006). However, the operational autonomy of the horizontal governance network actors does not guarantee cooperation and equality in terms of the distribution of power. Rather, the network actors might have unequal power bases and means of influence, resulting in ill-informed collective decisions, conflicts and rigid and subjective policy solutions (Hedmo, 2004; Torfing, 2006). This means that governance networks can take many different forms depending on how they evolve; they might be initiated from above or below; be loosely or tightly coupled; be intra-organizational or inter-organizational; or temporary or permanent in character.

NEW REGULATIONS IN EUROPEAN MANAGEMENT EDUCATION

During the late 1990s, a European, and later international, accreditation program and a ranking system were developed in Europe as innovative and voluntary means to control and to make management education more comparable and uniform across national boundaries. These systems have both

been influenced by and have influenced the wider European regulatory developments of higher education and research. This case shows an early example of regulatory initiatives that are organized in a heterogeneous governance network, crossing the public and private divide, in the area of higher education.

In 1997, the European accreditation program called the European Quality Improvement System, or EQUIS, was launched by the transnational professional network organization, the European Foundation for Management Development (EFMD) promoting the value of strengthening the standard of European management education. EQUIS was developed as a negotiated solution between public and private actors and ideals, all sharing a belief in defining collectively, on a European basis, what management education ought to be. Central in this transnational endeavor was the setting up of specific standards for the European dimension, translated into quality criteria for business schools' internationalization and their links with the business community. The system was also articulated as being an appropriate solution for the problems of uneven levels of quality in European management education. The whole idea of EQUIS was launched and run by EFMD, but to get adequate input, resources and attention its organizing presupposed the involvement by both private and public actors, operating at the transnational level and below. Of particular relevance was the involvement of EU institutions like the Commission, playing an important role in bringing external legitimacy and financial resources to the setting up and running of the system. In addition, the EQUIS project assumed the presence of the potential followers of the rules for gaining legitimacy and authority. Accordingly, the organizing and governing of the EQUIS rule-system included several prestigious European business schools and their leaders, and these provided valuable input in the development of the systems but also helping to attract and convince other schools to adhere to the rules of this voluntary system.

Only a year after the launch of EQUIS, in 1998, the *Financial Times* developed a European ranking of MBA programs. At this time, no international or European comparisons of this sort were prominent in the field, and rankings were in many countries not considered an important means of comparing and assessing programs or schools. The ranking list was made global in scope in 1999, becoming the first widely recognized international ranking of business schools. Heavily influenced by the development of a European accreditation program and the accompanying discussions about the need for comparisons, assessments and quality controls in management education, the rankings were constructed by the media but with involvement and support of the leading European business schools. This system also developed standards and measurements to assess

and compare schools across settings and countries, based to a great extent on a market logic, in which the students', graduates' and corporate recruiters' assessments and values are given significant room. The rankings assess, for instance, the international profile and character of schools, the employability of its graduates, and the financial 'value' of educational qualifications.

The ranking and accreditation systems, and the interplay between them, form new modes of regulation of higher education. These regulations are not directly coupled to systems of sanctions or resource allocation and are, at least formally, voluntary and include large elements of self-regulation. Those regulated have been involved as members of the regulating organizations, and also as financial supporters and participants in getting the systems started; thus the regulator and those regulated are not hierarchically coupled to each other (cf. Brunsson and Jacobsson, 2000; Jacobsson and Sahlin-Andersson, 2006). Furthermore, the new regulations are developed in networks that cut across and go beyond national boundaries and are thus transnational rather than national or international in character. They involve professional organizations, the media, business schools and the EU, and they rest on the logic of the market. They have significantly altered the regulatory landscape of the field (Hedmo et al., 2006).

TOWARDS A COMMON 'EUROPE OF KNOWLEDGE'

The efforts to re-regulate the management education field identified above were shown to be influenced by the larger European policy debates about the need and desire to strengthen the quality of higher education and to create and support a European dimension in management and business as well as in education. As the field of management education has gone through a process of re-regulation, the larger field of education is similarly being subject to new forms of governance principles and forms of regulation as new European-wide policies for higher education and research are being developed. This section will take a closer look at some of the initiatives following from these efforts.

In contrast to the private efforts of creating and maintaining a common European management education style or identity by means of accreditation and rankings, the current efforts in Europe aimed at strengthening the European field of higher education and research are driven largely by national governments and the EU. The EU has committed to build what is labeled a 'Europe of Knowledge' whereby European universities and research are to excel and the European systems for education are to be a 'world reference' by 2010 (COM, 2003, p. 2). This work gained widespread

attention and strength as it became tightly linked to the targets set by the European Council of becoming 'the most competitive and dynamic knowledge-based economy in the world' at the Lisbon meeting in 2000 (European Council Lisbon, 2000). While these aims are wide and go well beyond the immediate contexts of higher education and research, the EU strategies for building a competitive economy and society have intensified discussions about the role played by both the higher education systems and the research strategies within the Union as well as within individual nation states. The policy developments are focused on building competitiveness and creating uniform 'markets' for education and knowledge within Europe, formed under the labels of European Higher Education Area (EHEA) and the European Research Area (ERA). Both these policy areas have been subject to significant debate and re-regulatory efforts in recent years, with new governance mechanisms being developed. Through these efforts, the EU has taken an active step into the governance of higher education and research within Europe.

Historically, education in general and higher education in particular has not been subject to common EU policy, and decisions about the organization and content of education have remained a national concern for member states within the Union. During the last years, however, the EU has begun to strengthen its role in European higher education and to promote a European dimension in education and training within the frames of the DG Education and Culture. While not attempting to implement hard regulation in the area of education (in the forms of directives, for instance) the EU is attempting to increase cooperation among member states through the promotion of action programs such as SOCRATES and ERASMUS and to promote shared standards and benchmarking through an 'open method of coordination'. In recent years, however, the EU has also become involved in the so-called Bologna process, which is attempting to reform national educational systems in coherent ways and promote a uniform European educational landscape. The European Commission (EC) was formally accepted as a full member in the governance structure of the Bologna process in 2003. This has further strengthened the role of the EU in the governance of higher education.

In the area of research, the EU commitment to reshaping the research fabric of Europe is significant and involves a significant investment of EU funding. At the 2002 Barcelona Council meeting, the EU members set an objective to increase the level of investment in research by each member state to 3 per cent of GDP by 2010, which would significantly increase the funds available for research in the Union (European Council Barcelona, 2002, p. 21). While some countries are already living up to this target, the current average in the EU is only 1.9 per cent of GDP. The EU proposes to

go further, however, and also increase the public spending on research through EU funds directly, to supplement national spending and funding schemes. In the proposal for a 7th Framework program for research, presented by the Commission in the spring of 2005, is a suggestion to more than double the previous EU budget for research and to create a new funding mechanism for basic research in the Union. This funding mechanism should be designed to distribute funding to research projects competing at a European level, and includes a proposal for an autonomous European Research Council (ERC). With the development of the ERC, the EU is taking a significant step into the organization and financing of European research.

In the following sections we will follow the developments of these two initiatives, describing how they have come to form a governance network for European higher education and research by including a wide set of actors and relying on partly new means of governing.

THE BOLOGNA PROCESS

In general, the Bologna process has become closely associated with EU efforts to create a common 'Europe of Knowledge'. But in fact, the Bologna process preceded many of the discussions within the EU and was initiated as an intergovernmental effort and national response to the supranational activities in the area, and it goes beyond the Union boundaries. In 2006 the process involved the public authorities of some 45 European countries collaborating to reform national higher education systems in similar ways (see Appendix A for a list of signatories). As will be outlined below, the process is not exclusively intergovernmental in its organizing, but has come to involve a large set of actors at the transnational level.

Historically, the Bologna process started in 1988 with the Bologna Magna Charta, delegating institutional autonomy to single universities and articulating their meaning and continuous need to adapt to changing needs and demands in society, and to advances in scientific knowledge (Magna Charta Universitatum, 1988). Ten years later, in 1998, the education ministers of four central EU member states, France, Germany, Italy and the UK, signed a joint declaration for creating a 'Europe of Knowledge', by, among other things, harmonizing the architecture of their European higher education systems. The main focus of this agreement was to construct a common overall framework of degrees and cycles in Europe, leaving the content of curricula to single universities to decide. Like the Magna Charta, the Sorbonne Declaration put the role of universities and their independence at the forefront when restructuring European higher education systems. The

Declaration also emphasized the significant role played by national governments in reforming national higher education systems and the value of using a coherent educational structure as a key way to promote citizens' mobility and employability and the continent's overall development in line with EU priorities (Sorbonne Joint Declaration, 1998).

The Bologna Declaration, signed in 1999 by 29 ministers of education of both EU member and non-member states, was an expansion and development of the action lines outlined in the Sorbonne Declaration and its main ambition was explicitly to create a 'European Higher Education Area' (EHEA) by 2010, setting common directions and priorities for national higher education systems, and thereby eliminating institutional obstacles to the free mobility of resources across borders. The Declaration indicated three main goals: international competitiveness, mobility and employability. To reach these goals, the Declaration enumerated six objectives to be implemented on the different education and training systems across Europe, including for instance comparable degree systems and a common program structure.¹ An important element in the Declaration, which explicitly links back to the debates in management education, was the objective to develop and protect a 'European dimension' in higher education.

The signatories of the Declaration decided early on to involve, as observers and advisors, a wide range of associations and interest organizations at the European level. These were university associations (such as the European University Association, EUA, and the European Association of Institutions in Higher Education, EURASHE), student associations (The National Unions of Students in Europe, ESIB), employer associations (the Voice of Business in Europe, UNICE), and the Council of Europe. Besides national responses and the setting up of local and national working parties for implementing the Bologna Declaration, the overall process was followed up with seminars and other events organized by various stakeholders of European higher education and ministerial meetings every other year. In 2001, for instance, the Bologna meeting was followed by two important conventions of European universities (Salamanca) and European students (Gothenburg), influencing the overall direction of the Bologna process. In Salamanca, more than 300 European universities and their representative organizations met in order to prepare input to the ministerial meeting in Prague the same year (see below). The universities supported the Bologna Declaration but raised their voice for keeping their autonomy and to empower university institutions in the process of shaping of the new higher education regulations. They laid out a number of guiding principles concerning academic freedom, the definition of education as a public responsibility, the value of research-based higher education, and institutional diversity as a valuable asset when organizing the EHEA.

On the basis of follow-up reports, national reports, messages from the conventions held in Salamanca and Gothenburg, and EC recommendations, three themes were added to the Bologna Declaration at the ministerial follow-up meeting in 2001: to develop lifelong learning; to raise the involvement of higher education and students; and to work to increase the attractiveness and competitiveness of the EHEA globally. In addition, the progress of the process should be drawn on all possibilities of inter-governmental cooperation and an ongoing dialogue with European universities and other higher education institutions and student organizations as well as the Community programs (The Prague Communiqué, 19 May 2001). At the follow-up meeting in 2003, the doctoral level was included in the recommended structure of higher education systems, thus creating a tighter link between higher education and research. Thus the original suggestion of a two-cycle system was turned into a three-cycle system recommending the '3-2-3'-structure corresponding to three-year undergraduate studies, a two-year masters program, and a three-year doctoral program.

A key issue on the Salamanca agenda was quality assurance and quality certification, articulated as forming building blocks in the overall EHEA: 'Quality is the basic underlying condition for trust, relevance, mobility, compatibility and attractiveness in the European Higher Education Area' (Salamanca Convention, 2001).

The issue of quality assurance has since become a key component in the Bologna process (The Berlin Communiqué, 19 September 2003). The Berlin meeting of the ministers for higher education stressed the ongoing work to create effective and mutually shared quality assurance systems (that is criteria and methodologies) in higher education, particularly calling upon the European Network for Quality Assurance in higher education (ENQA) in cooperation with various associations like the EUA, EURASHE and ESIB, to create a common set of standards, procedures and guidelines for assessing quality in higher education. When the ministers met again in Bergen in 2005 the common quality standards proposed by these associations were adopted (The Bergen Communiqué, 19–20 May 2005).

Work to realize the objectives set out in the Bologna process and to prepare for the next ministerial meetings have thus taken shape through a governance structure continuously elaborated over the past years and covering a broad mix of public and private actors. The structure includes a Bologna Follow-up Group (BFUG) that takes new shape after each ministerial meeting. The guiding principle is that this group should be composed of representatives of all members of the Bologna process, the EC, the Council of Europe, the EUA, EURASHE, ESIB and UNESCO/CEPES as consultative members. This group should be convened at least twice a year and be chaired by the EU presidency, with the host country of the next

ministerial meeting as Vice Chair. Its main task is to coordinate activities such as intermediate seminars treating the themes and actions covered by the communiqué and to report back on them before the next ministerial meeting. The work to develop new policies and regulations in European higher education has thus been driven by both intergovernmental bodies and a large set of other actors, including the EU.

A EUROPEAN RESEARCH COUNCIL

The second component of the envisioned 'Europe of Knowledge' concerns research, where particular efforts have been initiated in recent years to restructure, strengthen and control the production of knowledge through a common European research policy. Unlike the EHEA, the creation of a European Research Area (ERA) is an EU initiative that was proposed by the Commission in 2000, and endorsed by the European Council in Lisbon the same year. The ERA essentially holds three main aims: to create an internal market for research, in which knowledge, researchers and technology can move freely; to restructure the European research fabric and improve coordination of research activities and policies across nations; and to develop a European research policy that addresses the funding of research activities as well as other aspects that are covered by national policies (COM (2000) 6 Final, 18 January; www.euractive.com, Nov 2005). The last aim, to improve the funding of research activities, includes the establishment of a new funding body at the European level, known as the European Research Council.

Discussions about the possibility to establish an ERC began in 2001, and were intensified in 2002. The Danish Minister for Science, Technology and Innovation, Helge Sander, initiated the establishment of an expert group (ERCEG), consisting of seven members representing national research councils, foundations and science organizations, to explore the options for an ERC during the autumn of 2002. The expert group was asked to develop the main purpose and scope of a possible research council, and to consult broadly with ministries, research organizations and other interested parties to explore the options of establishing the ERC with wide support. The initiative was supported by many of the scientific groups and organizations, including the European Research Advisory Board (EURAB) and the European Science Foundation (ESF). In its final report to the council of research ministers at the end of 2003, the expert group's main recommendations were to create an ERC that is an autonomous entity, accountable to, and receiving its budget from, the EU (and possibly other funding partners), and that it should be led and run by the European scientific community and

leading scientists based on principles of peer-review (ERCEG Summary report, 25 September 2003).

These early discussions about the ERC had mainly taken place within the working group and in the scientific community, but from early 2004 the debate also intensified politically. In a communication from the Commission (COM (2004) 9) in January 2004, they recognized that a potential ERC would be part of the efforts to establish a new funding system for European basic research. Further supported by the Competitiveness Council and the European Council in early 2004, the Commission was asked to prepare a formal proposal for the governance and management of an ERC. Particularly stressed by both the Competitiveness Council and the European Council is the need and desire to promote excellence and creativity in basic research by increasing the competition between researchers and research teams at the European level (COM (2004) 353). To do that, the Commission aims to promote a funding scheme that is research-led and selects projects based on their 'scientific merit', and a 'funding instrument' that allows competition at the European level but that is distributed as individual grants to individuals or teams of researchers. This has become two prominent elements in the development of the ERC.

One of the initial debates concerns the structure and governance of the ERC. In the formal proposal, the Commission suggests two alternative structures: an 'executive agency' (a Union agency of conventional type) or a 'specific structure' (for instance a foundation, established under Article 171 of the Treaty) (COM (2004) 353). The Commission recommended the first alternative, while some member states and scientific organizations, for instance in France, Germany, Poland, Spain and the UK, favored the second alternative. The legal status and structure of the ERC was still undecided at the end of 2005. In a report presented by a joint working group between the Commission and the association for European Heads of Research Councils (EUROHORCS), an administrative structure for the ERC was suggested that stressed the importance of giving the scientific community a significant influence on the governing of the council. They proposed a Governing Council comprising 'recognized and respected representatives of the scientific community in Europe at the highest level' and who would act as 'representatives of science' (High Level Working Group, 28 July, 2004, p. 4). This suggestion was in line with the pressures from the scientific community for a researcher-led organization that would be firmly based on the principles of scientific peer-review. Such a governing body of the ERC was established in July 2005, when the names of the 22 members of the Scientific Council of the ERC were announced (DG Research, press release, July 2005). These had been selected by an identification committee consisting of five 'experienced and respected scientists', headed by Lord Patten,

Chancellor of Oxford University (DG Research, press release, January 2005). The main role of the Scientific Council is to determine the scientific strategy of the ERC and oversee the work to establish its basic governing principles. The Scientific Council held its first meeting in October 2005, and the goal is to have the ERC begin its work in 2007 (DG Research, press release, October 2005).

MULTI-LEVEL GOVERNANCE

From the review of current policy discussions in higher education and research within the EU, it seems clear that the governance is getting increasingly complex and multi-level in Europe. We noted how the Bologna process has been characterized by an intergovernmental process involving a large number of governmental and non-governmental actors, but is today also linked to the supranational level by the inclusion in the EU policy-making process. The implementation of the process, however, remains a national concern. The debate on research, on the other hand, was from the beginning an EU initiative, and has only strengthened its prominence in the EU policy debates over time. In this area, the idea is not to interfere or interrupt national funding programs or systems of research, but to add a European level funding mechanism to supplement those at national or regional levels. It is inevitable, however, that the national and regional regulatory principles are also affected by the introduction of a European-wide mechanism. With the advent of new European-wide policies, the governance is becoming multi-level involving national, transnational as well as supranational regulatory initiatives, and these are both tightly linked and integrated.

The involvement of the EU in the governance of higher education and research implies adding another actor and a partly new, transnational dimension to the governance systems. These systems also include a large number of both state and non-state actors which all work to form a governance network. In the cases of EU education and research policies, these are particularly representing interest organizations of different forms; students, universities, funding organizations and so on. As in the management education case, professional organizations and interests are playing increasingly important roles in setting rules and principles for higher education and research. This does not necessarily mean less state involvement or importance, but it does mean that governments are working in close relation with other interests and with professional and private organizations.

Also the role and function of the governmental organizations are changing with the new constellations of regulation. The examples above show an

increasing complexity of regulatory issues and the involvement of different units and policy sectors within the EU, for instance through the increasing linkages between the areas of education and research, but also the fact that the development of both the ERA and the EHEA have become tightly linked to the Lisbon convention and to general competitiveness and internal market issues with the EU policy framework. This has pushed a strong focus in the debate to issues of 'competitiveness' and the need for innovation in industry and society linked to the desire to create a 'competitive knowledge economy'. This means an increasing focus on the usefulness and economic benefits of research and education to society, and the importance of producing knowledge to strengthen European competitiveness.

A further example of both the ways that different policy areas have become interlinked and to the strong focus and push for 'competitiveness' and innovation, is the very recent proposal to create a European Institute of Technology (EIT), or what is described as 'a new, multi-site, legal entity which brings together the best teams and university departments in strategic fields across Europe' (DG Education and Culture, press release, February 2006). The initial suggestion for developing an EIT was first put forward by the Commission in 2005 (COM (2005) 24) as part of a mid-term review of the Lisbon strategy. The EIT is intended to be a 'knowledge operator' that will be used to integrate and carry out education, research and innovation. Following a public consultation during the fall of 2005, in which more than 700 organizations and individuals participated, the Commission announced a preliminary proposal in February 2006 (DG Education and Culture, press release, February 2006; COM (2006) 77), but a final proposal is not expected until the end of 2006. This proposal will be a further sign of the increasing commitment of the EU to regulate and govern the production of knowledge in Europe.

DISCUSSION

The developments of transnational policies for higher education and research and new forms for evaluating and assessing educational programs and organizations are part of the ongoing re-regulation of these areas in Europe. What have traditionally been national state concerns are now becoming not only international but also transnational in character and scope, and take on partly new or revised forms. Attempting to characterize this process of re-regulation, we focus here on two issues that take prominent place in the current reforms. First, we see that these processes raise the debate about *who* should govern and control the field. Second, the changes spur discussions about *how* new regulation is to be organized and

performed, and what principles should guide its development. Together these two issues constitute elements in a complicated struggle for influence and the proper means for governing higher education and research.

The regulation of education and research is changing in the number and type of actors involved in the regulation. We have seen how the new regulatory system that is emerging can be characterized as a dynamic multi-level form of governance, spanning across multiple sectors and levels in society; national regulatory systems interact with intergovernmental and supranational ones, at the same time as governmental systems interrelate with non-governmental ones. The European efforts are thus adding another dimension to the national and/or regional mechanisms already in place, thus partly altering the 'who' of governance, or at least making it more complex. However, it is important to note that this development involves more than just adding an actor or a 'level' of governance. Rather, it involves a process whereby the different actors change, develop new routines and relationships, and take on new roles in the governance of higher education and research as the new networks of governance are being formed.

The development of European policies for higher education and research has not meant a retreat of the state (Strange, 1996) or that transnational governance mechanisms replace national regulations or control systems. Rather, what we see is a changing role and meaning of national governments and national regulations that have become important in relation to the transnational developments. Much of the implementation of policies and governance mechanisms rely on national states to pursue the European goals. National systems are thus still important but are oriented to a transnational level, implying less concern for nation states and national issues and a more 'Europeanized' agenda.

The development of new networks of governance and a stronger focus on the European agenda does not mean, either, that there is less regulation and fewer rules to follow for universities and researchers in Europe. On the contrary, re-regulation processes tend to imply a multiplicity of rules, particularly as these can take many forms and shapes. As was noted in the case of management education, standards, guidelines and monitoring activities that are not necessarily binding and coercive forms of rules can become important elements of new regulatory systems. They do so as they take on a rule-like status, and become linked with normative ideals and pressures. The use of soft regulatory principles is predominant in both management education and higher education generally, relying on voluntary agreements and reforms as the main methods of creating more compatible and successful systems for higher education and research. Thus, also the 'how' of governance is changing.

This new means of regulating education and research in Europe is, like that in management education, characterized by a strong belief in market based regulation and market ideals as guiding principles of governing the production of knowledge. The mechanisms described here all rest on ideas of competition and the promotion of the free movement of people and resources, and they seem to call on rhetoric of 'excellence', 'quality' and 'competitiveness'. They thus include ways to create comparability and a common 'market', and they apply mechanisms such as quality assurance systems to their governance systems. The EU has also explicitly stated that no 'hard' regulations or governance principles should be used for these efforts, relying on voluntary agreements, ideals and the creation of market mechanisms to pursue the ideals of a competitive knowledge society in Europe.

The increasing involvement of governments and the EU in the networks of governance on the one hand, and the increasing use of and reliance on market mechanisms and a market rationale for the development of new governance mechanisms on the other hand, present an apparent paradox. While market rationales are most often used to promote fewer forms of regulations and are commonly associated with the free movement of goods and services, promoting independent and competing producers, politics is most often associated with increasing control and tighter regulation, often aimed to reduce or structure competition and displace market mechanisms. In the case of higher education and research, however, it seems that these two rationales, or logics, are co-developing. Political efforts to control and to regulate the production of knowledge and research are increasing, but are incorporating ideals of free competition and free movement of goods and services as well as of knowledge. The political rhetoric is imbued with previously unfamiliar concepts such as efficiency and productivity, and the agenda is incorporating market ideals and principles for increasing the production of good and useful knowledge. At the same time, as was noted in the management education case, market mechanisms and principles of evaluation and monitoring are creating more rules, and form regulatory networks of their own. Thus, market ideals are leading to an increasing number of rules, although these tend to take on new forms. New governance mechanisms can thus be based on different combinations of market and political ideals and rhetoric. Further research is prompted, however, to investigate how political efforts to control and govern the production of good and useful knowledge are balanced or united with the market-oriented ideals and governance principles currently taking form in Europe.

NOTE

1. The six objectives were: 1) Establish a system of easily readable and comparable degrees between countries (*Diploma Supplement*). 2) Adoption of a two-cycle system, based mainly on an undergraduate level and graduate/masters level, where the first level refers to a minimum of three years and is adaptable to the needs of the European labor market. 3) Establish a compatible credit system, often referred to as the ECTS – the European Credit Transfer System – to increase student mobility. 4) Promote mobility and overcome all remaining obstacles of free movement of students, teachers and researchers. 5) Promote European cooperation in quality assurance and develop comparable criteria and methods. 6) Develop and promote a ‘European dimension’ in higher education (The Bologna Declaration of 19 June 1999).

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APPENDIX A: BOLOGNA PROCESS, PARTICIPATING COUNTRIES

1999, 29 original signatories: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

2001: Croatia, Cyprus, and Turkey

2003: Albania, Andorra, Bosnia-Herzegovina, 'Former Yugoslav Republic of Macedonia', Holy See (the Vatican), Liechtenstein, Russian Federation, and Serbia-Montenegro.

2005: Armenia, Azerbaijan, Georgia, Moldova, Ukraine.

7. Combining the production and the valorization of academic research: a qualitative investigation of enacted mechanisms

**Julie Callaert, Bart Van Looy, Dominique Foray
and Koenraad Debackere**

INTRODUCTION: ACADEMIC ENTREPRENEURSHIP

The emergence of knowledge-based societies over the past decades has spurred research on the specific role of universities in innovation systems. The notion of academic entrepreneurship has gained acceptance among communities of researchers, practitioners and policy makers (Etzkowitz et al., 1998). At the same time, this acceptance seems impregnated by a constant alertness for tensions that may arise. Research has been conducted at several levels, resulting in a vast literature on the topic of academic entrepreneurship. A rough distinction can be made between critics and proponents.

Critics have raised concerns about the possibly detrimental impact of combining academic research and business-related activities or have formulated boundaries to possible synergies between both activity realms (Lee, 1996). Some fear for inopportune modifications of public research agendas (Geuna, 1999; Hane, 1999; Vavakova, 1998), while the ‘corporate manipulation thesis’ (Noble, 1977) warns against corporations that seek to control or even manipulate university research in order to make it useful to their own agendas. The alleged ‘skewing problem’ (Florida and Cohen, 1999) indicates the risk of more applied research being executed at the cost of basic research endeavors. The conflicting nature of the normative principles that guide Academia and business is at the base of many concerns: competitive considerations and secrecy practices are perceived to stand in direct opposition to the principle of free dissemination of scientific knowledge (Cohen and Noll, 1994; Blumenthal et al., 1996). Some empirical

evidence on these detrimental effects is available. The alleged skewing problem was for example suggested in a detailed survey of US university–industry research centers, conducted by Cohen et al. (see Florida and Cohen, 1999). Research centers that value the mission of improving industrial products and processes devote less of their R&D activities to basic research than centers that do not value this industry-oriented mission. Blumenthal et al. (1996), surveying life science faculties and companies supporting these faculties, found some evidence for the secrecy problem. The faculties reported that delaying publications and restricting information sharing are quite common, for instance to allow enough time for the sponsoring company to file a patent application, to protect the financial value of certain research results, or to avoid undermining the competitive status of the sponsoring company. Brooks and Randazzese (1999) mentioned other empirical evidence of the ‘secrecy problem’, but toned their argument by pointing to a possible effect of research institution characteristics: the best research universities seemed to make only modest concessions to the practical needs of industry.

The current status of empirical research on academic entrepreneurship provides rather strong evidence for the proponents’ view that organizing scientific and entrepreneurial activities is at least feasible – and probably even advantageous – in Academia. This was illustrated for example in the setting of the Catholic University of Leuven (Belgium). At the level of the individual professor, involvement in contract research with industry (Van Looy et al., 2004) and involvement in patent activity (Van Looy et al., 2006) were associated with more scientific publications. Moreover, no evidence was found for a trend towards more applied publications at the expense of basic research. Similar observations on the feasibility or even the positive effects of combining entrepreneurial and scientific activities have recently been made in several other studies. Gulbrandsen and Smeby (2005), in a survey among Norwegian professors, found that industry funding was positively related to publication productivity. Yet they found no positive relation between publication performance and entrepreneurial commercial ‘outputs’, such as patents and spin-off companies. Breschi et al. (2007) analyzed patent activity of Italian academics in relation to their publication behavior. They observed no major trade-off between patenting and publishing; neither did they find evidence of a skewing effect. Professors who were scientifically more productive were even more likely to sign for a patent. In another study on Italian scientists, Calderini et al. (2005) found patenting to be predicted by the number and by the quality of preceding publications. The effect of publication quantity was stronger than that of quality. Azoulay et al. (2006), in their panel study on life scientists, observed that patenting has a positive effect on the rate of publication, but no effect

on the quality of these publications. Meyer (2006) from his side did find a positive relation with publication quality. Drawing on a dataset of publications and patents in the field of nanotechnology, he found patenting scientists to outperform their non-inventing peers in publication counts and citation frequency.

Hence, notwithstanding contextual qualifications, the feasibility of a combination appears sufficiently supported in the empirical literature. The ‘star scientist’ effect might play an important role here. Professors enjoying a strong academic reputation are highly visible not only within their scientific community, but also to industry actors that are looking for cooperation with Academia. A cumulative advantage as observed in science (Merton, 1968a, b) could hence extend towards entrepreneurial activity as well (Van Looy et al., 2004). At the same time, the empirical literature remains rather silent on the dynamics behind successful combinations of entrepreneurial and scientific activities. It is at this level that we want to contribute, by providing an in-depth and practice-informed view on how professors reconcile their scientific and entrepreneurial activities.

COMBINING SCIENTIFIC AND ENTREPRENEURIAL ACTIVITIES: A QUALITATIVE INQUIRY

The qualitative approach adopted allows for an in-depth exploration of dynamics at the level of the individual professor. The evidence revealed here builds on interviews with entrepreneurial professors at the Ecole Polytechnique Fédérale de Lausanne (Switzerland). Founded as an engineering school in 1853 – and becoming a federal university in 1969 – the EPFL is now a leading scientific and technological university in Switzerland. The school hosts approximately 280 professors, 2000 researchers and 6200 students (including postgraduates). It houses over 250 laboratories and research groups in seven faculties covering Basic Sciences, Engineering Sciences, Architecture, Information Sciences, Life Sciences, Humanities, and Technology Management. Research valorization, technology transfer and socio-economic contribution are an explicit part of EPFL’s mission. Mostly since the late 1980s, this strategic orientation has been institutionalized in several ways. Interfaces such as the SRI (Service des Relations Industrielles) and CAST (Centre d’Appui Scientifique et Technologique) offer support for patenting and licensing activities, contract research and startups.

To uncover the dynamics behind their successful combination of scientific and entrepreneurial activities, interviews were conducted with a sample of 32 professors. The selection of interviewees was based on a

mapping of EPFL professors' publications and their involvement in invention disclosures and patents. We selected professors who are active in entrepreneurial activities and who are at the same time prolific publishers. No a priori choice was made in terms of faculties. We also added a few professors who were not involved in patent activities, in order to assess to what extent opinions are inventor specific. Table 7.1 presents the breakdown of our sample in faculties and their involvement in inventions.

Table 7.2 presents the breakdown of the sample in three publication output categories.

Our exploration focuses primarily on professors who are successfully involved in entrepreneurial activities and who at the same time maintain a satisfactory publication level. Therefore over 70 per cent of the respondents are inventors and over 70 per cent have a medium to high publication performance. It should be noted here that in the selection of interview cases, a distinction was made between inventors and non-inventors. Interviews with 'non-inventors' nevertheless revealed that all but two of them were involved

Table 7.1 Breakdown of sample in faculties and inventorship

	Inventors ⁽¹⁾	Non-inventors ⁽¹⁾	Total
Engineering Sciences	9	3	12
Basic Sciences	6	4	10
Life Sciences	5	1	6
Information Sciences	2	1	3
Architecture	1	0	1
Total	23	9	32

Note:

- 1 With 'inventors' we refer to persons appearing as such in the Micropatents database (1971–present). All of these except for two also had one or more invention disclosures at EPFL's TTO.

Table 7.2 Breakdown of sample in publication output

Publication output	Inventors	Non-inventors	Total
High (> 45 pubs; n = 18)	8	1	9
Medium (20–45 pubs; n = 42)	8	5	13
Low (< 20 pubs; n = 226)	7	3	10
Total	23	9	32

Note: Web of Science publications with EPFL affiliation are counted; for the years 2000–2004. Category breakpoints represent the 33rd and 66th percentiles.

in some kind of industry-oriented activities such as contract research with industry, or startup involvement. Academic entrepreneurialism clearly goes beyond patenting and it proved difficult to find non-entrepreneurial professors, especially in the faculties considered here.

Semi-structured interviews were conducted to obtain an insight on factors that are considered conducive to combining performance in scientific as well as entrepreneurial activities. The open-endedness of the interview protocol left room for unattended factors to be touched upon, apart from three factors that were identified a priori. Explicit investigation of these factors was inspired by an analysis of the literature, as well as by exploratory conversations with professors at Catholic University of Leuven (Belgium). Each interview hence included an inquiry with the following themes: the presence of economies of scope, the role of financial resources and the role of the research unit in which the activities of professors are embedded.

If knowledge is considered an economic good, entrepreneurial professors could benefit from economies of scope (David, 1994; Foray, 2004) when involved simultaneously in different activities and various domains. *Economies of scope* occur if an asset (in this case: knowledge) can be used in more than one application at no or marginal additional cost, or when the results of successful research in one field have positive implications for work in other fields (Henderson and Cockburn, 1996). A broader access to relevant state-of-the-art knowledge, thanks to valorization efforts and interactions with industrial partners, might provide entrepreneurial professors with extra food for thought and might stimulate the formulation of additional research questions. As such, application and valorization activities may bring in new ideas that can serve the basic research agenda and reduce difficulties related to problem choice (Zuckerman, 1978). Inversely, if fundamental research precedes commercialization activities and if knowledge is considered an 'asset', fundamental research can have direct value for application-oriented R&D (Lacetera, 2005). Hence, we are interested in exploring whether and how successfully entrepreneurial professors benefit from economies of scope through their synchronic involvement in basic research and application-oriented valorization activities.

Besides positive effects rooted in the content of the research agenda, there is prior empirical evidence supporting the presence of *leverage effects from financial resources*. At the university level, Powers (2004) empirically showed a positive relation between federal R&D funding and technology licensing. This suggests a positive effect of basic research funding spilling over to the application side. In the opposite direction, financial resources gained from contract research with industry could lever basic research. In their questionnaire study among Norwegian professors, Gulbrandsen and Smeby (2005) found industry funding to be strongly correlated with high

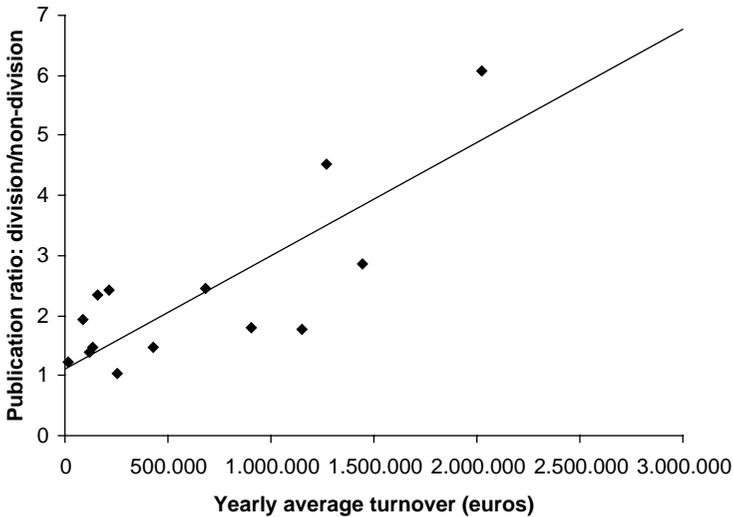


Figure 7.1 *Publication ratio in relation to division turnover (adapted from van Looy et al., 2004)*

publication productivity. A similar effect was found by Van Looy et al. (2004) and is depicted in Figure 7.1.

The figure maps the publication ‘advantage’ of professors who are members of a contract research division, meaning that they are structurally involved in research contracts with industry. As Figure 7.1 clarifies, their publication advantage over a control group of non-division colleagues is more outspoken for contract research divisions with higher turnover. So research activities might benefit from industry funding through extra resources being acquired. In the interviews, we therefore also explore whether and how resources that are obtained through entrepreneurial activities are used for developing scientific activities.

One likely mechanism through which the latter could be achieved, is the translation of financial resources into human resources, redefining the scale of the research group. Much empirical work has been done on the relation between scientific performance and research group size and composition (Carayol and Matt, 2004; Groot and Garcia-Valderrama, 2006; Turner and Mairesse, 2003). These studies have yielded diverse results. Less empirical evidence is available on how human resources – that is the size and composition of the research group in which the activities of professors are embedded – can benefit the combination of scientific and entrepreneurial activities. Gulbrandsen and Smeby (2005) found industrial funding to be associated with a more collaborative mode of doing research. Collaboration was

observed not only with external partners, but also with colleagues within the department. Also, the presence of a research group allows for more possibilities in terms of task allocation and specialization (Carayol and Matt, 2004). In as far as basic research and industry-oriented activities involve different role attributes (as for example suggested by George et al., 2006), having different persons focus on the one or the other could be instrumental in avoiding role conflict. Finally, to the extent that increased industry-orientation in research coincides with a higher need for multidisciplinary approaches, a heterogeneous research group could be more favorable for combining scientific and entrepreneurial activities. Therefore, the role of the research group was included as an explicit theme in the interview protocol.

The next section describes the main findings from these semi-structured interviews with successful academic entrepreneurs. In a synopsis, the general picture of relevant dynamics behind their scientific and entrepreneurial activities is highlighted. A detailed discourse on individual narratives is beyond the scope of this contribution, which by no means implies that we would consider the rich diversity of individual stories as irrelevant.

A SYNOPSIS OF PROFESSORS' STORIES ON ACADEMIC ENTREPRENEURSHIP

Application as an Inherent Part of Understanding

Respondents indicate a high degree of topic overlap between their basic research agenda and the objects of valorization. Such overlap seems intrinsic to their conduct of research. In stating that 'understanding presupposes applying and applying presupposes understanding', most respondents situate themselves within Pasteur's quadrant (Stokes, 1997). Table 7.3 summarizes their views in three categories and gives exemplary quotes.

Over half of the inventors did not acquiesce in the distinction between scientific and application-oriented activities. A few are extreme in considering publications and applications as 'joint products'.¹ The others are more moderate, referring to applications as 'byproducts' of their primordial activity, which is basic research. The views expressed by the respondents at this point support the suggestion of Breschi et al. (2007), who observed short run positive effects of publishing on patenting. These authors explained this by suggesting that patents are often byproducts of fertile research projects. Respondents in the next category appear more tolerant towards the basic-applied distinction. They describe topic overlap in terms of continuous mutual feedback loops between basic and application-oriented activities. Inventors, when asked for pinpointing topic overlaps

Table 7.3 Respondents' views on topic overlap between basic and applied activities

	Inventors	Non-inventors ^(*)	Quote
(1) Applications as byproducts (or even joint products) of basic research	11	0	'There is total overlap: everything we publish we try to patent. [. . .] This is due to our philosophy: if something is really interesting in biotechnology and life science, then it is also interesting for practical applications.'
(2) Feedback loops between basic research and applications	8	4	'Many new ideas come up in the process of patenting. There is really a lot of cross-fertilization. For example some specific applied questions require going all the way back to the theoretical formula and rethinking or rewriting them. So I have to go back all the way down to mathematics [. . .] It's really cross-fertilization.'
(3) Keep basic and applied research sufficiently separated	4	3	'When a company comes in and starts paying a number of people from the lab, it changes the dynamics. I don't think the lab has the right dynamics to run such a project: it is not the open free spirit environment. [. . .] When you mix industry collaboration with the solid lab activity, you get confused people in the lab. So it's best to keep them separated.'

Note: ^(*) For two respondents, this was unclear. They are not in the table.

between their patents and publications, affirmed that everything that is patented, is also published. Both are outputs of one and the same research project. Development of the basic research agenda receives the highest priority. It is the driver behind all outputs, with publications covering the whole spectrum and industry applications representing a subset of all the knowledge created. A minor share of respondents still argued for a separation between basic and applied activities. Their arguments are various: the academic setting still imposes taboos on application-driven research, collaboration with industry is seen merely as a way of getting access to

specific resources, and some difficulties in balancing short-term applications and long-term fundamental research were being experienced.

The obviousness with which most professors point to high levels of topic overlap creates the impression that the flow from knowledge creation to applications is a spontaneous one, muting allegations of tensions. Further exploration of respondents' narratives reveals clues for qualifying such spontaneity. Crucial prerequisites are open-mindedness and sensitivity for valorization opportunities.

Professor Engineering Sciences: For me, I am in academia; publication has to be my number 1 priority. If I can't publish well, I don't get good students, I don't get recognition, I don't get reputation. So publication has to be number 1. Then, to put out patents: if it happens, it happens. It is not that we are driving towards it. I don't see it as something that we would plan for the next two years. But you have to be open-minded enough to know when to do it.

Professor Engineering Sciences: For us, publications are most important. But it's clear that the question of patenting is in the room. So if we have a publication and we see some potential, then we check with our patent group here.

Professor Engineering Sciences: I am not oriented towards patenting. I am oriented towards not losing an opportunity to patent.

It is clear that no tensions are experienced between an entrepreneurial orientation on the one hand and the creation and maintenance of the basic research agenda on the other hand. The opposite is even expressed: scientific activities benefit from an orientation towards applications. Interestingly, several researchers pointed out that the worst enemy of the basic research agenda is the science system itself. Excessive focus on international visibility makes scientists lock themselves in 'fashionable' topics, possibly at the cost of more interesting research tracks. On the other hand, being too advanced is not rewarded by the system, as peers are not ready yet to absorb and assure some follow-up. With regard to alleged secrecy issues in relation to patent activity, respondents indicate that patents and publications are developed in parallel, with difficulties rarely occurring.

As such, allegations of industry-orientation negatively influencing the academic research agenda do not find support in this study. Moving beyond the conduct of science and the maintenance of the academic research agenda, respondents nevertheless mentioned some constraints to be taken into account when working with industry.

Professor Engineering Sciences, when asked about possible negative effects of secrecy norms in industry: It has happened. We had one case with [company] where it has been detrimental. We had a brilliant postdoc. For two years, he had

been refused to publish. And that is really a pity. . . . He was a brilliant guy. A nice guy also, he accepted this restriction. But he is looking for a professorship now . . . so he needs publications.

Respondents often associate difficulties with inexperience. Experienced professors have learned how to prevent tensions or trade offs. A synthesis of their stories reveals three important principles:

- **Selectivity:** selecting industry partners and projects for cooperation only if they respect and accommodate to the practices of the scientific environment.
- **Contract clarity:** being very clear when formulating contracts with industry partners; especially in relation to publishing.
- **Foresight and anticipation:** knowing what may be valuable for (commercial) development later on; and not going public with concepts or results before patent activities have been initiated.

In summary, the majority of respondents pointed out that understanding implies application and vice versa. As a consequence of situating their activities within Pasteur's quadrant, no major tensions or trade offs between scientific and entrepreneurial activities are encountered. In addition, selectivity, contract clarity and anticipation are seen as important principles to enable and facilitate the co-existence of both types of activities.

The Role of Financial and Human Capital

To investigate how, at an individual level, resource dynamics underlie the combination of scientific and entrepreneurial activities, we inquired whether successful entrepreneurial professors benefit from the financial and human resources pertaining to their scientific and entrepreneurial activities.

Let it first be noted that at EPFL – and more generally in Switzerland – professors enjoy a relatively comfortable position in terms of scientific funding and research infrastructure provided by the school. Within our sample, no labs were found that suffer from a lack of funding. Therefore the argument that academic entrepreneurship would be driven by filling financial gaps seems less relevant in the context studied. A lack of financial dependence also implies that the academic partner has a relatively strong negotiation position in setting clear contractual agreements with industry, which in the previous section was mentioned as important in handling the risk of unintended industry interference with the academic work.

Notwithstanding their comfortable level of internal funding, respondents indicate that substantial effort is devoted to assembling the research

group's 'external' budget portfolio. It consists of a combination of the following funding sources:

1. FNS: Swiss government money for basic research that is provided through funds of the Swiss National Science Foundation. Basic research projects are funded mostly through the payment of salaries of researchers.
2. CTI: Swiss government money for application-oriented research projects, provided through funding of the Innovation Promotion Agency of the Federal Office for Professional Education and Technology. The aim of this office is 'to put the scientific potential of academic institutions to better business use'. CTI provides funding for entrepreneurially oriented R&D projects and business ideas with high market potential. Involvement of one or more industry partners is a necessary requirement. CTI pays for the researchers' salaries; industrial partners finance their own expenditures and in addition contribute financially to the research activities of the academic institution.
3. EC: European money for projects executed in one of their research programs, which can be basic or applied research. Usually the project involves a network of European partners. These can be academic partners, but often also imply industry partners.
4. Industry funds: acquired through the execution of research mandates or research contracts. Involvement of the technology transfer office implies that an overhead is being paid to the school.

The share of industry funds is generally low. This does not imply a lack of cooperation with industry, but contract research with industry partners is usually framed within a CTI or EU program. Whether direct or earned through EU or CTI funds, Table 7.4 shows that most respondents do not consider industry money as a substitute for traditional forms of basic research funding. Essentially, professors' comfortable financial position implies that they are not confronted with critical gaps – in their research budget – to be filled. More specifically for patenting and licensing activities, our inquiry among inventors shows that academic patenting does not pay off financially in the short term. Academics, when engaging in technology development, appear to be mainly driven by non-monetary motivations. When asked about the main drivers of their involvement in entrepreneurial activities, they indeed mostly touched upon non-monetary factors. Curiosity, 'getting things out', satisfaction from seeing research results being put into practice and feedback loops flowing back into the basic research agenda are all drivers anchored in or at least very closely tied to the traditional academic research mission. In addition, transferring knowledge and

Table 7.4 Respondents' views on whether industry funding fills gaps in basic research funding

	Inventors	Non-inventors ^(*)	Total	Quote
Yes, they can be considered substitutes	3	3	6	'Let's put it this way: I do applied research in order to pay for my fundamental research. In fact, it's prostitution.'
No, they are complements	18	2	20	'Whenever possible, I use the flexible money that comes from industry to complement the salaries. With the money from FNRS, we can pay salaries and a little bit of travel. But we will not be able to buy for example a computer from that.'

Note: (*) For six respondents, this was unclear.

leaving some legacy were deemed important and many professors expressed a strong social responsibility, wanting to 'give something back to the taxpayer' by creating jobs and delivering educated people to society.

The positive relation between industry funding and research performance could be explained by an important complementary function of industry-originated money, to which over one third of the respondents pointed. These respondents indicate that their research activities benefit from a budget portfolio whereby part of the funding implies industry involvement. Basic research funding provides freedom to do exploratory innovative research and to work on new ideas in a curiosity-driven way. In contrast to the academic freedom in terms of research content, stands fierce budget rigidity: besides the salaries covered, almost no extra expenses can be accounted for. Industry partners from their side usually provide the researchers with more freedom in budget allocation. This allows for the creation of flexible funding pools that can be used for things like traveling, paying temporary employees and so on. But projects including an industry partner are often stricter in terms of research content and project organization: research direction and objectives are set from the start, and predefined deliverables are due at agreed upon deadlines.

Professor Basic Sciences: Basic money is very rigid money. Funds from application-oriented projects allow one to be flexible, to buy some extra equipment, to go to conferences, . . . It is the money that basically puts the oil in the system and smoothens it.

Professor Engineering Sciences: Money from applied projects can serve as a kind of cement, for holding together the fundamental bricks that represent basic research funding.

Respondents hence perceive benefits from a budget portfolio which balances basic funding and industry-originated money. Focusing on one source would either hamper budget flexibility, or else define the project organization and research content too strictly. A positive relation between scientific and entrepreneurial activities may therefore be – partly – explained by the observation that resources acquired through entrepreneurial activities can be allocated flexibly, in turn benefiting the basic research activities.

A preoccupation with budget composition rather than budget size may wrongfully create the impression that the latter does not matter. Importantly, however, budget size primarily defines the scale of the research activities, even more so as a large part of the budget is immediately translated into human resources. As said previously, much empirical evidence is available on how group level factors influence research activities. Yet a specific point of interest in the interviews was whether there are specific group characteristics that enable the combination of research to valorization activities. Even when explicitly asked about this, professors' narratives still paint a pretty one-sided picture on how group characteristics influence research productivity, rather than on how they enable a combination of scientific and entrepreneurial activities. Groups consist mostly of PhD students, and – more or less permanent – senior researchers. Respondents point to the traditional inverse U-shaped relation between group size and productivity (Hackman, 1987); but they thereby consider research productivity and not entrepreneurial productivity. As for the role of group members in the entrepreneurial agenda, professors do not refer to the presence of PhD students as enabling. About one third of respondents even try to avoid having PhD students on industry-funded projects. They point out the risks implied both for the industry partner and the PhD student: deadlines may not be made and the project could eventually turn out to be an intellectually unrewarding dead-end. Most professors interviewed, however, deliberately involve PhD students in industry-oriented projects. But the purpose here is framed in terms of the benefits to the students: industry-involvement prepares them for a future industry career. The role of senior researchers and postdocs appears somewhat more conducive to entrepreneurial outputs. These group members are more easily mobilized in entrepreneurial activities, especially by professors who avoid having PhD students work on industry-related projects. In addition, but again affecting the research productivity rather than entrepreneurial outputs,

senior researchers are said to ascertain some continuity in the basic research agenda: they constitute a more stable layer of critical mass compared to PhD students, who very often move out after finishing their projects. With this double function in the research group, senior researchers do appear to play a more pivotal role in combining and balancing basic research activities with more applied industry-oriented activities. Let it be noted finally that the mobility of PhD students can constitute an important channel for valorizing research and linking up with industry. For one thing, many of the startup activities are initialized because PhD students want to further develop and commercialize research results obtained in their project (see also Zellner, 2005). In addition, PhD students moving out to go and work in industry create paths on which – in later stages – cooperative projects originate.

Taken together, additional resources that are acquired through entrepreneurial activities benefit the research activities undertaken. A balanced composition of the budget allows for the exploitation of complementarities between funding sources. Research group characteristics are seen as enabling for scientific activities, although entrepreneurial outputs can in some cases benefit from a complementary role of senior researchers.

Cooperative Scenarios Moderating Concerns and Appropriate Practices

Throughout respondents' narratives, many contextual factors were touched upon. Ample literature shows how national and institutional contexts can shape incentives for academic entrepreneurship (see for example Debackere, 2000; Goldfarb and Henrekson, 2003; Shane, 2004). Below this national and institutional layer, professors' stories in this study – confined to one institutional setting only – reveal a diversified picture of scenarios in which the relationships between university and industry are embedded. A synopsis of respondents' stories reveals three scenarios:

1. A 'research push' scenario: the researcher reaches a result worth commercial development, brought out onto the market; industry partner only comes in after the research has been done.
- 2a. An 'industry pull' scenario in which an a priori objective is set by the industry partner.
- 2b. An 'industry scouting' scenario whereby the industry partner 'scouts' the academic research without any fixed or predefined objective.

The distinction between 'industry pull' and 'industry scouting' scenarios on the one hand and the 'research push' scenario on the other hand, is based on which partner primarily initiates the interaction. In the research

push scenario (1), academic research leads to some result that could be worth further development and valorization. Several avenues can be taken at this point: the academic partner can create a startup, or can take a patent and license it to industrial partners. The research result can also be a starting point for a follow-up project with an interested industry partner, illustrating how one valorization trajectory may be a sequence of different scenarios. The ‘industry pull’ and ‘industry scouting’ scenarios imply a first move from industry but can be further distinguished by whether or not the initiated cooperation is directed towards a predefined goal. Scenario 2a represents a traditional research contract. The academic partner is paid for working on a problem or question that is advanced by the industry partner. Mostly, a specific output is to be delivered at some point in time upon which the partners have agreed. In scenario 2b, the academic researcher pursues his or her research agenda and some industrial partners become involved by providing additional funds: in turn these partners are allowed to scout the research being done. The industry partners here are mostly large firms that can afford to sponsor research at several research institutions. No predefined objective is put forward by the industry partner.

While these different scenarios are not meant to provide an exhaustive mapping of collaboration modes, they do shed further light on the conditions that influence the reconciliation of scientific and entrepreneurial activities (for a well-documented similar exercise in the plant breeding sector: see Joly and Mangematin, 1996). First, the timing and directions of feedback loops between scientific and valorization outputs – and consequent topic overlaps – should be considered in light of the scenario in which the university–industry interaction is embedded. For example in scenario 2a, the industry partner is most closely involved in the academic research process. Academic research in this scenario could be more vulnerable for industry influence than in scenario 2b, where the industry partner plays a much less active role. In scenario 1, topic overlap is likely to be highest: the ‘byproduct’ conceptualization is most salient in this scenario.

Second, the relevance of ways for dealing with possible tensions (cf. supra) differs according to the interaction mode. ‘Selectivity’, in an industry pull scenario, essentially means accepting or rejecting projects. This decision influences research under scenario 2a more strongly than under scenario 2b. In the former, a subdivision of the academic research is actively ‘directed’ by the industry partner. In the latter, the industry partner plays a more detached role of supporting observer. In the research push scenario (1), selectivity really means choosing a partner to which to transfer scientific findings in later stages of development. The relevance of selectivity as a way to avoid difficulties depends on the avenue chosen. If the startup avenue is chosen, the industry partner is created rather than chosen. In some cases

where the licensing avenue is chosen, selectivity is less of a concern because further activities are being transferred. However, to the extent that future cooperation is needed with the licensee for further development of the invention (see Jensen and Thursby, 2001), selectivity again becomes relevant as the avenue chosen then leads back to scenario 2a. Opportunities for success in the research push scenario are most importantly defined by the ability to foresee valorization potential. Foresight is even a necessary condition for scenario 1 to occur. In the two other scenarios, foresight of the industry partner can to some extent substitute for a lack of foresight at the academic side. The relevance of contract clarity, finally, is high in all three scenarios. The type of contract is nevertheless contingent on the cooperation mode. A clause guaranteeing the publication possibility for the academic partner appears most important in scenario 2a. Related to this – and mostly important in scenario 2b – is an agreement that no part of the research being conducted can be made exclusive for use of the scouting industry partner. Scenario 1 often revolves around some licensing contract; these are mostly relatively standardized. Many respondents at this point indicate welcome support of the technology transfer office in defining and following up contractual agreements. Relating some of these contentions back to what was said in the interviews, Table 7.5 shows the frequency of associations between ways to deal with tensions and the specific scenarios.²

The research push scenario comes out as most prominent. This reflects the frequently expressed paradigm in which developments are byproducts of curiosity-driven research. Scenario 2a is also mentioned frequently, whereas scenario 2b is somewhat less cited. Taken together, ‘selectivity’ is mostly touched upon as a way to deal with difficulties that may arise from industry-involvement. ‘Foresight’ is also mentioned frequently but exclusively in association with the research push scenario. ‘Selectivity’ seems most relevant in industry pull scenarios with a predefined goal, but has also been mentioned in the research push scenario. ‘Contract clarity’ is mentioned to a somewhat lesser extent, but seems most relevant in scenario 2a.

Table 7.5 Frequencies of association between scenarios of university–industry linkage and mechanisms to avoid difficulties

	Scenario 1 (research push)	Scenario 2a (industry pull: predefined objective)	Scenario 2b (industry scouting: predefined objective)
Selectivity	5	8	3
Contract Clarity	1	3	1
Foresight	10	–	–

An exploration like this shows how the exploitation of opportunities, discussed in the previous sections, is qualified by the specific setting in which the university–industry interaction takes place.

CONCLUSIONS

An in-depth exploration of academic entrepreneurs at EPFL, a renowned Swiss engineering school, offers insights into the mechanisms behind successfully combining scientific and entrepreneurial activities within Academia.

Reassuringly, and in line with what is shown in most quantitative studies, this qualitative investigation reveals no fading of the traditional missions among entrepreneurial academics. Interviewees expressed a deeply-rooted sense of research as their main mission. The adoption of an entrepreneurial mission appears to even highlight the traditional mission, possibly because the danger of neglecting it becomes more pertinent.

Entrepreneurial professors indeed experience benefits from engaging in basic scientific activities on the one hand and industry-oriented applications on the other hand. A conceptualization in terms of ‘knowledge spillovers between multiple activities’ seems inappropriate, as the paradigm by which our respondents conduct science essentially unites the activities of creating knowledge and valorizing it. A curiosity-driven basic research agenda is the underlying activity out of which publications and entrepreneurial ‘byproducts’ originate. Experienced researchers have adopted several principles to deal with potential conflicts in practice: selectivity, contract clarity and finally foresight and anticipation. The acquisition of financial resources provides complementary benefits. Industry funds play an important complementary role, as they imply more flexibility in terms of allocation than traditional government funding for basic research. A successful combination of scientific and entrepreneurial activities appears to be facilitated by a balanced budget portfolio, which allows both budget and topic flexibility to be achieved. The composition of the research group is seen as instrumental for improving scientific productivity rather than as contributing directly to a successful combination of research and entrepreneurial activities. Nevertheless, the role of senior researchers can be pivotal in scientific as well as entrepreneurial engagement. Finally, our respondents highlighted the importance of the specific scenario in which the university–industry interaction is being embedded. Three scenarios have been described, each implying particularities on the occurrence of potential tensions and the relevance of different coping strategies. Consideration of the different implications that each scenario entails, seems highly appropriate when further analyzing academic entrepreneurialism.

These results suggest that technological developments and industry-oriented outputs, at least in the setting under study, are first of all conditional on a qualitatively solid scientific base. As ‘understanding requires application and application requires understanding’, involvement in technology development is seen as complementing science, rather than conflicting with it. Our observations suggest some mechanisms whereby university administrators can foster an adequate atmosphere. A fluent translation into technological developments – patents – is accomplished by adopting a perspective on patenting as an additional channel of output for research results, rather than as a necessary evil. This requires that financial dependence on industry partners for filling critical funding gaps remains limited, but also that a supportive atmosphere is created for entrepreneurial activities. Technology transfer offices can fulfill an important function in creating awareness of opportunities for professors and their ideas and in offering support and information about contractual possibilities. Finally, sufficient degrees of autonomy seem instrumental for professors to select their own entrepreneurial trajectories to embark on, complementary with their core research agenda.

Overall, entrepreneurial professors, having adopted a proactive stance towards valorization, do enact several dynamics that allow them to become more effective in different activities. It seems that the exploitation of opportunities to successfully combine scientific and entrepreneurial activities not only presupposes a sufficient degree of strategic autonomy (Bailyn, 1984); the degree of autonomy itself is actually being enhanced by simultaneous involvement in different activities. Professors’ autonomy in setting the research direction provides them with the opportunity to exploit knowledge spillovers between understanding and application. At the same time, acquiring additional resources from industry creates additional degrees of freedom for effectively managing the portfolio of research activities. Strategic autonomy thereby also allows professors to engage in certain scenarios of industry interaction and to avoid others, facilitating the alignment with an industrial environment. When such increased levels of strategic autonomy are framed within a triple strategic mission – covering research, education and valorization – the harvesting of opportunities, resulting in better performance, is likely to occur.

NOTES

1. The terms ‘joint products’ and ‘byproducts’ were not as such used by the respondents themselves. We refer to their definition in accounting. Joint products are two products that are simultaneously yielded from one shared cost and they have a comparably high (sales) value. Byproducts from their side are produced along with a ‘main’ product. The latter

constitutes the major portion of the total (sales) value. Byproducts have a considerably lower (sales) value than these main products. We can use these terms to think about basic research (publications) and applications (for example patents), by using 'perceived value to the academic professor' instead of 'sales value'.

2. It should be noted here that these categories and the matrix structure have been developed a posteriori, at the moment of data analysis and synthesis of the stories told. So interviewees were not systematically asked to classify the cases of which they spoke.

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8. The university is not an institute of technology

Gilles Van Wijk

I. INTRODUCTION

The fact that universities around the world tend to lose their autonomy as institutions of higher learning and of fundamental research has been observed and discussed quite extensively. Indeed, a lot of attention is being paid to universities, either to insist that the lack of public support is curtailing the innovation potential and the competitiveness of the economy (Axelrod, 2002), or to argue that new institutional models are developing, with close collaboration between universities, companies and government in the so-called triple helix, or with more self-supporting institutions such as the 'entrepreneurial university' (Etzkowitz and Leydesdorff, 1997; Etzkowitz et al., 2000). Jacob Merle and Tomas Hellström (2000, 1) comment that three important developments have strongly impacted on the university research system: the shift from national science systems to global science networks; the capitalization of knowledge; and, the integration of academic labour into the industrial economy, 'also known as the coming of the knowledge society'.

In the same vein, Gibbons and his colleagues (1994) make two typical predictions about the future of the university. The first is that the nature of knowledge production is being transformed from Mode 1 (disciplinary, university-centred process) to Mode 2 (a transdisciplinary-based knowledge production in which academics collaborate with users to produce practice-relevant knowledge). The second claim is that this Mode 2 process is superior to Mode 1. These two predictions serve to group issues ranging from epistemology to politics in the university, and they may also be read as legitimizing the decline of the university as the central site of knowledge production.

The debate largely rests on differences in conception between those who argue for a university as an efficient, competitive organization, and those who view the academic institution as an organization that plays an important social role without complying necessarily with the dominant rules of efficiency familiar in the other sectors of the economy.

In the following, it will be argued that both conceptions are valid, but that they will deliver very different results in the long term, practical and theoretical. The outcomes are complementary and have to be maintained, neither model dominating the other. In order to achieve this, it is important to develop a global vision that goes beyond the alternative models, and integrates both systems, recognizing their distinctiveness and their complementarities. We will distinguish the university from the institute of technology: the university is in charge of the pursuit of pure science, the institute of technology is in charge of the development of applied science. When this distinction in the roles and outcomes is lost, a lot of confusion and contradiction results.

The mission of the university, the interaction with the environment and the factors that lead to discrediting the classic university model will be discussed in the following sections. Together these elements will provide the means to analyse the contradictions in discourse and in policy. We will argue for a new equilibrium, reasserting an old arrangement with the university, and its ‘universal mission’, and institutes of technology with their operational role.

II. UNIVERSITY MISSION

The mission of the university may be a matter of debate. In order to achieve some clarity, it is necessary to decide at the outset what its objectives are and/or should be at the societal level. The mission will be stated in simple institutional terms and open for reformulation as long as the ‘spirit’ of universality can be maintained: the university is there to create and diffuse knowledge for the good of society. This is materialized in a Unesco (1998) statement: three indissociable principles for which every university should stand:

- the right to pursue knowledge for its own sake and to follow wherever the search for truth may lead;
- the tolerance of divergent opinion and freedom from political interference;
- the obligation as social institutions to promote, through teaching and research, the principles of freedom and justice, of human dignity and solidarity, and to develop mutually material and moral aid on an international level.

This somewhat lofty statement is probably acceptable to most, even if some may argue that the actual contribution to society is not specified. It

focuses, nevertheless, on important questions: creation of knowledge, education, and the good of society. Each of these three elements of the mission will be developed so as to expose what the objectives are and how they are supposed to be achieved.

III. CREATION AND DIFFUSION OF KNOWLEDGE

The creation of knowledge is achieved by fundamental research, a research that should tolerate 'divergent opinion and have freedom from political interference', to paraphrase the Unesco statement. This research requires two ingredients: time and money. It also requires the special skills of people not thinking in conventional ways: even within the scientific community, the social pressure towards conformity in scientific paradigms exists (Kuhn, 1962; Latour, 1989). It is therefore important to always reassert academic freedom. Summing up, combining time, money, competence and academic freedom, university research will generate a variety of explorations of which only very few will eventually achieve the status of 'normal science'. But all these explorations are necessary: research cannot be effective by being planned. Variety, not planning, generates new insights and eventually, new knowledge.

This position can be challenged. Technology and science have reached such levels of development today that their full development and their implementation can be argued to be more important than the intellectually attractive quest for further development of science. This last statement emphasizes the distinction between fundamental and applied research. Applied research will seek implementation through development of existing knowledge. This kind of 'research' can be planned and programmed. Its purpose is unambiguous and it has direct practical and economic relevance. However it does not yield the diversity of exploration, and hence it does not generate 'discoveries', that is radically new insights. Nowadays, a degree of closure in a number of domains may suggest that further research is pointless: not only the 'end of history' but also the end of science (Horgan, 1966)? Disqualifying fundamental research and preferring applied research would implicitly come down to pretending that we have achieved closure in terms of knowledge, a positivistic stand *à la* Auguste Comte. In such a case, all that would be left to do would be to develop the consequences of our existing theories. In all respects this is hard to accept, and scientific progress in unexpected directions continually proves that this is contrary to everyday experience, despite the persuasive arguments advanced by Horgan.

In a similar way, diffusion of knowledge education appears to be split between two objectives: applied and academic. First there is the

‘vocational training’ in which students are learning techniques, models, theories with the purpose of applying them appropriately. The knowledge involved in this kind of education is well defined, and the programmes can be tuned to the exact needs of industry. Furthermore, the didactical techniques can be carefully worked out in order to achieve best results with the students involved. As a result, offering applied education is a matter of ‘programming’, and it will further the implementation of applied knowledge by providing the technicians. This is typically illustrated by the training of software engineers that will work using the programming tools developed as an implementation of software programming systems and languages.

Academic education is of a different order. Whereas the preceding training involves coursework and internships for on-the-job training, here the education requires coursework to acquire the basics of a discipline, similar to the previous training, but also seminars and laboratory work, where exploratory work is done to study the limits of the theories. Students in this situation have to learn quite something else: they have to develop critical thinking towards normal science. This kind of thinking emancipates the human being. Students have to raise issues, and explore them as to their originality and their significance, in literature reviews and field research. They have to articulate their initial insights more precisely and devise experiments so as to get a discriminant validation. Clearly, this education can either be limited to dialectical skills or develop into actual research training. Critical thinking is considered as part of basic education, beyond mere rote learning of (scientific) facts, and builds on a humanistic model of man. It rejects the idea of education as a simple means to play a productive role in society, and claims that a capacity of thinking autonomously is essential for personal deployment. In the US, this kind of education is typically offered at the college level. In Europe, this kind of education is offered at high school level.

On the basis of this separation between pragmatic and academic approaches, two sorts of education can be conceived of. Classic approaches suggest that both kinds are necessary: they build on each other. Basic education provides the elements of knowledge and the means for critical thinking. Beyond, according to opportunity and capacity, higher education can be directed towards practical implementation, typically engineering or business education, or towards academic research, typically with PhD training.

In fact there is not much new under the sun: the separation between professional and academic education goes back to the early nineteenth century, when in Germany and in France ‘schools’ were created dedicated to the education of professionals in engineering in particular, to build bridges and roads, develop telecom systems and so on (König, 1935). This separation of ‘school’ and university has been fruitful. It still exists today though the two

kinds of institutions have grown very close to each other. On one side there is the 'institute of technology', with the near equivalent 'Hochschule' in German-speaking countries, and the 'Grande Ecole' in France. On the other side there are the national or private universities, with uncertain futures. The current debate about the creation of a European Institute of Technology is an almost ironic reflection of the confusion between the two entities. Beyond the talk of creating a centre of 'global excellence', the mission includes the 'knowledge triangle' of innovation, research and education (Cordis, 2006). It should be realized that research is innovative by definition, and that innovation refers here to applied research, bringing together two fairly antagonistic orientations. The fact that they are complementary does not mean that they can be accommodated within a single organization: one approach is questioning normal science, the other is implementing promising developments; one is requiring open-ended resources, the other is promising concrete results.

Some institutions of world fame seem to be a living contradiction to this thesis. The Massachusetts Institute of Technology has contributed to pure science and to applied developments of worldwide significance. The cross-fertilization of ideas and practices seems to demand the continuous challenge of the opposites to develop innovations. Yet, this does not mean that a single organization is the best way to achieve these exchanges. Quite the contrary, a variety of constraints and pressures still to be discussed is likely to create an imbalance, and eventually evolve into a lopsided institution. In this sense, the MIT is a remarkable exception.

Contemporary developments focus increasingly on the immediate usefulness of the training received, and logically tend to favour vocational/professional training. The education must be instrumental to the job, and academic training has become a luxury. In Europe, the labour market reflects this social preference for professional training by giving it the higher compensation and prestige which used to be granted to academics.

Because the missions and the means of the two institutions are so different, they cannot be grouped or combined in any way. This leads to confusion, debate, competition and conflict, and missions that are not properly carried out. Today's problem is not just one of confusion, however, but also one of dominance of the professional model over the academic one, both intended for the good of society.

IV. THE 'GOOD' OF SOCIETY

The argument is difficult and important, precisely because the 'good' of society means different things to different people. Looking at the outcomes of higher education, where the good is most likely to be observable, the two

previous orientations are found to yield quite different results. The professional orientation produces solutions to well-identified problems: pollution and fuel efficiency, new molecules in the pharmaceutical industry, and so on; there is an urgency to find new solutions by carefully working out our expert knowledge. Applied research can produce valid solutions and in that way contribute to the collective good. In the same way, professional education is instrumental by producing well educated graduates and expert consultants.

At the other extreme, the academic orientation can attempt to explain the hole in the ozone layer, or develop new (genetic) therapies in pharmacy. Explanation is a matter of intensive research and experimentation; it will eventually contribute to the body of knowledge, but there is no particular reason to expect solutions. Costly academic research is done for 'the fun of it'. If it were to be done to bring solutions, it would most likely not even be considered as a valid research project. This gratuitous development of new knowledge, new insights and new explorations has no legitimacy other than serendipity; the belief that academic research can evolve progress, in a very general way. The belief that material contributions will happen in the future can only be based on previous experience, and on the knowledge of the limits of science. For this reason, it will be accepted more readily inside the academic community than outside, almost in a tautological way.

To sum up, goodness is a concrete concept, almost measurable in its contribution to society for applied knowledge, whereas it appears as an idealistic aspiration in the academic case. This idealistic development has, however, an essential role to play, both in maintaining critical thinking and in ensuring the continuous production of new ideas and new theories. This essential role is, however, hardly recognized in contemporary society, favouring the short-term, measurable, outcomes.

Adding to the general inclination towards control, measurable outcomes, and the preference for well-defined over exploratory processes, the practical contribution of applied approaches pulls the collective idea of what a university should be still more towards that of an organization supposed to 'produce' employable graduates and useful research. The popularity of the instrumental vision of the university adds to the regrettable confusion as to the mission of the university, and makes policy decisions matters of debate. Some argue convincingly for autonomy and independence (Axelrod, 2002). Others consider the instrumental role of the university, and others still see the emergence of new models supposedly merging the instrumental and the academic missions. In the above discussion of mission, we have tried to indicate why this last approach is doomed: the models cannot be integrated; the missions are radically different.

Several factors converge to press for 'reform' in the direction of a new university. In the next section, the external factors will be reviewed. They

give an insight of how an a priori judgement based on a vague notion of mission can be reinforced by objective facts.

V. EXTERNAL CONSTRAINTS

As has been mentioned already, it might be misleading to present the various models as the options of a choice. The differences in mission in and of themselves amply justify the co-existence of different institutions. If there is so much talk of university reform, it is mainly due to a combination of constraints that appear to disqualify the academic model definitively:

1. increasing numbers of students worldwide seeking higher education;
2. the limits of national educational policies, and the growing sense that private financing should take a more comprehensive part (students and employers);
3. demand for more efficiency in education and research, either because public money is committed (e.g. British reviewing system of universities), or private money (donator members of the board of directors);
4. harmonization across the European Community to enhance circulation of students and researchers, and to make them employable in the single market.

Facing these constraints is a tall order for any institution. University resistance and a quest for academic excellence have often been understood as academic elitism, parochialism, and resistance to change. Together the demographic, financial, efficiency and harmonization concerns seem consistently to drive out old fashioned views of the university and promote its incorporation. This assimilation of the university as just another business organization is contrary to the essence of universalism contained in the name itself.

Indeed, the above constraints converge. Meeting the challenge of the student numbers leads either to the massification of programmes with related standardization, or to a market approach where diplomas (for example MBAs) of all sorts of levels and qualities can be purchased at all sorts of prices, with all sorts of contents, and little overall control. Letting the market decide is *not* the best approach when education is concerned, even if there are rankings published in the trade journals and if much is done to provide rich information about the various programmes. In fact, good programmes have an intrinsic coherence, and they may therefore not easily be compared with other programmes, even if they deliver the same

diplomas. After all nobody claims that there is one best way to train academic researchers, or engineers . . .

Rankings typically provide a rich mix of criteria and are a good illustration of the confusion between the academic orientation and the professional orientation. Graduates' salaries will be considered (instrumental), as well as faculty's research activity (academic), internationalization of student body and entry level. Together these indicators don't make much sense, even though each indicator taken individually is interesting. Some more discerning use of indicators of what makes a good programme could be useful. But does it matter when the point is only to reassert the leading position of a happy few institutions and to stimulate their sound competition? The mass of applicants will distribute itself over the range of programmes in competition; little attention will be paid to the actual contents . . . Let the market decide . . .

Despite the awareness of the key importance of innovation in higher education in a nation's competitiveness, many European countries tend to reduce their outlays in these sectors. The reduction of public financing has led to the growing participation of private monies. Education is free less and less, students have to pay significant amounts for good and not so good programmes. In this instance, the meaning of 'good' refers to programmes that lead to 'good' jobs, high level specialized education, lawyers, dentists, or MBAs. Demand for 'open' academic programmes that broaden the mind is very limited: the market system demands pragmatism; long-term humanistic approaches are not attractive. From the industry perspective instead, the same pragmatic approach prevails: education and research for results. Obviously, these results are the 'good' of society because they further the development of business. The contributors will exert the control they have to focus the programmes and to tailor them to their specific needs.

At the same time, the ever popular quest for efficiency is sweeping all organizations, whether industrial or service. It has become a common concern with academic institutions as well. Clearly, some thinking on the proper management of such large, influential and costly institutions is useful. But this does not mean that the methods applicable to business organizations can be implemented directly. Large numbers, standardization, and private financing, all logically press towards efficient use of the facilities, and of the student and researcher time. A dedicated method of management must be developed, unless the outcome of this additional pressure will be the commoditization of the programmes.

The last constraint, harmonization, stems in Europe from a policy of integration. The European Community seeks to develop a university network in which the exchange of students and the exchange of researchers is facilitated, and the degrees are mutually equivalent. The policy has

yielded fruit: generations of ERASMUS exchanges have profited from a stimulating international experience. But, somehow such programmes have ignored an important aspect of European culture: its intrinsic diversity; languages, cultures, educational systems still are quite different. And, it may be argued that these systems all have an intrinsic coherence and did not evolve to achieve the exact same outcomes. They have been ignored in the pursuit of a single model. The Bologna process for all its approximations and ambiguities is forcing a single model on the previous diversity, imposing structure and content.

Lundvall (2002) argues that with increased internationalization and networking, universities have become 'more directly involved in market-driven processes and more exposed to competition from other producers of knowledge'. Sharp and rigid separations among disciplines and relative isolation from society are being replaced by strategies of alliances and networking. Yet 'as universities open themselves up, there is a need for changes in the institutional framework to ensure that the long-term, creative and critical aspects of academic research can survive'. Market exposure of the university is not in itself a tenable policy aim, and universities must consolidate their *traditional ethical and social dimensions of knowledge* in order to enhance the overall diversification and differentiation of knowledge production.

The recognition that diversity is an asset was not entirely lost on the lawmakers, and the principle of subsidiarity was included for higher education in the Amsterdam treaty (1997): each country is free to decide upon a number of parameters regarding its programmes. 'The community shall contribute to the development of quality education . . . while fully respecting the responsibility of member states for the content of teaching and the organisation of education systems and their cultural and linguistic diversity' (art. 149). This article appears, however to be radically invalidated with the subsequent action lines of the Bologna process (1999): readable and comparable degrees, two main cycles, a system of credits, and the promotion of mobility. Once the temporal structure has been imposed, two main cycles and mobility of students requiring the alignment of terms, and once the contents are 'harmonized' to ensure comparability and mobility, there does not remain much to be decided at the country, or the institutional level. The success of harmonization spells a loss of diversity, in order to install education developed as a production line, with 'quality assurance', indicators, benchmarks and best practice to achieve greater convergence. The surprising presence of this consultant jargon not only reveals the fact that education and research are considered as just another business, but it also underlines the influence of management consultants among European legislators.

This rapid survey suggests two things: all the forces at work converge towards a very instrumental definition of the university, and the open critical thinking approach appears more and more as an outdated model. The notion of subsidiarity as posed in the Amsterdam treaty would suggest that there still is some hope, but in effect mission and constraints make it an uphill battle. To make a difficult situation worse, the academic model also suffers from severe internal management problems that definitely do not make it more attractive to the public. These intrinsic problems will be reviewed next.

VI. THE UNIVERSITY'S INTRINSIC PROBLEMS

The external constraints just reviewed push for a professionalized business-like model of the university. Recognizing these pressures will help to face them and possibly maintain the university's essential mission. But this is not enough, intrinsic characteristics further make the university suspect for non-academic stakeholders:

1. autonomy and self-regulation of academic institutions;
2. external financing, without specific commitments as to outcomes;
3. key mission, 'good of society', is self-defined and not monitored by the outside.

These characteristics reinforce the idea that the university is a fortress and that it will resist any assailant. Indeed, predictably, these characteristics have led in the past to significant abuses: inefficient operation, even by academic standards, outdated curricula, inexistent research, clan behaviour among faculty, and so on. In certain cases the dysfunctions are even institutionalized, and generate situations of isolation and concomitant mediocrity (Gagliarducci et al., 2005). The great academic freedom supposes at least a good measure of responsible behaviour on the side of faculty. Instead, the attempts to fight these most regrettable situations have given more argument to the advocates of the university business model: competition with rankings, financing tied to external control, import of management methods.

These are not the right solutions if the integrity of the university is to be preserved. Instead, it is probably possible to carefully develop a mutual control system, in which teaching and research are valued for their intrinsic value. This kind of control process is costly, but it is much more costly for all people involved to offer sub-average programmes and research. Autonomy and self-regulation will hence become possible by the definition

of managerial positions, probably occupied by academics, but with an 'impresario' responsibility. Faculty must be at the centre of the stage, performing like stars.

Financing has to remain free of commitment, even though this flies in the face of common business sense: the university system takes its responsibilities as to the good use of the funds allocated, but it will not commit itself to any particular outcome. In the long run, few will probably accept this proposition, and in most cases public financing will be the only practicable way.

Finally, the mission of the university is perceived as problematic to those who do not understand it, and to those who may want to modify it – in instrumental directions. The academic mission is totally unambiguous: education and research can generate important contributions to society. It is true that the time involved may not suit those who are eager to obtain short-term results, but eventually, significant contributions will be delivered again and again.

VII. CONCLUSION

The discussion of the development of the university in years to come has highlighted a number of serious problems affecting the academic institution. First, there is a strong tendency for the university model with open research and critical thinking to fade away under the irresistible pressure of applied education and research. Second, the university is not an organization like most others: its specificity is in fact a strong liability as it can develop severe dysfunctions, and discredit itself. Given the strength of forces tending to impose a professional university model, and the weaknesses of the alternative academic model, a clear policy is necessary.

The policy is to reassert the idea of distinct institutions: institute of technology and university with their unambiguous missions. Public funding and a high degree of autonomy will be given to the university, whereas the institute of technology will rely on private funding and much collaboration with the industry. Institutes of technology will probably end up competing for students and funded research projects, but they should be left to themselves to decide on the best curriculum, as they will decide by themselves on the best research projects to pursue. The university will operate mostly on intrinsic standards. However, the university network will be required to confront programmes and projects on a qualitative (outcome) basis. Only through this separation, will the fragile entity that is the university be able to operate and to perform, and become attractive again.

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PART III

Cases

Section III (i)

Governance and Performance Measurement

9. Australian higher education transformed: from central coordination to control

Suzanne Ryan, James Guthrie and Ruth Neumann

1. INTRODUCTION

I want to see a sector that provides a world class education of the highest standard for our students, that equips them with the skills employers will seek for the jobs and professions of the 21st century, with universities that create new knowledge to underpin our innovation and competitiveness, that are accountable for their performance, transparent in their operations and efficient in their administration to ensure they are affordable to students and the taxpayers that sustain them.

And that means I want to see the development of a diversified higher education sector, made up of universities which differ from each other in terms of mission, discipline mix, course offerings, modes of delivery, management and in academic structure. (Bishop, 2006a)

This quote from the former¹ Australian Minister for Education provides the context for our chapter on the Australian Higher Education System (AHES). The chapter continues our work in the area of ‘New Public Management’ (for example, see Guthrie et al., 1990; 1997; 1999; 2005; Guthrie and Humphrey, 1996; Olson et al., 1998; 2001; Jones et al., 2001) with a particular focus on the Australian Higher Education System (AHES). The powerful effects of New Public Management (NPM) and New Public Financial Management (NPFM) reforms have been established over the past decade, with significant potential to impact further upon the scope, nature, provision and management of public services. The work of Guthrie and Humphrey (1996) and Guthrie et al. (1990; 1997; 1999) discusses the need to subject these reforms, both their practical application and the forces motivating them, to detailed empirical research and analysis at individual, organizational, national and international levels.

The NPM reform agenda has influenced the AHES over the past decade (Neumann and Guthrie, 2002; 2004; Guthrie and Neumann, 2007). This

chapter explores how funding mechanisms have been used to steer the role of universities from a domestic social institution to a competitive export industry, with a consequent shift in the role of central government from co-ordination to control.

Against a backdrop of increasing social demand and decreasing government resources, the trend over the past two decades has been for higher education institutions in OECD countries to undertake NPM reforms incorporating a market-oriented approach to higher education resulting in 'institutional and professorial markets' and 'market-like efforts to secure external moneys' (Leslie, 2001). The emergence of 'entrepreneurial universities' in some countries is one expression of this trend (see, for example, Clark, 1998; 2004; Marginson and Considine, 2000; Slaughter and Rhoades, 2004). Similar changes in government policy and funding directions have occurred in the UK, NZ and Europe; however, the Australian transformation is marked by its speed and compliance.

This transformation results from a number of key Australian public policy changes. Previously, government support for university teaching and research had been justified on the basis of 'public good', in which specific benefits are widely dispersed and payoffs are not immediate. More recently, the performance of the Australian economy has been linked to 'successful outcomes' emanating from knowledge-intensive industries, with an increasing focus on innovation and research. Paradoxically, the need for universities to raise revenues, especially through international student fees for teaching, and to focus on organizational productivity changes has undermined the time and resources available for research and innovation. The consequences have been to radically alter the structure and culture of universities and introduce a pervasive 'new' language (Vagnoni et al., 2005). This language is reflected in the Minister's quotation above with its emphasis on 'competitiveness', 'accountability', 'performance' and 'efficiency'.

The past decades have witnessed executive government use of funding mechanisms to steer the most radical changes in the history of higher education in Australia. The changes came in four waves. The first wave of funding changes in the 1970s moved universities from elitist social institutions to more public social institutions with the abolition of student fees and a shift in funding responsibility from the states to the Federal government. The cost led to a second wave of funding change in the late 1980s that partially reintroduced fees, created a mass higher education sector through amalgamations of universities and colleges and encouraged universities to seek additional revenue through fee-paying international and postgraduate students. Universities responded quickly, building a major export market in higher education and developing postgraduate courses to attract full-fee paying students. This reduced university reliance on Federal government

funds but also created short- rather than longer-term financial stability. The third wave, in the 1990s, aimed to make the 'new' AHES more competitive but more accountable. The fourth wave has been focused on greater efficiencies, compliance and quality measurements. Thus, from the late 1980s to the present, federal government funding of AHES moved from full funding to financial support. In particular, the introduction of productivity and performance grants served not only to enhance central government control over the universities, but to further entrench a managerial culture within the university system.

This chapter focuses on the third and fourth waves of government funding changes. It examines the impacts of these developments in four areas: institutional governance; academic staff and culture; teaching; and research.

The chapter is structured as follows. Section 2 outlines the changing nature of the AHES over the past decade in terms of scale, legal basis and funding arrangements. Section 3 examines the impact of the new funding arrangements and performance monitoring regimes on the work and operation of universities, specifically on institutional governance, academic staff and culture, and teaching performance. Section 4 provides an overview of changes in research in the AHES. Section 5 concludes with an analysis of the former Minister for Education's vision of the future for the AHES based on government policy in the past decade.

2. THE CHANGING NATURE OF THE AHES

In 2006 Australia had 37 public universities, three private universities and several self-accrediting higher education institutions. Slightly more than 95 per cent of the 957 176 students in 2005 were enrolled at public universities and over 25 per cent or 239 000 of these students were international students (DEST, 2006a). This is an increase of 51 per cent in total student numbers over a decade including a 350 per cent increase in international students (from 53 188 in 1996) and a 370 per cent increase in postgraduate coursework students (from 45 374 in 1996 to 213 462 students in 2005).

Australia has a federal system of government. Constitutionally education² is a state responsibility and thus all universities report to State Parliament annually and are subject to state government financial audits. However, full funding responsibility for all public universities was assumed by the Federal government (herein referred to as 'central government') in 1973 through the abolition of student fees. This was the first step in central government assuming more direct control over universities. The full funding agreement with the state governments was renewed in 1991.³

Direct central government control was further increased with the abolition of independent national advisory bodies on higher education. The Commonwealth Tertiary Education Commission (CTEC), which influenced the structure of higher education and allocated resources based on federal government budget determinations (DEET, 1993) was abolished and its responsibilities assumed by the central government through a much weaker, statutory advisory body, the National Board of Employment Education and Training (NBEET). This was abolished in 1996, thus removing all previous buffers between central government and universities. Subsequent central governments used their direct control to affect significant change in the AHES.

Since the revision to the funding agreement between the state and central governments during the second wave of reforms in 1991, there has been a progressive move from full funding to partial subsidization of universities. This has been achieved through the increased use of tied, negotiated and competitive grants with a resultant increase in control of central government over universities. The nature of this shift in relationship is evident in the change of name from the old act, *Higher Education Funding Act, 1988*, to the new, *Higher Education Support Act (HESA), 2003*. The replacement of the word 'funding' with 'support' is not merely semantic. It heralds a raft of micro-management conditions and accountabilities that were hitherto unknown in the sector. Changes to university funding can be seen in Table 9.1

Government grants have also substantially changed in purpose and nature. The Australian Higher Education Contribution Scheme (HECS) is an income contingent loan, where students contract to pay back a loan for fees at a later date. Non-government income is derived primarily from student fees with additional revenue sources such as bequests, industry grants and university owned private consultancy companies. The change in the amount and nature of grants from the government, and the success of

Table 9.1 University revenue by main source

Source of Revenue	1996	2005
Federal government	57%	42%
HECS	12%	14%
State and local government	1%	1%
Fees and charges	13%	27%
Other sources	17%	16%
Total university revenue	\$8,052m	\$13,941m

Source: Adapted from AVCC (2005a) and OECD (2006)

most public universities in building alternative sources of revenue, can be seen as a marked policy success. It is a remarkable achievement in a relatively short period for the central government to move from near full funding in 1991 to partial subsidization of universities in 2006. There are several different grants provided by the central government under the most recent education legislation, HESA, 2003, to support the operation of universities. These grants are further explained in sections 3 and 4.

As indicated in Table 9.1, across the sector, non-government revenues are nearly equal to government revenue. Non-government revenue is sourced primarily from 'education entrepreneurship' (Slaughter and Rhoades, 2004). University responsiveness to marketization has been strong. Fees from international and domestic postgraduate students have been the major source of revenue to replace decreases in government funds. Australia has the highest percentage of international students of all OECD countries (OECD, 2006). Total expenditure by international students studying in Australia and in transnational Australian programmes in 2007 was \$12.5 billion (IDP, 2008) making international education Australia's third largest export industry behind coal, iron and tourism. Fees from overseas students as a percentage contribution to institutional revenue increased from 0.065 per cent (\$531.11m) in 1996 to 15.1 per cent (\$2.168b) in 2005 (DEST, 2006b). Fee income from domestic postgraduate coursework students has been significant. Other sources of non-government revenue have included donations, industry grants, private research and consultancy contracts and community education programmes.

Although the revenues obtained from these non-government sources are substantial, the cost of attracting these funds in terms of marketing and management is also high. The need to attract additional funds has led to the creation of additional administrative and service units within university structures.

3. PUBLIC ACCOUNTABILITY AND CENTRAL CONTROL

Performance monitoring has increased greatly and forms an important aspect of measuring the success of central government policy (Guthrie and Neumann, 2007). A central government review and direction setting exercise for Australia's universities, *Our Universities: Backing Australia's Future* (Nelson, 2003), required universities to assess and indicate their performance in detail in an institutional assessment framework. The scale of reporting and the detail required highlight the level of government scrutiny of universities' performance in return for an increasingly

small proportion of their annual funding (Guthrie and Neumann, 2007).

The following sections examine the impact of the 'new' funding arrangements and performance monitoring regimes on the work and operation of universities, specifically, in relation to institutional governance and labour relations (section 3.1), academic staff (section 3.2), and teaching (section 3.3).

3.1 Institutional Governance and Labour Relations

Reductions and changes in government funding have created unprecedented changes in university governance and structure. Governance responsibilities and structures have become narrower and more hierarchical. The administrative structure has grown and become more complex to cater for new and expanded functions in marketing, international recruitment, community relations, planning and finance. Many decisions once made by academic groupings are now made by administrative staff (Coaldrake and Stedman, 1999). The power of academics within universities has been effectively eroded by the increased number of managers and the impact of managerialism (Neumann and Guthrie, 2002).

Although the general shift in institutional focus from research and teaching to being a 'business' commenced in the late 1980s, it has been consolidated in the past decade. While academics continue to have major control over their teaching and research, senior management and administrators control resources. In order to gain greater financial control over the institution, faculties have been made financially accountable for their budgets. The effect of this was to make cross-subsidization between faculties difficult so that overall resource allocation between faculties has become inequitable. Efficiencies were exacted by cutting or downgrading non-profitable disciplines. Profitable disciplines, primarily business and commerce, have had large increases in student numbers. In these instances further cost-efficiencies have been made through the employment of casual academic labour and the introduction of cost-effective teaching technologies. Government grants such as the *Workplace Productivity Program*, introduced under the HESA, assist institutions in making productivity gains in all areas of operations (DEST, 2005).

Micro-management of universities by the central government was achieved through incentive grants in areas such as governance, productivity, industrial relations and workplace reform. In institutional governance, for example, universities are eligible for increased funding under *National Governance Protocols*, another HESA initiative, that requires the governing bodies of universities to, *inter alia*, specify objectives; approve mission statements, strategic and business plans; consist of no more than 22 members

including at least three with expertise in financial and commercial matters; and generally govern in accordance with the principles in the *Corporations Act* (DEST, 2004). Government incentive grants such as the *National Governance Protocols* expedited a change in focus and structure requiring more corporate behaviours, procedures and language. Vice Chancellors have become 'presidents' and 'CEOs', and 'managers' and 'directors' have proliferated to reflect the increasing number and influence of administrative staff.

In the area of labour relations change has been steady and effective since the late 1980s. National labour relations laws instituted since 1992 have moved from academic salaries and conditions being determined nationally through compulsory arbitration to a system of institutional collective enterprise bargaining and most recently to the encouragement of individual contracts. The implications of changed labour relations have been significant, financially, culturally and in terms of equity across the sector. At the same time that enterprise bargaining was introduced, the government made universities financially responsible for any salary increases,⁴ thus adding further pressure on declining institutional budgets and collegial relationships within institutions. The impact of incentive funding is seen in the introduction of the *Higher Education Workplace Relations Requirements* (HEWRRs) under the HESA (2003). The central government seized the opportunity afforded by its newly introduced labour relations legislation to offer an incentive grant scheme, HEWRR, to encourage, *inter alia*, individual contracts outside collective agreements, in return for grant increases of up to 7.5 per cent of their base government (CGS) grant (DEST, 2006c). The consequences have been to undermine the notion of a 'community of scholars' by dividing, legally and structurally, the academic community into employers and employees, and further into full-time and casual employees.

3.2 Academic Staff

The impact of changes in funding, institutional governance and structure have combined with changes in labour laws to alter the nature of academic employment, academic work and academic culture. Reductions in full-time academic employment, additional new forms of work, variations in academic calendar and new modes and locations of delivery, all with a consequent increase in workload and hours of work, have affected the nature of academic work and created dissatisfaction and stress among academics (NTEU, 2000; Anderson et al., 2002). The Evatt Foundation (1994) correctly predicted that enterprise bargaining meant that academic salary increases came at the expense of higher workloads, tighter budgetary

Table 9.2 Changes in EFT academic teaching staff and students 1996–2005

Year	Teaching and research and teaching-only academic staff	Student enrolments
1996	26,302	634,094
2005	25,959	957,176
% change	–1.3%	51%

Source: Adapted from AVCC (2005b) and DEST (2006b)

controls and cuts in staff recruitment. At the same time individual productivity and performance measurements were promoted.

Changes in equivalent full-time (EFT) academic staff numbers vis-à-vis student numbers can be seen in Table 9.2. ‘Equivalent full-time’ is defined as either being employed on a full-time basis or the teaching of 25 hours or more per week. This makes it difficult to evaluate from official statistics the actual number of casual staff working in universities. However, the academic union has estimated in 2005 that over 50 per cent of academics employed in universities are engaged on a casual basis (NTEU, 2005).

The nature of academic work in the past decades has expanded into new areas, utilized new technologies, increased in administrative tasks and changed in terms of hours and location. The quest for new international and postgraduate fee-paying students and the need to ensure that undergraduates take up their allocated places means that many academics are now involved in marketing activities of one form or another. Some travel overseas recruiting students, others visit workplaces or schools or offer short courses. Technologies such as learning portals, text-matching software and online grading are in common use by academics. Additional time is required for administration and paperwork as management information systems demand more direct input from academics, whether in gathering student feedback, recording publications, organizing travel or arranging resources for teaching and research (Anderson et al., 2002). Academic calendars are no longer based on the two semester system as postgraduate and offshore programmes are taught on the basis of trimesters or even shorter terms or in block (Baldwin and McInnes, 2002). More teaching is done in the evening to cater for postgraduate students and part-time undergraduates and, with the growth of offshore, multi-campus and online programmes, it is not unusual for an academic to teach at multiple locations including overseas, several locations in Australia, at home or from their office.

While the new forms of work have ensured that Australian academics are generally flexible, technologically savvy, entrepreneurial and global in their

outlook, they suffer onerous workloads and long working hours (NTEU, 2005). Significant increases in workload have resulted not only from new forms of work, but from pressures of increased student numbers, requirements to publish and co-ordination of casual academics. In two large-scale surveys of academics and their work, the self-reported hours of work increased from an average of 46 hours per week in 1991 (Sheehan et al., 1996) to over 50 hours in 2002 (Anderson et al., 2002).

Not surprisingly, both job dissatisfaction and stress have increased among Australian academics in the past decade. Job satisfaction has declined from two thirds in 1993 to one half in 1999 (McInnes, 1999) to only one third by 2002 (Anderson et al., 2002). The number of academics experiencing an increase in stress levels has also increased from 62 per cent of academics in 1998 to 73 per cent in 2000 (NTEU, 2000). The major sources of stress are salary level and benefits, and management interference with teaching (McInnes, 1999; NTEU, 2000).

3.3 Changes in Teaching

Changes in funding outlined in section 2 have had consequent changes in the way students are taught in universities in Australia. As indicated above in section 3.2, the same number of academics now teach 51 per cent more students than a decade ago. This has meant changes in class size, decreased student contact hours, and high casualization of teaching staff.

Increased dependence on fee income from both HECS and full-fee paying students has led to the inevitable increase in student numbers and teacher–student ratios. In the years 1996 to 2004, the ratio increased from 15.6 to 21.1 across the sector, reaching a ratio of 32.8 in the business and commerce disciplines (AVCC, 2005b). Simultaneously, the requirements of institutional governance and the need for university staff to take on more administrative and entrepreneurial roles (see section 3.1) has left less time available for teaching despite the increase in student population. Ultimately the time taken with teaching and administrative activities reduces the time available for writing and research (see NTEU, 2005; Anderson et al., 2002).

As students become ‘consumers’ of education their requirements have changed and this has an impact on teaching and learning. Students are now ‘clients’ and their expectations of the way in which academics ‘serve’ them means they are more demanding, but at the same time the need to attract more students has led to a perceived decline in the intellectual quality of students. The decline is stark. At the start of the decade 26 per cent of academics rated their students as worse than previous students (Sheehan et al., 1996) rising to 33 per cent (McInnes, 1999) and most recently 47 per cent (Anderson et al., 2002).

As indicated in section 2, Australia has the highest percentage of international students of all OECD countries (OECD, 2006). The economic imperative to cater to international students means that academics may have to adapt curriculum and teaching methods to accommodate international students. Australian universities have also sought a large share of the market in education by forming alliances with institutions overseas. From 1996 to 2001 international students living outside Australia but enrolled in Australian institutions increased from 24 per cent to 37 per cent (OECD, 2004). Over 75 per cent of these students attended institutions in Hong Kong, Singapore and Malaysia, while the remaining 25 per cent were in distance education. It is not uncommon for Australian academics to travel overseas to teach.

Changes in funding and student numbers have also created an imbalance of disciplines. During the 1990s, local business graduates increased by 107 per cent and international business graduates increased by 729 per cent. By 1998, local business graduates increased by 32 per cent compared with local graduates in all other disciplines, where the increase was a mere 1.5 per cent (Considine et al., 2001). Such a strong distortion in fields of study has implications for diversity. In an earlier paper we argued the importance of diversity to maintaining quality and flexibility in universities in a globalized knowledge economy. We argued for the centrality of diversity of students, diversity of research approach and type and diversity of discipline and institution (Neumann and Guthrie, 2004).

During this period national surveys of graduate satisfaction with their learning experiences have taken on increased importance. Of central importance is the rewarding of teaching performance based on graduates' perceived satisfaction ratings of their learning experiences. Australia has a long history of teaching performance indicators and graduate employment (see also Guthrie and Neumann, 2007). A number of graduate surveys serve as a form of public accountability with published annual ratings at aggregate, institution and also discipline levels. In a controversial move, in 2005 the central government used the outcomes of these surveys to develop the Teaching and Learning Performance Fund. A competitive fund, it allocated an additional \$54 million in 2005 to the best 14 performing universities as judged by graduate ratings on these surveys (DEST, 2006d). The process used by the government to reward institutions that 'demonstrate excellence in learning and teaching' (DEST, 2005, p. 4), is both onerous in terms of workload for the institution as well as controversial in terms of definitions of measures of excellence. The notion of rewarding the 'best' has led to perceived inequities across the sector.

4. CHANGES IN RESEARCH

Within Australia, universities represent the key institutions for basic research as well as research across a broad array of disciplines (Neumann and Lindsay, 1988). Unlike other western countries, Australia does not have a strong tradition of research outside the university sector (Vagnoni et al., 2005). Key government policy developments for research (see Neumann and Guthrie, 2004) over the past decades have involved concentration and selectivity of research across smaller numbers of institutions and disciplines. The argument for concentration has been to direct higher levels of public funding to specific research fields, thus enhancing their capacity to respond to change.

In the most recent policy language of the former Minister of Education, this selectivity and concentration is designed to encourage diversity as universities ‘focus on pockets of research excellence’ (Bishop, 2006a). There will only be government funding to universities to undertake research in their areas of excellence; research outside institutionally specified areas of strength will not be funded (Bishop, 2006a). However, since the creation of the Unified National System of higher education, research and research training has always been concentrated in a number of universities. For example, more than half of all PhD completions are concentrated in the Group of Eight universities (DEST, 2005). Government research grants awarded for 2007 are also concentrated in these universities with their share of all categories of grants at 73 per cent (Healy, 2006). In recent years, the government has established national research priorities for government funding of university research which is intended to ‘provide a vision of where research can contribute to Australia’s future prosperity and well being, and . . . help align [Australia’s] research effort in these key areas’ (DEST, 2006d). Effectively tied grants have been used to ensure compliance with government research priorities.

Consequently, some disciplines are privileged over others – raising questions about the appropriate discipline mix – as well as the type of research undertaken, thus favouring applied as opposed to basic/pure research. The grant system also favours research processes that are low risk and do not involve time-consuming data collection and analysis and are short-term in their nature. The research modes and publication styles of ‘big’ science and experimental science dominate those of ‘little’ science, theoretical science, the humanities and the social sciences (Neumann and Lindsay, 1988; Neumann and Guthrie, 2004).

Assessments of research performance are always controversial. Publication and citation indices are a form of research indicator, along with

institutional and teaching performance indicators as discussed in this chapter. The institutional annual reporting of publications has been standard practice for some years (Neumann and Guthrie, 2004). However, the development of citation indices across the many fields of study continues to be problematic (Gray et al., 2002).

Since 2004, the government has been pursuing the measurement of institutional research performance through the research quality framework (RQF) (Nelson, 2005; Bishop, 2006a). The intention of this framework is to recognize excellence in research and also its outcomes through research impact on 'quality of life' (Bishop, 2006b). The previous minister's RQF was based on the UK RAE; however, the Expert Advisory Group (EAG) included not only assessment of research quality, but of research impact. No other country has moved down the path of assessment of impact, given the already contentious nature of the assessment of quality. In particular, the attempts to measure impact are strongly criticized, with arguments that current plans support low quality research, discriminate against fundamental research and would be complicated to administer (Gallagher, 2006; Illing, 2006).

5. CONCLUSION

Government use of funding over the past decade has proven a powerful instrument in the transformation of the AHES. Change has been fast and, in policy terms, can be seen as a marked success for the Australian government in terms of sector growth and wealth creation. In social terms, the outcomes are mixed. Internal tensions associated with increasing workloads and decreasing full-time permanent academic positions along with the risks associated with reliance on international students pose challenges to the existing higher education system. Future policy and funding directions are likely to heighten these challenges in the near future with performance changes being planned in all areas of academic work and institutional operation.

The future of the AHES is encapsulated by the previous Minister for Education's remarks quoted at the beginning of this chapter (Bishop, 2006a). If we examine the key words in this quotation, the challenges arising from the developments of the past decade are clear. The Minister envisages a future AHES having the 'highest standards' of education, yet large increases in teacher-student ratios, casualization of teaching academics, and diversion of resources away from teaching and research into marketing and administration tend to undermine standards. The sector will continue to be globally 'competitive'. However, budgetary processes that encourage

internal competition between disciplines and funding policies that create quasi-competition between institutions ultimately undermine the overall global competitiveness of the sector. The Minister's stress on more 'accountability' for performance and more 'efficient administration' suggests further managerialism, measurement and decreased involvement of academics in institutional operations. It may also imply further reductions in government financial support and hence more students and fewer staff. An education system 'affordable' to students and taxpayers appears to ignore the reliance on increasing fees from students while also hinting at potentially less government investment in the sector.

Without doubt, the most far-reaching change from the former Minister's speech is the issue of 'differentiation'. We have argued (Neumann and Guthrie, 2002, 2004; Guthrie and Neumann, 2007) the crucial importance of diversity in terms of institutions, student and discipline mix as well as research and research approach within the counter-acting forces of homogeneity of the Unified National System and government performance funding policies. Thus, differentiation in the form of diversity would appear to be the appropriate direction for the AHES. However, use of 'differentiation' by (Bishop, 2006a) and its translation into the National Protocols for Higher Education (MCEETYA, 2006) take on another interpretation. Australia will for the first time allow the title 'university' to be used for specialized, single discipline institutions as well as institutions with a teaching-only mission. This is a major change: within the AHES a university has been defined by encompassing a broad range of disciplines with staff employed to undertake the dual roles of teaching and research. Bishop's (2006b) argument is for a move away from 'a one-size-fits-all' approach and a 'monochrome' system. The implications for existing universities are huge. The likely outcome is that Go8 universities where research and doctoral research training currently concentrate, will become the new 'elite' institutions. Those outside this group may become a lesser category of institution with a minor research role in only a small number of areas/disciplines, with a third category of teaching-only universities. The emerging private sector within AHES, currently small and restricted in terms of discipline range may assume the title of university. Bishop (2006b) indicated that there will not be more universities, indeed the hope is for fewer than the existing universities. Thus, new forms of public and public-private universities may emerge. The consequences for academic staff are also enormous, with a formalization of three types of academic: research and teaching academics, research-only academics, and a lesser status group of teaching-only academics. There are further consequences for workloads, performance measurement and reward structures. Clearly, the successfully introduced financing of AHES

over the past decade, with tied grants and performance-based funding in specific areas will continue.

NOTES

1. The Australian central government changed in December, 2007.
2. The AHES is influenced by Australia's federal system of government. In addition to the Commonwealth or Federal government (the Australian central government), there are six state governments. The role of the Australian central government is essentially restricted to the macro level of economic and fiscal policy management, international relations and national security, and raising taxation revenue. Using funds supplied by the central government, the states are responsible at the micro level for the implementation of economic and social policies that affect the lives of each citizen.
3. Although the renewal of financial responsibility again committed the Federal government to full funding, it was based on student load and competitive grant allocations, not on general recurrent and indexed funding as had been the case previously.
4. Under the previous system, the government paid for centrally imposed increases in salaries, thus protecting university budgets from these impositions. As government funds were reducing and the new revenues through international and postgraduate fees were viewed as 'soft' funds, subject to risk, university managements were put under considerable financial pressures by the new bargaining system.

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10. Managing modernization: introducing performance management in British universities

Tom Keenoy and Michael I. Reed

I sort of have maxims in my mind – one of them from Oliver Cromwell I had pinned up on my desk for a long time: ‘Think ye in the bowels of Christ ye may be wrong’ [laughs]. (Academic-Manager)

INTRODUCTION

The emergence of the discourse of ‘modernization’ has been a core theme in the reform of public sector management in the UK since the 1980s. Successive British governments have sought to improve performance through various initiatives known collectively as the ‘new public management’ and these have resulted in the reconfiguration of daily routines across the public sector. More specifically, virtually all the changes involve the introduction of performance targets and a variety of ‘league tables’ which are projected as indicators of organizational and individual progress. Collectively, these developments may be seen to represent the extent to which Britain has become an ‘audit society’ (Exworthy and Halford, 1998; Ferlie et al., 1996; Power, 1997, 2001; Reed, 2002).

Since 1989, UK universities have become subject to a range of government-driven new managerialist policy scripts which now inhabit every corner of managerial policy and practice (Deem, 1998). The regulatory body, the *Higher Education Funding Council for England* (similar bodies exist for Wales and Scotland), offers an extensive and ever-elaborating stream of advice on everything from governance to purchasing and, every year, conducts an intrusive audit which scrutinizes every aspect of university managerial policy, procedures and performance (HEFCE, 2005). Arguably, these performance management practices are more advanced than those elsewhere in EU universities.

Such processes have driven an increasingly ‘managerialist’ agenda in UK universities and have, inevitably, had a significant impact on the roles and

behaviours of both academic managers and academics. Among the most visible enactments of performance management are two mechanisms which routinely survey and monitor performance in teaching and research. First, there is what is usually referred to as 'the QAA' (the Quality Assessment Audit) designed to ensure effective 'quality controls' are in place to 'measure' teaching performance (Morley, 2003). Secondly, alongside this sits 'the RAE' (the Research Assessment Exercise) which evaluates institutional, departmental and individual research performance. Periodically, the RAE displays the 'research performance' of all those UK university departments which participate in the competition for research funding. This process has come to dominate research-oriented universities and, although its efficacy is widely contested, its impact is undoubted.

In the context of the conceptual-theoretic concerns around 'managerialism', the chapter will draw on field research conducted separately by the authors (Keenoy, 2003, 2005; Reed, 2002) to provide an assessment of the impact of performance management on the lifeworld of contemporary UK universities.

VARIETIES OF MANAGERIALISM

New managerialism has dominated the academic and policy agendas for public services reform in the UK and other Anglo-American political economies over the last two decades (Ferlie and Fitzgerald, 2002; Ferlie et al., 1996; Deem, 2004; McLaughlin et al., 2002; Clarke and Newman, 1997; Clarke et al., 2000; Clarke 2005; Pollitt, 1993; Pollitt and Bouchaert, 2000; Hood, 1995, 1998; Newman, 2001). It has generated and sustained a powerful ideological and discursive context within which its political progeny, new public management (NPM), has flourished as a policy paradigm intended to restructure public service delivery and facilitate a flexible and changing balance between 'strategic control' and 'operational control' (Kean and Scase, 1998; Farnham and Horton, 1999; Exworthy and Halford, 1998; Flynn, 1999; Farrell and Morris, 2003). Universities, although constitutionally outside the 'public sector', have been subject to a similar developmental trajectory over the last two decades (Reed, 2002; Reed and Deem, 2002; Deem, 2004).

'Managerialism' can be defined as a broad ideological movement that has been highly influential in all modern industrial societies since the late nineteenth century (Enteman, 1993; Parker, 2002; Grey, 1999). 'Managing' and 'management' – invariably regarded as universal accoutrements of technologically advanced society – are often projected as almost neutral 'technical' practices which are 'outside' the wider social, moral and political

struggles. Echoing Weber's legal-rational form of authority, contemporary management is seen as technically and socially superior to any other conceivable form of organization such as craft, profession or community (Weber, 1989). This is not the view taken here.

Three forms of managerialism have dominated the last hundred years. The gradual emergence of a *Corporatist Managerialism* from the First World War period onwards reached its apogee in the 1960s and 1970s (Jessop, 2002; Thompson, 2003). It was an uneasy blend of Keynesian economic policy, state welfarism, political pluralism, industrial tripartism and Fordist-style management. In policy terms, it was geared to the generation and maintenance of a viable social settlement between the major contending producer/provider classes and interest groups in modern industrial society.

As an approach, it was swept away in the early 1980s following the economic liberalization of trade, financial and labour markets. The resurgent free market ideology typified as 'Thatcherism' and 'Reaganomics' was reflected in monetarist policy initiatives which led to a coruscating critique of the endemic weaknesses of neo-corporatism and the surfacing of *Neo-liberal Managerialism*. As a set of ideological principles and social practices this was anti-state/pro-market, anti-provider/pro-consumer and anti-bureaucracy/pro-network. Proponents also promulgated 'market populism' which privileged free markets in combination with private enterprise as the idealized model solution to the governmental and organizational problems besetting advanced capitalist societies (Korten, 1995; Frank, 2000; Jacques, 1996; Rose, 1999). As Foucault (1991) suggests – and others have argued since (Rose, 1999; Reed, 1995) – the practical conduct of governance is a 'perpetually failing' activity that is fated to achieve much less than its more grandiose ideologues and theorists consistently envisage. As a 'new' approach to this problem, the implementation of the NPM reform programme consisted of a series of centrally-determined but – in many instances – minimally coordinated policy initiatives and organizational experiments. These have included 'internal quasi-markets', 'quality management', 'devolved agencies', 'contracting out', 'competitive tendering', 'best practice models', 'beacon exemplars', 'self-managed trusts' and a variety of more or less stringent performance indicators policed by a variety of quasi-autonomous agencies. While the political rhetoric which has accompanied such initiatives has often been strident, active and direct managerial control has oscillated between centralized strategic direction and devolved local initiatives with financial provision being employed as the key lever to effect the desired changes.

The election of 'New Labour' in the late 1990s, pledged to find a 'third way', prompted commentators (Newman, 2001, 2005; Fergusson, 2000) to

suggest this produced not only a discursive but also an ideological re-alignment which moved the approach away from some core elements of neo-liberal managerialism. This may be characterized as a move towards what might be called *Neo-technocratic Managerialism*. The new discursive touchstones became ‘personalization’, ‘customization’, ‘localization’, ‘co-production’ and ‘empowerment’ (Leadbeater, 1999, 2003). Professional and managerial service providers remain but are now in the role of ‘reflexive practitioners’ in advisory, technical and counselling roles – central directive control lurks in the distance.

Nevertheless, this ‘Blairite spin’ on NPM introduced a much stronger technocratic orientation into policy and practice. By imposing market forces and business discipline across the full range of public services provision, neo-liberal managerialism intended to weaken, if not destroy, the regulatory ethic and machinery that had protected professional and administrative elites under neo-corporatist managerialism (Freidson, 1996, 2001). In contrast, the technocratic managerialism of successive New Labour administrations places greater faith in ‘metrics’ than in ‘markets’. This has produced more sophisticated and more integrated performance measurement regimes. In this respect, Blairite technocratic managerialism has attempted to pursue improved performance and accountability while avoiding the extreme spatial and social inequalities in service delivery that unregulated market competition inevitably generates (Walsh, 1995; Thrift, 2005). And underlying the various ‘comparative metrics’ that now drive the delivery, organization, management and governance of public services in the UK is a ‘modernizing’ policy paradigm which strives to integrate the rationality of strategic managerial direction and localized managerial control with the reality of national and international competition within a globalized market for public services (Llewellyn, 2001). Insofar as this ‘third way’ offers a distinctive alternative, it appears that neo-technocratic managerialism has generated a move towards a more intrusive and continuous regime of micro-level *work controls* through the progressive construction of an eclectic combination of audit, performance and accountability technologies.

Despite ritualistic appeals to ‘old Labour’ rhetoric, this has led to a blurring of the distinctions – never mind the boundaries – between ‘public’ and ‘private’ forms of service provision. What one might identify, following Weber, as a fundamental ideological distinction between an ‘ethic of civic responsibility’ and the ‘ethic of private accumulation’ is also beginning to disappear as both ‘public’ and ‘private’ service providers confront this proliferation of seemingly abstract ‘metrical ethics’. These developments have not only raised fundamental questions about the viability of autonomous ‘professional’ authority (Perkin, 1989) but

also the very existence of a 'public domain' in the UK where wider social considerations override the values of economic efficiency (Marquand, 2004).

This emergent neo-technocratic managerialism is the context for the exploration of how academic managers and academics have both experienced and responded to NPM in universities in the UK.

RESEARCH SOURCES AND METHODS

The data for this analysis comes from two studies. The first is an ESRC funded study of manager-academics in 16 UK universities which examined the extent to which NPM was perceived to have permeated the management of UK universities. The methods employed included focus group discussions with academics, manager-academics and administrators drawn from the universities and the learned societies of several disciplines; interviews with 137 manager-academics (from Heads of Department to Vice Chancellors) and 29 senior administrators; and case studies in four of the 16 universities (for details, see Deem, 2001). The second study is a small-scale qualitative study designed to explore the changing nature of academic work in a small number of so-called elite departments and conducted primarily through 33 in-depth interviews (for details, see Keenoy, 2003). Our analytic rationale for combining these two discrete sources is that they provide a reasonable basis for exploring the issues from both a 'top-down' and 'bottom-up' perspective.

THE VIEW FROM THE 'TOP'

Not unlike CEOs in the private sector, Vice Chancellors (VCs) and Pro-Vice Chancellors (PVCs) work very long hours, are routinely engaged in a wide range of symbolic and representative roles, attend endless meetings and, of course, invariably occupy key roles in strategic planning. But unlike CEOs, managerial direction of the institutions they lead appears far more constrained. Throughout the focus groups and interviews, participants routinely located their activities – and indeed, their identities – within the iconic democratic values which inform the university lifeworld. Comments frequently emphasized the significance of 'collegiality', stress was placed on maintaining 'trust' and building 'goodwill' and – central to academics' self-conceptions – paramount importance was attached to 'autonomy'. While such linguistic framing coloured the accounts provided, for the most part, managerial action and behaviour simultaneously accommodated the

contemporary demands on universities to produce the required evidence of 'visible performativity' (Deem, 1998).

Historically, the VC was a leading academic performing a largely symbolic leadership and representative role. Today the role of the VC is tightly focused on making universities 'perform'. As one VC, not unfamiliar with managerialist language, observed of his three core responsibilities:

. . . one is clearly the strategic, the long-term vision, perhaps the shaping of the opportunities, the ideas, the values, the beliefs about the university. There's a second element, which is, if you like, about the operational systems, which deliver that strategy, and there's a third element, which is essentially about the people. (VC, Social Science, post-1992)

Although mindful of the political and regulatory contexts in which they operate and despite their role-prestige, VCs and PVCs appear to be continually negotiating their managerial authority both with other senior manager-academics, and, indeed, their academic employees more generally. While there are some significant differences between the pre- and post-1992 universities, all appear constrained to proceed through consensus generation rather than central direction. In part the historical legacy of devolved controls, this also reflects the sometimes fiercely defended academic autonomy claimed by academic colleagues and their own continued direct involvement in 'academic work'.

The most graphic description of 'the problem' came from a VC who said:

You can talk until you are blue in the face and . . . I'm conscious that just sort of telling people what I'm trying to do is not enough; you have to actually demonstrate it by action. (VC, Social Science, pre-1992)

Another, elaborating on 'managing change' declared:

. . . you have to be able to listen to disparate views, have to be prepared to be castigated in public meetings, all of those things, but you just say 'yes, you have the right to say that'. (VC, Social Science, post-1992)

This emphasis on 'managed consensus' was also reflected by those who claimed to operate in terms of 'leadership' and providing strategic rather than central direction. Arguably, it is the very nature of 'academic work' which necessitates such an approach:

A university depends on individual creativity as its absolute lifeblood, that is particularly true in research, but I think it's also true in education but perhaps to a lesser extent. I mean, I literally can't tell people what they should be doing because I don't know what they should be doing. (VC, Social Science, pre-1992)

None of which is to suggest UK universities have not seen a fundamental transformation in the ways in which they are managed. A key feature of neo-technocratic managerialism is the attempt to construct an ever more refined set of 'loose-tight' controls: 'loose' central strategic direction is fine-tuned through the application of a 'tight', intrusive and financially rewarding array of micro-level controls effected and monitored through audit and performance management technologies. All the VCs and PVCs were acutely conscious of the need to prioritize activity to meet these performativity targets.

The consequent tensions were clearly voiced by the Heads of Department (HODs) who emerged as 'reluctant managers' (Scase and Goffee, 1992): among the 60 HODs interviewed, some 15 per cent rejected the role of 'manager'. Although 80 per cent accepted the label, most framed their managerial work alongside or subordinate to other roles as leader and/or academic. In effect, 'managing' was marginalized and downgraded:

My aspiration is to be an academic who happens to have a managerial responsibility. (HOD, post-1992)

Such identifications appear to be a direct response – even challenge – to the historical changes which have accompanied the imposition of neo-technocratic management. And identification with managerialism was carefully nuanced. Many preferred to talk in terms of providing 'leadership' despite routinely *performing* what most would regard as a 'managerial role':

I am Head of Department, I am leader of the MA in X, I am head of undergraduate programmes, I am leader and responsible for all Faculty research . . . I have a senior management team which meets fortnightly with a proper business agenda, but we might be covering everything from – I don't know – purchasing policy, buying computers to use of space. (HOD, post-1992)

with a clear awareness of their budgetary, logistical and administrative responsibilities:

I know what finance comes into the Faculty and the sources it comes from and where it goes to and, in fact, this School partly subsidises some of the others . . . and I'm only just now beginning to get a clear picture of which bit's subsidising what . . . but the problem for me of that is that it means that I'm actually saying, 'We need to spend all the money that we earn' at a time when the institution is saying, 'Well, of course, we should be making efficiency gains.' (HOD, post-1992)

HODs were also clearly aware of the contradictions involved in constructing an acceptable 'translation' of the demands for 'performance' in a

context where the norms around governance stress ‘collegiality’ and ‘autonomy’:

I think academic life is all about the encouragement, the free flow of ideas. I think talk-down managerial styles are an absolute anathema within a department and also upon a department. If you’re reduced to ordering people about or pressuring people into doing things then I think you have done something damaging to the life of a university. (HOD, Humanities, post-1992)

Not that this is necessarily an operational problem for:

. . . university academics are, on the whole, self-managing, they have broad guidelines and they don’t like close supervision. (HOD, post-1992)

In practice, effective ‘managing’ depends upon operating skilfully within long-cherished normative values for any perceived threat to ‘autonomy’ may be greeted with significant resistance:

The latest thing . . . they [senior management] want is to make a log of exactly what staff development activities people are undertaking . . . I mean people get offended at being checked up on. It’s not conducive to a good working atmosphere. (HOD, post-1992)

As this last quote indicates, at least some HODs do not identify themselves as part of ‘them’ and many appear to tolerate managerialist demands only so long as these do not conflict significantly with what are regarded as core values.

Another important theme which emerged is the tension – particularly evident in the pre-1992 sector – around the prioritization of teaching and research activity. Traditionally equally valued activities, in the new climate, ‘the debate is a political one about the deployment of resources in higher education systems, as well as a battle for supremacy and status of teaching *versus* activity research in the academy’ (Deem and Lucas, 2006, 7). Hence, while some were deeply concerned about the seemingly detrimental impact of audit mechanisms on teaching:

Do you know what I think has been horrifying? We have had a strategic review in this university and in the document the word ‘student’ was [only] mentioned twice. (HOD, Social Sciences, post-1992)

others were concerned about the alleged distorting effect of the RAE process on research as a valued activity:

I have a young guy coming in . . . [some] opinions would suggest that he is the Nobel prize winner potentially. I am going to have a very difficult job as a manager to protect that individual . . . and at the same time say to him 'The RAE is coming up, can I have your four publications?' (HOD, Science, pre-1992)

However, not all would necessarily agree that either teaching or research have been significantly threatened or undermined by the micro-processes of control introduced to satisfy the ambitions of neo-technocratic managerialism. To explore this further, we turn now to the qualitative data from a small number of high-rated academic departments.

A VIEW FROM 'BELOW'¹

Work activities for the 33 academics in high-rated departments appear to have changed little. It continues as a variable mix of teaching, research and administration. However, work is more pressured, more focused and carefully prioritized; and work orientations have changed in subtle and significant ways. As has the context of work: in each department studied there is a designated person to coordinate research strategy and produce the RAE return. In addition, each department has a Research Committee to promote research, collate research-related information, coordinate research bids and generally develop the 'research culture'. Such committees are invariably linked into higher-level committees with extensive influence.

With respect to the tension between teaching and research, most participants clearly privileged research. While the teaching audits have generated a significant increase in administrative demands, it also emerged that many now engage in a far wider range of research-related activities: research seminars, conferences, workshops and day-schools all figure 'normal events' within the daily routine. This focus on 'RAEable activity' – a term which encompasses anything which can contribute to recordable performativity – has also been accompanied by a calculative elaboration in the division of labour. Research-only posts have been established; some are employed on short-term contracts (to cover for those on sabbatical leave) and others on 'teaching-only' contracts. (The latter employees do not 'count' in the RAE and are deployed to reduce the teaching loads of 'research-active' staff.) Such initiatives are not yet the norm but they contribute to increasing differentiation both between and within universities. In this respect, the RAE – as a managerial mechanism – induces a 'natural' (and some might say, 'market-driven') increase in specialization: research-oriented academics are simultaneously both attracted to and rewarded by higher-rated

departments which can offer not only lower teaching loads and more time for research but, in many cases, better promotion prospects. All participants were acutely aware of this potentially virtuous circle, for a good individual RAE 'score' can open both internal and external doors.

However, these opportunities are only available to those prepared to accept the continuous pressure emanating from the need to 'perform': the routine expectation is four articles in highly rated academic journals for submission to the next RAE. As one observed wearily:

The walls are constantly echoing research. (WJ)²

'Pressure' for some is experienced simply as 'the way things are' by others. Few – at least in terms of their responses – perceived the situation as problematic. What is also clear – echoing the comments of the academic-managers – is that short-term measurable outputs appear to be privileged over longer-term more nebulous achievement criteria:

Everybody says you shouldn't write a book for all sorts of reasons. (MJ)

Despite the apparent straightjacket of performativity criteria, most participants continue to *express* a commitment to the conventional valued icons of collegiality, autonomy and academic freedom. However, individual academics make sense of these new imperatives in qualitatively different ways and display a variety of psycho-social and task-related coping strategies to negotiate this 'new reality'.

At one extreme are a minority who continue to resist the performativity agenda (while continuing to perform in a managerially acceptable fashion). One individual, referring to the cultural impact of the RAE on his previous department, described it as:

. . . extremely – very – competitive; [it's] a horrible culture to be in [and] the RAE nurtures an awful lot of that . . . I'm dead against that.

Similarly, with respect to the teaching audit process (the QAA), he insisted:

. . . it hasn't changed what I do . . . what I believe makes good teaching is not measurable . . . I will pay lip service to them [the QAA criteria] . . . I just totally disagree with everything being prescriptive . . . it's totally alien [to what a university stands for]. (MJ)

Another well-established academic who also continued to privilege teaching over research, maintained her distance from the new regime and disdainfully observed:

I can't help feeling that . . . well, who gets excited about these things? . . . most of it is so bloody pathetic . . . my values vary so considerably . . . I just get on with what I think I should be doing [even though] they think I'm not good at the things that matter . . . it's suited some people to think . . . we can make [the University] better by shoving it up these lists. (WJ)

Such resistance was untypical. At the other extreme, the new performance measures have been embraced with some enthusiasm. One individual – who insisted the RAE had opened up a new personal direction – was unsympathetic to colleagues who complained of pressure:

if you get stressed in this job, there's something wrong with you . . . we're just being asked to do our jobs . . . we have to be accountable. (MS)

This discourse of 'being-accountable-for-public-money' informed a significant number of respondents' expressed justifications for conforming to (or not resisting) the new measures.

All the individuals quoted thus far in this section became professional academics prior to the introduction of the RAE. However, among those who have never known anything else there appears to be an equally diverse range of responses. The visibility of the new linguistic regime was highlighted by one individual who, reflecting upon his recent induction day, said:

the thing that struck me about the [talk] on teaching [was that it] purely focused on the QAA and on the empirical measurement of our teaching [while] the research talk placed great emphasis on the RAE . . . and how significant this was to the Department and, 'yes, it's an imperfect system, but it's a competition and we want to win' and 'yes, it's the bottom line' . . . [these induction talks] were indicative of the priorities. (MJ)

He did not feel pressured to perform for the RAE but expressed irritation at:

just filling in endless forms and the various micro controls they impose on you. (MJ)

Asked to elaborate on what this referred to, he added:

the form filling was one thing . . . the talk given by the Research Director, the interview with the Head of Department, the [job] interview . . . what my mentor says . . . the talks you have with colleagues. (MJ)

Such remarks illustrate the organizational mechanisms through which a 'culture of performativity' is mediated through a combination of policy

statements, routine linguistic framing and institutional reinforcement. It adds substance to the metaphor of ‘walls echoing research’. This latter remark came from an individual who seemed unprepared for what was expected. Elaborating on the perceived sources of pressure, she said:

Well . . . basically pressure from the RAE . . . but I think the Department doubles that up . . . we’re expected to submit 6 [articles] so they can submit 4 [a ‘fact’ not mentioned by any of the other interviewees in this department] . . . a lot of stuff sent round by email [and] then there is the . . . I think she’s called the Research Coordinator . . . and just the ambiance of the place. (WJ)

As a young academic on probation, her concerns were understandable. But few in a similar situation admitted to such anxieties:

I don’t like to say this, but I quite like it . . . I love writing . . . it’s what we’re supposed to be doing anyway. (MJ)

Another seemed equally relaxed:

It [the RAE] doesn’t worry me too much . . . I feel reasonably pressured . . . I feel more pressure to upgrade [i.e. get published in higher rated journals]. (MJ)

Significantly, nearly all these young academics displayed a strategic awareness of how to ‘play the RAE game’. One admitted to ‘saving’ an article because she did not need it for the imminent RAE exercise; others detailed issues around choosing ‘suitable’ journals in which to place their work; another submitted work to top journals just to get the better comments from referees. All were acutely conscious of the link between a ‘good’ RAE performance and career progression.

The general perspective which emerged from both the academics and their managers was one of ‘situated pragmatism’. This is exemplified by one senior participant who observed:

We play the numbers game [and] we have a portfolio approach to our CVs . . . we make sure we get publications in journals that are rated – those are where we get the RAE points – as well as putting in papers to encourage some newer journals . . . we try to get some kind of balance . . . we try to be broad and include all sorts of perspectives, for example, if someone got interested in the political science perspective, we’d say ‘fine’ [but] we look at [the overall trajectory of] publications. Each individual has a writing plan . . . it’s difficult . . . everybody has a writing plan which they are working on . . . and we look at what’s happening. (WS)

Such careful euphemism – which echoes the findings of our ‘view from the top’ – might well be a description of a calculated instrumental strategy

designed to enact acceptable performativity while simultaneously promoting careers and guarding academic autonomy.

ANALYSIS: THE HYBRID UNIVERSITY?

Social change is a process rather than an 'event'; and mapping these data against the broad conceptual-theoretic character of neo-technocratic managerialism involves some measured if speculative interpretation. Insofar as it is possible to characterize the 'view' of academics to the changes, it appears to be one of principled, suspicious ambivalence. Not unsurprisingly, what has emerged is a mix of adaptive responses designed to satisfy governmental expectations, ensure the future financial health of the organization and – as far as is possible – preserve what is regarded as the 'core' values and activities of the university as an intellectual and cultural institution.

At all levels the academic lifeworld has been transformed by audit and performance management technologies. The focus group data suggested that universities are now highly managerial and more bureaucratic; increasing academic and administrative specialization has been accompanied by declining trust and discretion. Higher workloads, longer hours, finance-driven decision-making, remote senior management teams and greater pressure for internal and external accountability were all in evidence. The interview data is more varied and – perhaps predictably – indicates that the academics' experience with neo-technocratic managerialist initiatives has produced a wide range of responses. At best, we would suggest that contemporary HE in the UK displays a hybridized form of the 'new managerialism'.

This hybridity can be charted through three inter-related (and interpenetrating) discourses which academics and academic managers employed to 'translate' their engagement in the processes of change.

First there is the 'official' or *expressed formal discourse* of audit and performativity which is to be found in audit templates and policy documents at all levels. This has been enacted though changes in organizational structures (for example the research committees), revised departmental priorities (for example privileging research over teaching) and more targeted recruitment and promotion policies (for example buying in performance oriented individuals). Despite sometimes heavy qualification, this discourse is promulgated and promoted by senior academic-managers and stoically if sometimes resentfully accepted by HODs who strive to enact the expectations of such formal scripts. 'High-performing' academics have, at least in behavioural terms, embraced the changes. Most academics now appear compliant

with the changes. They have accepted the ‘performance culture’ even if it was rare to find anyone expressing positive endorsement. As one put it:

Yes, it’s [the RAE] now part of the wallpaper. (MS)

Secondly, there is the *expressed professional discourse* which emphasizes collegiality, openness and trust and idealizes the historic icons of academic freedom and dispassionate reflection. Academics employ this discourse to construct their identity as teacher, knowledge-pursuer and knowledge-creator.

However, it would be a serious misjudgement to regard this iconographic discourse as intrinsically antipathetic to the emergent (new) formal discourse. While a small number of respondents could be described as ‘anti-performativity’, their influence is marginal and probably in decline. Habituation and the slow but relentless process of staff turnover are working through any residual resistance. However – and this is no paradox – as we have seen, the historic core values embodied in this ‘professional discourse’ litter the surface of almost every interview.

Thirdly, there is the *expressed ‘coping discourse’* (or situated pragmatism). In common with employees everywhere, academics have had to find ways of making sense of the projected abstracted realities which form the basis of managerialist discourse. They see themselves as having to accommodate the audit culture and have ‘translated’ these contextual realities into acceptable forms of work organization and performance. To push the metaphor, academics have devised ways of ‘performing’ for the ‘performance measurers’. Through this process they believe they can mitigate the impact of NPM which, generally, appears to be interpreted as conditioning rather than determining behaviour:

Yes, of course, the RAE is nonsense . . . it’s journals which count not the content . . . but we have to make it look good. (MS)

This is not to suggest academics do not do what is ‘expected’ of them in relation to the ‘imperatives’ of neo-technocratic managerialism. Indeed, most are working longer hours and producing more ‘outputs’ than in pre-RAE times and far more is expected of younger staff than pre-1989. The point is that they ‘appear’ to perform in a visibly measurable and acceptable fashion while attempting to minimize the potential intrusiveness and – as they might see it – the potential destructiveness of the new performativity regime. The discursive – if not the behavioural – significance of this attempt to protect ‘traditional’ Academia is particularly exemplified in the quotes from the academic-managers. Despite accepting – as a ‘theory of practice’ – that new managerialism has irreversibly permeated universities,

they appear to remain committed to defending the values embodied in the ‘professional discourse’. Of course, this does not mean – even if they have been successful to date – that they can continue to do so.

Whatever its continued appeal to central policy-makers, the claims for neo-technocratic managerialism remain unproven. We noted earlier that governance is a ‘perpetually failing’ activity and the evidence reported above provides some of the reasons why this is so. In a democratic society, the power to order the enactment of particular procedures and practices invariably founders without consensus. Compliance is never enough. As one academic-manager observed:

I think there’s a middle way, I hate to say that because I don’t believe in it as a phrase. But I don’t mean that in any sort of Blairist sort of way. But I think it’s possible to be better run than the old universities ever were without being heavy-handed in a managerial way, it’s just bloody difficult to do it. (Dean, Science, post-1992)

NOTES

1. The findings in this section are not representative of the UK HE sector as a whole. For present purposes, they illustrate how NPM ‘micro-controls’ have impacted on academic orientations to work (for details, see Keenoy, 2003).
2. This notation indicates the gender (M or W) and status (Senior or Junior) of the informant.

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11. Higher education governance, leadership and management reform: systemic corporate governance reform at City University, London

Ian Creagh and Richard Verrall

INTRODUCTION

Governance reform within United Kingdom higher education (HE) has been the focus of significant public policy and institutional attention in recent years. Many of the issues driving the reform agenda as well as the substance of the reforms themselves were crystallized in Richard Lambert's 2003 review of university and business collaboration (Lambert, 2003).

At City University, the reform of institutional governance has been seen as an important part of the drive to ensure that the university remains capable of adapting dynamically to ongoing changes in the HE market as well as responding quickly to appropriate opportunities. City has become heavily reliant on tuition fee income from deregulated student markets, having moved into these markets in the early 1990s. Managing the accumulating risks of less than 25 per cent of its revenues being sourced from direct funding council grants, has fundamentally changed the university's perspective on the role and importance of effective corporate governance.

Against this background, City's experience can be seen as an exemplar of an institution using governance reform as a lever to encourage change in a relatively traditional academic, not-for-profit organizational culture to adjust to a highly competitive and evolving operating environment. In this chapter we present an analysis of City's experience of governance reform, the forces that motivated it, the implementation methodology deployed, the lessons learned and the outstanding issues requiring attention. In doing this, we aim to place the theoretical developments in HE governance and management in a strongly practical context. In considering these issues, we look at both formal systems of governance as well as the less tangible

aspects of organizational culture and its impact on the pursuit of a reform agenda.

HE GOVERNANCE REFORM IN CONTEXT

HE and New Public Management

Any discussion of the reform of HE management and governance at the institutional and system level must be set within the broader context of New Public Management (NPM) which has dominated OECD public sector reform over the past two decades (Meek, 2003, p. 8). While far from being a coherent body of management theory, NPM has had a significant if uneven impact on management and governance practice in a variety of publicly funded HE systems (De Boer, 2003, p. 89). The thrust of NPM implementation in an international context has several observable themes (Coaldrake, 1999, pp. 118–120; Meek, 2003, p. 9; Brennan and Shah, 1993, pp. 299–300; Smith et al., 1988, pp. 281–83; Salminen, 2003, pp. 55–56). Perhaps the most important and universal of these is the desirability of importing predominately private sector management techniques, practices and values into the public and not-for-profit sectors (Osborne and Gaebler, 2002).

Institutional governance, and more recently the nexus between leadership, governance and management, has emerged as a common target of the managerialist critique advanced by policy elites throughout the OECD, who argue that traditional collegial governance is no longer an appropriate means of steering contemporary universities (Gallagher, 2001). Despite their not-for-profit objects, it is argued, contemporary universities are large, complex organizations that perform a significant role in the social, economic and cultural life of the societies in which they are located. It is against this background that several public enquiries tasked with reviewing HE systems in Britain and elsewhere over the past 15 years have provided the empirical and strategic policy foundation for the emergence of the leadership, governance and management policy reform agenda (Committee for the Review of Higher Education Financing and Policy, 1997; NCEIHE, 1997; Nelson, 2005; DEST, 2005).

Commercial Misadventure and Corporate Governance Reform

As Locke (2001, p. 33) has observed, it is tempting to reach the view that good governance in HE is almost too obvious to warrant attention. A vast number of reports and investigations conducted internationally over the past 10–15 years have shown that corporate governance is no simple matter

and is of variable quality throughout the commercial world. The Enron, WorldCom and Parmalat misadventures (to name a few!) graphically illustrate this point.

In Britain a raft of independent reports based on enquiries have been published addressing corporate governance reform in response to high profile failures of large corporations over the past decade or more (Cadbury, 1992; Greenbury, 1995; Hampel, 1998; Turnbull, 1999; Higgs, 2003; Smith, 2003).

Other European countries have also been active, including the European Commission, which published in 2003 its European Corporate Governance Action Plan (European Commission, 2003). France has consolidated its various Corporate Governance Codes into a single Code providing Principles for Corporate Governance (AFEP, MEDEF, 2003). Germany has further tightened its Cromme Code (Government Commission German Corporate Governance Code, 2005) and in the Netherlands, the Tabaksblat Code has been developed and implemented (Tabaksblat, 2003).

To varying degrees, policy makers in Britain have championed the broad and underlying relevance of commercial corporate governance reform to the public and not-for-profit sectors. Their appetite for public and quasi-public sector governance reform rests on a belief that the fundamental principles underpinning commercial sector corporate governance reform – transparency, rebalancing stakeholder and executive power, effective reporting and accountability – are as relevant to health services, schools, the charitable sector and universities as they are to private corporations.

THE CONTEMPORARY BRITISH HE GOVERNANCE CRITIQUE

In their critique of HE governance, British policy elites and business stakeholders have concentrated on the following themes:

- i. governing bodies are not sufficiently engaged with setting the strategic direction of their institutions nor are they fully carrying out their supervisory duties;
- ii. governing bodies are too big and unwieldy, leading to effective decision making power being captured by formally or informally constituted committees whose deliberations often lack transparency;
- iii. there is a confusion of roles among some categories of members serving on governing bodies, with these groups often misconceiving their role as being concerned with representing the interests of their electorates rather than serving the interests of a unified board;

- iv. there is a confusion of governance and management roles;
- v. there is ambiguity in the constitutional and practical application or interpretation of delegated authority and power, leading to poor accountability;
- vi. there is a lack of constitutional clarity surrounding the formal and informal power and authority of senates or academic boards;
- vii. decision making systems are unclear or overly complex with an over-emphasis on inclusiveness and consensus and a corresponding under-emphasis on accountability and the locus of responsibility; and
- viii. institutional leaders are under-prepared for their roles, insofar as they either do not challenge the inefficiency of the status quo or know how to challenge it.

The current British government's response to this critique has been to define so-called best practice, compliance with which is theoretically voluntary. The Committee of University Chairmen (CUC) has released a Code of Practice as a guide for members of HE governing bodies in the UK, having been commissioned to produce this by the Higher Education Funding Council for England (HEFCE) (CUC, 2004). Not surprisingly, this code draws heavily on HE governance policy and practice in other countries, most notably Australia, and vice versa (Nelson, 2005; DEST, 2005). HEFCE also commissioned the CUC to conduct a project on key performance indicators for governing bodies (CUC, 2005).

GOVERNANCE REFORM AT CITY UNIVERSITY

Governance reform commenced at City University 18 months prior to the publication of the Lambert Review (Lambert, 2003). At that time, a Corporate Governance and Membership Committee (CGMC) of Council was formed, with this group quickly becoming the nucleus of the governance reform agenda at the university.

City University was constituted as a full university in the mid-1960s by Royal Charter, but has non-university HE roots stretching back to the 1890s. Its pre-university discipline profile had been dominated by applied science and technology. City has, however, transformed itself into a university aligned with 'business and the professions', with discipline concentrations in: business; law, the social sciences and arts; health sciences; and engineering, mathematical sciences and informatics. It was an early adopter of commercialization activity, as well as moving decisively into full-fee paying student markets from the late 1980s. Today less than a quarter of the university's revenues are derived from direct funding

council grants, with the lion's share of income coming from international and postgraduate student tuition fees. Approximately 45 per cent of the 13 000 Full-Time Equivalents (FTEs) (22 000 students) are post-graduates, and over 30 per cent of all students come from outside the UK.

Its deliberate strategy of re-focusing its discipline profile into one that mirrors the economic and social life of London, large exposure to the full-fee paying market, experience in working with industry in designing very high fee, professionally focused full-time postgraduate coursework offerings, applied research culture and close links with the City of London have led to the development of a distinctive academic culture at City. While the university cherishes its pre-1992 university status within British HE, it combines this with a highly pragmatic, competitive and often opportunistic approach to its strategic development. Unlike many of its peers, City is not overly encumbered with the more mystical elements of collegialism and normally avoids the trap of dichotomizing collegial and managerial behaviour. The university's Council has contributed to the evolution of the university's culture, historically drawing many of its independent members from the financial services sector of the City of London, as well as London's legal, property and health services sectors. Furthermore, unlike some older universities in the UK, historically City's Senate has not been a source of active internal opposition. On occasion it has demonstrated a capacity for strategic opportunism and has undoubtedly contributed positively to City's pragmatic academic culture.

Against this background, matters such as: how the university's strategy is set, approved and evolved; the internal distribution of formal and informal power and authority and its delegation; clarity in lines of accountability and responsibility; and a general frustration with slowness in decision making provided the impetus and appetite for seeking systemic change. While the university's Senate did not demur from these criticisms and questions, they were not the major focus of its motivation for engaging in a process of academic governance reform; rather, its members were primarily concerned with ensuring that the Senate continued to play an active and creative role in steering the university along its chosen path.

MAJOR OUTCOMES OF THE REFORM AGENDA AT CITY UNIVERSITY

The reform process at City University has produced a variety of formal changes in governance and management practice resonant of the themes

explored earlier in this chapter. In this section we adumbrate these changes as well as the less formal cultural changes in institutional practice.

Formal Changes to Governance and Management Systems

The governance reform programme has generated far-reaching changes to the university's formal systems of governance. The key outcomes were as follows:

- i. the adoption of an adapted commercial model for the structuring and operation of the Council. Its size has been reduced from 35 to a maximum of 21 members, with a requirement for two thirds of the members to be independent members. The remaining third are student and staff members nominated by the Vice Chancellor and considered by the Corporate Governance and Nominations Committee (CGNC). The aim is to further reduce the Council to a total membership of about 14 within approximately three years;
- ii. a complete overhaul of the Council's terms of reference with a much tighter focus on the Council's role in strategy formation, as well as approval, scrutiny of the executive and the management of high order risks;
- iii. abolition of a forest of sub-committees, with only four sub-committees remaining, these being the CGNC, audit and compliance, remuneration and executive committees. The executive committee is a committee of senior managers and is chaired by the Vice Chancellor;
- iv. reduction in the size of the Senate from 55 to 30 members. Given the dominant school-based culture of the university, the electorate for elected members was widened to encompass the whole university. Also, its terms of reference were redefined to focus the Senate's role on the enhancement of academic quality;
- v. abolition of school boards and the creation of school executive committees with a remit to advise deans of schools. In parallel, school-based boards of studies were strengthened as part of the reform of the Senate, which also involved giving the Senate greater powers of scrutiny of schools' boards of studies;
- vi. abolition of the university's stakeholder body's (known as the 'Court') residual powers to appoint the chairman of the Council and the university's external auditors;
- vii. implementation of a formal delegations ordinance covering not only the limits of delegated power and authority to the Senate and Council committees, but also to individual executives; and
- viii. a complete revision of the university's formal constitution, its Charter and Statutes.

Cultural Changes in the Informal Organization

Changes in organization culture and leadership behaviour have also been deeply influenced by the reform agenda and the implementation process. Important examples include:

- i. changes in the debating behaviour of both the Council and the Senate, with both bodies accepting the challenge to lift their respective sights to consider the strategic issues facing the university. The Council, for example, has explicitly moved away from considering highly polished papers to a position where it is seeking to develop a proactive voice on the university's integrated business strategy. Similarly, the Senate has sought to restructure its agenda so that it is more effectively scrutinizing academic quality systems of control in schools;
- ii. changes in the way the university's executive team manages differences of views and how these differences are exposed to the Council. With the creation of the executive committee, subtle changes have taken place in the relationships between executive managers. In the past, key decisions were taken by Council committees with functional responsibilities, with these decisions effectively taken without full debate among the executive team. With the creation of the executive committee, executives must now find a way of either agreeing a decision before it goes before the Council, or alternatively, honestly exposing the conflict of views around different options, but also informing the Council of its majority view. Secondly, the relationship between individual members of the executive team and the Council has changed. In the past, the independent members of the Council who chaired the relevant functional committee presented items to the Council with the support of the relevant executives. Now that the executive committee's terms of reference charge it with the responsibilities of most of the former functional committees of the Council, individual executive managers must lead debate within the Council, demonstrably accepting accountability and responsibility; and
- iii. changes in the locus of strategic authority within the university. Prior to the reform agenda being implemented, unstated strategic authority rested with academic schools and institutes. The central university, whilst on occasion uneasy with the consequences of this, was happy to proselytize the virtues of these arrangements largely because a majority of the schools were benefiting from reasonable rates of growth. This combined with the judicious acquisition and subsequent incorporation of new academic disciplines added weight to the arguments in favour of a highly devolved management structure. The implementation of the governance reform agenda with all of the

attendant changes described above coincided with a sharp downturn in some schools' capacity to generate financial surpluses. In combination, these factors have led to a progressive rebalancing of the locus of strategic authority, with the new executive committee, comprising central and some school executives, exercising an increasing amount of strategic authority within the university.

LESSONS LEARNED AND UNRESOLVED PARADOXES

The overall view within the university is that the governance reform process has produced positive outcomes. The four key factors that underpinned the success of the process are analysed below.

A Guiding Coalition Sponsoring Change

If systemic change in an institution's governance is to take place rather than just compliance with externally imposed codes of practice, the full authority of the governing body combined with a demonstrable partnership between key Council members, the Vice Chancellor and other executive managers must be present. At City, the Corporate Governance and Membership Committee of the Council (CGMC) forged a powerful coalition between the Council's chairman and deputy chairman and the Vice Chancellor. Early on in its life, CGMC adopted an explicitly reformist agenda. This was important for at least two reasons. Firstly, it used its authority to signal to the rest of the Council that it considered reform to be an urgent priority. Secondly, it built credibility within the institution by being deliberately critical of the Council's effectiveness. Its championing of an approach which favoured learning through open criticism was crucial at a later point in the reform programme when it suggested that the Senate adopt a parallel approach in reviewing its effectiveness. The membership of the Senate review group comprised senior academics and academic managers as well as individuals with responsibility for academic regulation. As was the case with the CGMC and the Council, having developed a store of moral authority through constructive criticism, the Senate review group then provocatively challenged the Senate's performance and relevance.

A Principled and Systemic Approach to Reform

At a more practical level, and early on in the reform process, the CGMC clarified and sought the Council's agreement with its view of the principles

of governance against which the spectrum of possibilities for each element of governance reform could be judged. These were:

- i. governance should have a strategic focus;
- ii. accountability and responsibility should be clear;
- iii. there should be clarity between governance and management responsibilities;
- iv. the governing body should approve and monitor the implementation of strategy and should provide effective scrutiny;
- v. accountability for management decisions should rest with relevant executives, not committees; and
- vi. the Council and its sub-committees should be of a size that enables thoughtful debate, good decisions and effective monitoring and control.

These principles proved durable in the debates that followed. Adopting a principled approach to reform enabled the process to be ambitious in its scope, encompassing not only the size, focus and direction of the university's Council and Senate, but also the relationship between these arms of governance and the university's executive and other elements of the university's governance and management framework.

An Emphasis on Strong Communication

There is a strongly held view within some segments of HE that governance reform is simply the latest weapon in the managerialist armoury to be deployed against HEIs, and yet another example of how policy elites and their institutional allies continue to misunderstand the essence of the academic enterprise. Added to this, academics' hierarchy of allegiances which often places loyalty to their discipline above loyalty to their employer, ensures that academics' behaviour sometimes resembles that of members of a voluntary organization rather than as employees of an institution (Rae, 1997, p. 189). At best, this produces feelings of boredom with governance reform and at worst, outright hostility.

There was a risk that these views would take hold at City in the early stages of the reform process. City's previously described competitive context was crucial in this regard, as was well understood by a majority of staff. In terms of communication tactics, the governance reform agenda was aligned early on with the exigencies of volatile HE markets as well as a range of other familiar issues on which there was already a lively debate within the university. For example, the university's updated corporate plan for the first time explicitly identified senior managers by name with the

responsibility for leading the implementation of strategies and the achievement of targets. The leaders of the governance reform agenda took every opportunity, using a variety of communication channels, to inform staff and other stakeholders of the direct relevance of governance reform to the university's future success. Given the ambitious nature and scope of the changes envisioned, communicating the practical importance of changes in the university's governance to the university's future, and its relevance to individual academic and non-academic staff, became an early and major characteristic of the reform process.

Confronting Obstacles to Change

A combination of the lead times associated with the HE business cycle, the centuries-long longevity of the industry, and the highly articulate and sometimes intellectually intimidating way in which academics choose to debate change with external stakeholders, means that the forces opposing change within universities are often formidable. As Clark Kerr (1987, p. 186) has noted, 'One must be impressed with the endurance and the quiet power of the professoriate, and particularly the senior professors, to get their way in the long run – and that way at all times and in all places is mostly the preservation of the status quo in terms of governance and finance.'

Those who lead opinion within senates or academic boards are often adept in the way in which they go about confronting management and threaten confrontation with governing bodies as a means of checking the progress of a change agenda, using all available constitutional means at their disposal to press their view. At City, the combination of a demonstrably powerful guiding coalition committed to change with an equally determined commitment to communicate the change at every opportunity, had the effect of bolstering the collective confidence of the Council and the executive team to confront obstacles, debate the issues in a principled way and make the case for change on its merits. Similarly, whilst the devolved culture of City is resonant of that at many older universities, competitive pressures impacting upon various schools in terms of the HE markets they operated in ensured that the financial incentives for schools' independence from the central university was counterbalanced by an equal measure of incentives for gaining access to cross-subsidies. Emboldened by the enthusiastic agreement of the Council to the far-reaching reform agenda, it was a case of working with the better instincts of an academic community and selected external stakeholders capable of showing great pragmatism.

Two examples of potentially destabilizing obstacles serve to illustrate this point. The first concerns the role of nominating bodies in relation to

the composition of the Council's membership. Under the old Charter and Statutes, various bodies had either a statutory right or a right by way of precedent to nominate representatives to the university's Council. However, nomination rights and representation do not sit easily with a set of governance principles that require the governing body to behave in a unified way and independent members as, effectively, non-executive directors. It was proposed therefore, that nomination rights of stakeholder bodies be abolished. The second example concerns the provisions in the old Charter and Statutes which provided the Senate with the constitutional capacity to use negative, veto-style power to block financial and managerial matters where it had little if any expertise. The proposal for change was that the Senate's powers be more clearly defined as being concerned with awarding degrees and the enhancement of academic quality across the university.

In the past, objections to fundamental changes such as these might have been dealt with informally and indirectly, with the outcome, at best, uncertain. However, given that the logic of both proposals was firmly embedded in a set of principles that gave structure to the reform agenda from its commencement, combined with the fact that each proposal was connected with a web of other changes, effective rhetorical attacks on their purpose proved to be difficult. Furthermore, each of these changes, and others, were given life in a redrafted Charter and Statutes, which gave legal expression to the above-mentioned principles that had guided the process from the very beginning, and which provided the necessary context as to how individual changes might operate. So, for example, whilst the Senate's implied negative powers inherent in the old Charter and Statutes were clarified in the new constitution, so too were its positive powers concerning its remit to intervene in the life of the university to safeguard and enhance academic quality.

Unresolved Paradoxes

The process of implementing a new model of governance at City has, however, revealed some paradoxes. These are also likely to be encountered in other institutions undergoing or embarking upon governance reform.

Firstly, a central feature of the reforms was that individuals rather than committees should take demonstrable responsibility for decisions and their implementation. The desire to embrace this change emanated from a general dissatisfaction with slowness of decision making, too great a focus on process rather than desired outcomes, the disempowerment of decision makers with a tendency to lower their risk appetite, and a desire to lower the hidden transaction costs of lengthy decision paths. While most within the university's community valued consensus and wanted consultation on

big decisions to remain a feature of future arrangements, they were equally prepared to accept that there was a clear difference between the consultative processes that fed into decisions, and responsibility and accountability for the decision itself.

While this makes sense for predominantly operational decisions, strategic or important tactical decisions are normally pan-organizational in character and elude assignment of precise accountability to one executive. These matters have inevitably become the responsibility of the executive committee and yet while this group may discuss an issue and even achieve a consensus, individual executives cannot be relieved of the burden of making a decision, or the accountability that goes with it.

This logical paradox extends also to the nature of the relationship between the Council – and specifically the Chairman of the Council – and the Vice Chancellor, and more broadly, the other members of the executive committee. In a scenario where the Council has taken on a greater strategic role, who, for example, should be held accountable for the adoption of a strategy that proves to be disastrously misguided? The Vice Chancellor? Assuming that the problem had little to do with execution of the strategy and that the central flaw was with the strategy itself, he or she might rightly argue that it would be unfair if they were to carry full responsibility for the disastrous outcome. The Chairman of the Council? Assuming that the Chairman presided over a quorate Council that actively approved the strategy, he or she might argue that it would be equally unfair for them to take sole responsibility for the strategic failure. It is clear that while the new arrangements have delivered greater clarity in the roles and responsibilities of the various arms of governance and management, it has not eradicated fuzziness of accountability surrounding the more complex and strategic issues facing the university.

Secondly, and as noted previously, the distribution of power and authority between the central university and its schools arose as an issue in the reform process. An important outcome of the reforms has been a rebalancing of strategic authority with the executive committee exercising a greater degree of organization-wide coordinating authority. There continues to be a fear among some sections of the university that the ideology of governance reform necessarily leads to less power and authority being devolved, with more directive power being exercised by the central university.

Leaving aside the nuances of the nature and character of academic power residing in the university's schools, the new governance and management arrangements definitely do require schools to operate in a way that is more knowing of the impact on the rest of the university. However, if the objection of growing centralization of decision making as a logical outgrowth of governance and management reform is more than an objection

for schools to be more federal than confederal in the way they operate, then this sits uneasily with an underlying objective of the reforms: to enable and support staff across the university to innovate without burying them in labyrinthine committee processes and bureaucracy.

These paradoxes highlight a discussion which has to be faced concerning the style of governance, leadership and management desired, quite apart from the reforms made to formal systems. It is clear from the experience at City University that sitting alongside formal systems changes, it is also necessary to engender a change in culture in order to remove engrained habits – committees supposedly reporting to committees, confusing governance with management, confusing governance systems with processes, and a beguiling tolerance for high levels of organizational ambiguity as a means of achieving apparent consensus.

CONCLUSION

City University's governance and management reform agenda extending over the past several years has been ambitious in its scope and has been implemented with a remarkable degree of consensus. The benefits of the reforms implemented are beginning to be felt across the university, even though it has also created some intellectually challenging and unresolved paradoxes. To a significant extent, these paradoxes impinge upon the informal understandings surrounding the university's governance and management modus operandi, as well as the values that underpin its self-image as a university. Continued success will undoubtedly be reliant on the ongoing quality of the university's leadership and in particular, its capacity to continue to challenge the status quo in a thoughtful, open and rigorous way.

In a broader sense, policy elites' and other HE stakeholders' collective appetite for ongoing leadership, governance and management reform shows no sign of abating. All of the evidence suggests that in Britain and elsewhere, the performance of governing bodies and the efficacy of HE governance systems will continue to be a priority for policy at least into the medium term.

At City, in addition to the resolution of the paradoxes and other challenges alluded to above, there are at least three major questions that are likely to be the subject of ongoing debate.

Firstly, should members of the Council be financially remunerated? The university's new Charter and Statutes pave the way for this even though the current membership opposes it. This is likely to change for reasons associated with the upward trend in financial remuneration being paid to members of governing bodies in other public and quasi-public sector

industries. Furthermore, as the Council becomes more embroiled in strategy formation and other duties resonant of commercial non-executive director functions, workloads will increase as will the risks to personal reputations. In this scenario, members' attitudes to financial remuneration may well change quite rapidly.

Secondly, over what time period and in what context should further reductions in the size of the Council be managed because of the consequential impact on members' workloads? As long as members are not remunerated, the extent to which the Council can rely on the capacity of independent members to balance the increased workload with day jobs, is an open and as yet unexplored question.

Thirdly, to what extent and in what circumstances should the university's executive now be restructured? Enlarging the executive committee to be more inclusive of academic organization units will detract from the capacity of the executive to behave as a cohesive team, yet there is a clear disadvantage in not having a larger academic voice at the executive table. On the other hand, the executive committee has been relatively successful in rising above being a group that is merely a representative sum of the university's schools. Any restructuring will require careful handling given the relatively high levels of consensus surrounding the changes to date.

In conclusion, we can observe that City's experience of governance and management reform has been, on the whole, positive. Its relative success has been a function of the principled coherence of the university's chosen reform agenda, effective leadership, and the fact that the changes sought and implemented were congruent with the dominant organization culture characterized by academic pragmatism, strategic opportunism and a good awareness of the competitive conditions in which the university must operate. Predictably, while the implementation of various reforms has brought much greater clarity to many aspects of the university's governance and management, it has also generated a new set of demanding challenges which will need to be confronted if the initial successes are to become permanent.

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12. The structure and significance of the Italian research assessment exercise (VTR)¹

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1. INTRODUCTION

Thirty years after the first experience of research assessment in Europe, Italy has recently completed its first research exercise (VTR). This chapter discusses its strong and weak points and pays particular attention to the growing importance of evaluation and the innovations introduced in the evaluation of university activities in Italy. In particular the question will be raised as to whether the VTR reflects the principles of New Public Management (NPM) (Hood, 1991; Pollitt and Bouckaert, 2000) regarding evaluation in Italian universities. These principles foresee passing from preventive controls based on legitimacy, a respect for form and the adoption of pre-established behaviour to subsequent controls based on assessment of performance.

In the past decades growing attention has been paid to assessment of the quality of university research (Handerson et al., 1990; Lange, 2006). This is in fact extremely complex due to factors such as the great wealth of competences involved, the propensity for innovation and experimentation that make each project unique and unrepeatable (Rebora, 2003), the difficulty in grasping the true potential of the results in the short term and the need to organize research teams working on the same project (Harvey et al., 2002). Research assessment does however have the advantage of being able to highlight results in a well-defined simple way by means of scientific publications whose standard and reputation reflect the quality of the research process. Thus, an assessor does not need to get to grips with the creative process of the researcher's work but simply considers the research output.

According to the results of a survey of research methodologies in 11 European countries carried out by Genua and Martin (2001) statistical analysis of publications and peer review are the most widespread methods

for assessing research. One of the first parameters is the number of works published by a researcher but the database set up by the Institute for Scientific Information (ISI) goes a step further. The institute has created a database system for carrying out targeted bibliographical research to ascertain the number of publications of an author or research institute and how often these works have been quoted by other authors. The system can be consulted on the Internet, making analysis of publications easier and more effective, but it has its limits (Brenno et al., 2002). The database only analyses data in a limited number of scientific journals and takes all quotations into account even if they are negative (referring to articles that are incorrect or insufficiently corroborated) or refer to articles that are mere syntheses of the literature on a particular subject. Moreover there is the risk that authors and institutions will come to a mutual agreement for crossed quotations. As ISI is a business concern, it has optimized the English-speaking market of the large libraries and favours the examination of journals published by the most important English and American commercial publishers. Thus, using the ISI data implies an indiscriminate adoption of the values and criteria of the university system in the English-speaking world. This and other similar considerations have led some authors (Seglen, 1997; Figà Talamanca, 2000) to denounce the fact that the instruments proposed by the ISI for research assessment are absolutely inadequate.

The peer review method (Henkel, 1998; Turri, 2005; Reichert, 2006) is more concerned with professional values than with the use of particular techniques. The peers are members of the academic scientific community who are renowned for their own personal experience and competence in a specific sector and are often appointed or recommended by the academic staff. Only those values that are consistent with the principles of the academic community are considered and the task of assessment is entrusted to expert representatives of these values. There is consensus among the scientific community that sees a dual advantage in the exercise, firstly as a means of confirming and enhancing professional identity, since peer review reinforces the intrinsic values of the discipline by formally recognizing them, and secondly as a way to legitimize the self-regulation of the scientific community who consider peer review as a shield against accusations of self-referencing.

The peers' judgement has to respect and defend the scientific community that the peers represent. Failure to do so and lack of respect for the basic mechanisms of the discipline would cast doubts on the criteria and fairness for which they were chosen. On the other hand, peer review is a form of assessment that is at the basis of the traditional concept of universities that can only find mechanisms for self-regulation within the academic community (Henkel, 1998).

Peer review is normally required to respect certain conditions (OECD, 2005, Reale et al., 2006; EUA, 2006). The rules at the basis of the evaluation process must be well-articulated, coherent and recognized as such by all the actors in the process. Peers must be impartial and with no conflicts of interest and there must be a set of rules that guarantee the sound working of the evaluation process. The ratings given by the peers must be reliable, that is to say focused on actual observations and not on reputation or standing, and the evaluation exercise must obviously be financially sustainable. Moreover, the time needed for carrying out the exercise must not invalidate the significance of the results.

One of the most deeply-rooted experiences of research evaluation is the RAE in England which has now reached its sixth edition. Here the panels express a synthetic appraisal with a scale from one to five for each research institution and final assessment is made without the panels visiting the university. Departments are assessed by studying the four publications that each active researcher submits to the exercise. The results of the RAE are used with different criteria by the four main public-funding bodies to decide on the amount of funds to be allocated to research. For example, the HEFCE fund, unlike the RAE 2001, did not give funds to institutions with a rating of one and two whereas one with a rating of five received approximately four times more funds (for the same amount of research) than an institution with a rating of three.

The RAE is indicated by Pollitt and Bouckaert (2000) and others (Power, 1997) as a typical example in the area of controls of the spread of the values of New Public Management (NPM) in the English university system. However, literature suggests that the phenomena of degeneration and distortion present in the evaluation systems in England should be taken into account especially if they are connected to the funding system (Liefner, 2003). Many opportunistic or improper effects and strategies resulting from the close links with funding have been singled out by literature (Elton, 2000; Talib and Steele, 2000; Tapper and Salter, 2003; Morgan, 2004; Sharp and Coleman, 2005; Turri, 2005). There is a strong tendency on the part of the organizations that are being assessed to develop perverse learning behaviour, once they have understood the evaluation mechanisms that are finalized to using any possible means to maximize results (Smith, 1995; Power, 1997; Van Thiel and Leeuw, 2002; Reborá, 2003; Turri, 2005). This tendency increases exponentially when there are connections between evaluation reports and the mechanisms for funding research activities.

Furthermore, in the evaluation of complex activities such as university research the literature warns against adopting mechanical exercises especially in non-standardizable environments, that is to say where the environment and operational processes are not standard and repetitive

(Noordegraaf and Abma, 2003; Propper and Wilson, 2003; Baker and Hayes, 2004). Automatic mechanisms, statistical surveys and indicators will never be substitutes for a critical judgement, which finds its natural home in human meditation and elaboration, but may be helpful when making one. Evaluation cannot be entrusted to automatic sterile mechanisms or standard procedures but is an act of intelligence which requires taking on critical responsibilities (Power, 2003; Rebora, 2003). More attention must therefore be paid to professional accountability that is more suited to highly autonomous operational contexts (Huisman and Currie, 2004) and to the importance of organizational culture in evaluation (Kunda, 1992; Turri, 2005).

Evaluation activities in Italian universities have traditionally favoured a bureaucratic approach based on an *ex ante* check of the respect for input, processes or compliance with provisions of the law (Boffo, 1997; Turri, 2003). NPM has so far had no effect on the control and measurement of performance in Italy. However, the VTR has introduced an important innovation with immediate and far-reaching effects on university management. In the following pages this assumption will be tested and at the same time the existence of possible distortions will be verified.

2. THE THREE-YEAR CIVR RESEARCH EVALUATION EXERCISE (VTR, 2001–2003)

The Committee for the Evaluation of Research (CIVR) was set up in 1998 to promote research evaluation by supporting quality and the enhanced use of national technological and scientific research. Its seven committee members are appointed by the President of the Council of Ministers, have to possess proven qualifications and experience and be chosen from among a wide range of disciplines and methodologies.

The exercise, known as VTR, regards research activities carried out in the three-year period 2001–2003 and has its roots in the European peer review experience.

In order to carry out the VTR, area committees or panels were set up by the CIVR. Each panel was responsible for the evaluation of one of 20 scientific-disciplinary areas (14 National University Committee (CUN) areas and six special areas).²

The evaluation exercise aimed to evaluate research activities in state and legally-recognized Italian universities and public research institutions; 102 institutions took part in the research. This chapter focuses on the 77 universities that participated in the VTR and refers exclusively to the evaluation results put out in January 2006.

The evaluation procedure adopts a peer review system based on assessment of the merits of certain research products indicated by the universities. The exercise is in three phases that are under the auspices of the universities, panels and CIVR, respectively. Each research institution is required to select research products corresponding to 25 per cent of the total number of permanent academic staff. These research products include chapters in books, articles published in scientific journals, patents, projects, compositions, drawings and designs, performances, shows and exhibitions, manufactures and works of art. The CIVR, however, laid down guidelines for selecting the products, and every evaluation nucleus had to prepare a comprehensive report on the research activity.

During the evaluation procedure each panellist was given a maximum of 150 research products to assess by the president of the panel. The panellists did not carry out the assessment personally but gave it to external referees of their own choice who were then appointed collectively by the panel. In all there were 6661 referees. The informative system informed all the panel members on how the products were allocated. On average each referee was given five research products to assess. The panellists had to ensure that evaluation of the products was carried out correctly and promptly whilst the CIVR and panels made sure that the rating was kept anonymous.

Each product was assessed by at least two referees who gave a descriptive evaluation according to quality (the opinion of peers on the scientific excellence of the product in the scale of ratings laid down by the international scientific community), importance, originality of innovation, international standing and international competitive potential and occupational-economic impact. Each referee then had to synthesize his opinion in an overall assessment of the product according to one of four levels (excellent, good, acceptable and limited).

The first results of the VTR were presented at the end of January 2006 and posted on the CIVR website.

After evaluation by the referees each panel prepared a final report in three parts. The first was a consensus report where the referees' assessment of the individual research products was critically re-examined and a single assessment was given (excellent, good, acceptable, limited). The second was a ranking list, where the universities were listed according to their rating and each research product was given a numerical appraisal depending on the rating obtained (excellent: 1; good: 0.8; acceptable: 0.6; limited: 0.2). The university's rating in a specific area equals the mean of the score obtained by its products selected in that area. The ranking list gives each university's performance in the area, grouping the results according to the number of selected products (mega-structures with over 74 products – large structures between 25 and 74 – medium-sized structures between ten and

24 – and small structures with under ten products). Within each group the universities are first ranked according to their rating, then according to the percentage of excellent products and lastly on the basis of the degree of ownership of the excellent products. The third part was a concluding report on the area, where the methodology and organization of the work carried out by the panel were synthesized, the strong and weak points of the area pinpointed, and possible specific actions for improvement put forward. The university Rectors were then confidentially informed of the assessment given to each research product.

As previous studies have shown (Minelli et al., 2006) the use made of the results and above all the consequences on the funding of the universities are an indication of the importance of the role played by the research evaluation system.

Italian university activities are currently financed by the Ministry of University and no distinction is made between teaching and research. The state funds for running the universities (the FFO) are allocated annually. The largest sum is allotted on the basis of the funding given in previous years whilst the remaining smaller amount depends on the universities' performance. Funding criteria specify that 30 per cent of the latter amount is to depend on the results of scientific research activities.

In the VTR the uses of assessment are still not clear. Official documents state that (CIVR, 2004): 'when allocating public funds to research activities, priority will be given to those structures that have taken part in the evaluation exercise'. In effect, since 2006 the smaller amount of the FFO has taken the VTR results into account. However, to date the link between funding and performance is hazy and not particularly significant. The widespread publicity given to evaluation output has also led to great expectations on the increased use of performance measurement in the allocation of funds from the state to the universities and from the universities to the various departments. Moreover, on the basis of the CIVR results, some universities are promoting research activities that are considered excellent by offering prizes or awards, and decision-making has also been affected when allocating financial resources to departments. So far, however, this has only happened in a few cases.

3. STRONG POINTS AND INNOVATIONS IN THE ITALIAN EVALUATION SCENARIO

The CIVR exercise must be given credit for presenting the first overall picture of the results of research activities in Italy. In Italian public institutions the CIVR took the unprecedented decision to post the rating

obtained in the 20 areas by all the universities on its website and then placed the universities' performance in a ranking list. This contrasts with the lack of courage often shown by many evaluation systems in the Italian state sector, including those in universities (Turri, 2003; Minelli et al., 2005) where results give no indication whatsoever of merit. The introduction of ratings based on the *ex post* quality of output and not on *ex ante* respect for parameters and compliance is an important cultural leap forward (Bleiklie, 1998; Neave, 1998; Pollitt and Bouckaert, 2000).

When considering the natural elements that make up an evaluation system for complex activities, that is to say concepts, methods, bodies and uses, the promoters of the exercise have made simple, safe choices, minimizing the risk of resistance to change and making it possible to speed up the process.

The use of peer review based on the assessment of research products by high-level experts is methodologically innovative compared to the Italian tradition and has contributed to the acceptance of the evaluation exercise on the part of the Italian university environment which is traditionally founded on collegiate harmony that looks for consensus. In the case of the VTR it was crucial not to contradict the principles at the basis of university culture but to formalize evaluation practices that already existed in the university tradition through an exercise based on participation in the selection of research products. It is worth remembering that although this is the first Italian evaluation exercise, researchers have always submitted their products to evaluation procedures (for example, the referee procedures for publication of articles in scientific journals, the competitiveness to obtain research funds or appointment to an academic post after comparative evaluation). Basically the CIVR procedure has shifted evaluation from that of being a personal initiative to a national exercise. Even if this shift at first has no direct consequences on funding and the power system, it greatly affects the culture of the university organization by laying the foundations for a change in individual behaviour and management operating systems.

The evaluation system was centred on the bodies (CIVR and panels) that were set up and on operative methodologies. Once the CIVR was constituted, its members opted for panels and referees following in the steps of the European peer review tradition. Less attention was paid to operative procedures since the main purpose was to act quickly and obtain results that could be presented at a national level. However, the international character of the exercise is fully aligned with the requisites of the process for the integration of education and university research in Europe.

The idea or concept of evaluation may be criticized for its limited elaboration or excessive simplicity but the CIVR decided to play safe rather than go into infinite discussions on the concept of scientific quality. It adopted

a general concept that relied on the panels' evaluative competence: 'scientific quality will be what the panel considers it to be' and also chose to avoid facing the critical question of funding.

The members of the CIVR made great efforts to encourage widespread direct communication with members of the different scientific communities involved in each stage of the setting up and management of the exercise.

In the change process an important role is performed by players and agents. In effect, people in charge of research activities throughout the country (directors of departments, institutions, research centres and deans) became active agents. Evaluation became a dynamic lever for stimulating their particular universities by creating new openings, reorienting groups and people, starting all over again if necessary and reallocating funds. Some actors understood the rules of the game and its potentials and acted as a result, but others understood very little and remained inert and passive.

On the basis of what has been said above, the VTR is a great innovation in the way in which evaluation is carried out in Italian universities. Five important elements of discontinuity with the past can be pinpointed.

Attention to output. The main feature of evaluation has not been the adoption of pre-established behaviour, compliance with criteria or respect for the requisites of the process that are typical of the previous Italian university evaluation culture, but is focused on research products, in other words the output of research activities. The ratings obtained by the research structures in each specific area are a direct result of the assessment given to the individual research products.

Change in the relationship between universities, government and evaluation bodies. In the previous evaluation experiences in Italian universities the evaluation bodies only analysed statistical data and were not directly involved with the universities being assessed. However, in the choice of the research products and the drafting of a self-evaluation report the VTR required the universities to indicate the input on which they had to be assessed. The evaluation exercise has also led many universities to question their ability to carry out quality research and to make a comparison with other universities. This is the first important step towards strategies of valorization and differentiation between universities. These strategies foresee a greater say in management on the part of universities and departments with the definition of policies for improving the quality of research.

Enhanced decision-making in universities. Even the selection of research products for the evaluation exercise affects decision-making. In the long term this type of behaviour means that everyone is responsible for their own personal behaviour, decision-making in university departments is

enhanced and shifty behaviour is overcome. The need to take decisions and take on responsibility strengthens decision-making. Evaluation has a great impact on the distribution of power as it helps to open the black box of academic decision-making (Henkel, 1997; Brennan and Shah, 2000). This tendency is particularly strong in a system like the Italian one that is fully ensconced in the continental European tradition (Kells, 1992) with its weak institutional governance system.

Direct involvement of academics in evaluation procedures. In the first stages of the VTR academics were requested by their universities to set up the area committees for selecting products and to act as referees in the evaluation process. So far, the interest shown in the results of the exercise is promising as it underlines the universities' desire to improve the quality of scientific production and research in general. The comparative presentation of results also encourages academic staff to make improvements and the extent to which the results contribute to improvement will be verified in the coming months and years. The widespread participation in the VTR has brought results such as the initiatives of various disciplines to reflect on and formalize their criteria of excellence. There is possibly an increase in the number of younger university staff who have published articles in international journals, although this supposition will have to be verified with future studies. The international character of the CIVR is in fact a valid stimulus for orienting the activities of young researchers.

Attention to communication and the form of evaluation output. The posting of data on the website and their presentation at a press conference highlight the CIVR's attention to communication. Over the past six months more than one million people have visited the website where the VTR results are posted and a great deal of attention has also been paid by the press. The presentation of the data in ranking lists has also awakened interest in the results of the exercise. The university ranking lists are certainly effective and make an immediate comparison possible, arousing interest and attention. These elements are not insignificant. The novelty of the evaluation exercise for communication in the university system changes the traditional relationship between universities, national government bodies and society. With the solutions regarding communication the VTR goes beyond the frontiers of the relations between universities and government bodies and becomes an element of accountability that is available for society (enterprises, families and other universities). Basically, evaluation is no longer an issue inside the relationship between universities and national government but becomes one in which society directly requires universities to account for their quality levels and the government to be answerable for policies for stimulating and promoting research.

4. SHADOWS OVER THE EVALUATION EXERCISE

As already shown, the VTR has some significantly innovative elements. In this perspective of change some technical imperfections are apparent. As such they are not so important, although in the medium term they make room for the improper effects and unexpected undesired consequences that reference theories take into consideration (Smith, 1995; Power, 1997; Rebora, 1999; Van Thiel and Leeuw, 2002; Turri, 2005). The following is a summary.

The fact that the current evaluation exercise only involves a limited number of products means that the VTR does not assess the overall scientific production in Italian universities but only their ability to produce a certain number of research outputs of international excellence. This is a legitimate methodological choice but one must be fully aware of it when interpreting the results. It is impossible to expect that the exercise will give indications on the performance of university staff, or the ability to produce volumes of research activities that are in line with the funds used. The exercise only refers to excellence and must be considered in this light. Consequently, any observations on the results of the exercise must bear in mind that the reports show the peaks of excellence in the national system but serve no purpose in other matters such as the productivity of university staff during the period that is being examined.

Another drawback regards the criteria for drawing up the ranking list which puts universities of the same size in order of the absolute rating they have achieved. If the rating is not well balanced the results risk being distorted. A practical example points up the following situation (Table 12.1): in area 10 (philological-literary sciences, antiquities and arts) in the section referring to large structures the University of Venice and the State University of Milan had a similar number of researchers but selected a different number of products. The number of products depends on the number of permanent university staff but each university can decide how many products to assign to a particular area. Following the VTR criteria, the University of Venice legitimately reduced the number of products for evaluation from 49 (which corresponded to 25 per cent of the researchers in the area) to 29. This greatly increased the incidence of the total of selected excellent products and therefore had a positive effect on its rating. Milan, on the other hand, selected 48 research products, corresponding exactly to the researchers in the area but although it had a larger absolute number of excellent products it was given a lower rating, putting it nine places behind Venice in the ranking list. It is thus necessary for future evaluation exercises to pay more attention to the prevention of possible distortions.

Table 12.1 Area 10, philological-literary sciences, antiquities and arts

University	Position in the ranking list (large structures)	Number of FTE researchers	Theoretical number of products for selection	Number of selected products	Number of excellent products	% of excellent products over the total of selected products	Rating
Venice	1	97.83	49	29	23	79	0.94
Milan	10	95.67	48	48	29	60	0.91

Source: CIVR (2006)

The structure of the ranking list is also questionable. The sub-division of the universities according to the number of selected products seems to be arbitrary because the proportion between the number of researchers and selectable products is not fixed in the areas. The only justification appears to be the need to increase the number of prestigious positions available. The solution adopted by the CIVR increases the number of places on the podium so that up to 12 universities in each area can claim that they have reached one of the top three positions. This criterion favours universities in the mega-structure category too, because as there are very few of them they can easily reach the top positions.

The special areas distort the picture. In order to set up these special areas, universities fictitiously collocate researchers in them and this helps to falsify the ratio between the number of personnel in a particular area and the number of selected products. It would have been more suitable to put the special areas on a par with the other 14 CUN areas, thus making it possible to appoint personnel directly, or alternatively to consider them as part of the 14 areas with assessment by specially set up sub-panels.

In many disciplines there is an indiscriminate adoption of international criteria that use automatic mechanisms for assessing the quality of excellence. In reality the adoption of criteria for assessing the quality of research products was left to the area panels. However, even if the VTR has guaranteed a well-founded rating, there has been a strong tendency to use statistical analysis in many disciplines. The limitations of this practice have already been pointed out and what is sure is that if it is consolidated there will be adhesion to reference schemes belonging to Anglo-Saxon countries. In certain disciplines this is already happening and is considered acceptable, whereas in others it is certainly bringing about subordination and cultural impoverishment (Alasuutari, 2004). This chapter will not discuss the

question but it is necessary to be aware that the adoption of national evaluation mechanisms may foster this type of phenomenon.

The last weak point, but certainly not the least important, is that the exercise pays too little attention to transparency and the complete autonomy of assessment procedures. The CIVR's efficient and determined line of action has shortcomings as regards transparency. Firstly, in theory the procedure for proposing the panel members who are essential for the evaluation exercise has to be open to public knowledge, but in practice the academic community was kept in the dark and was only given information on the panel after it had already been set up, with no details of the criteria for choosing panellists. Secondly, the overall results of the exercise were widely publicized whereas the detailed results for each university (that is the rating of the individual research products) were only given to the Rector and, what is more, were synthesized. Even the authors were not directly told what their own rating was. Thirdly, just as the criteria for making the ranking list and the number of panellists changed during the exercise, so did the evaluation regulations laid down in official CIVR documents. The universities taking part in the VTR were kept in the dark and given no explanation for the changes. Finally, the process also reveals shady areas in terms of autonomy. Many of the CIVR members and area panellists have posts, some of which are important, in the universities that are being assessed. They have also submitted research products (often in large numbers) to the evaluation exercise where they have personally taken part in decisions on evaluation criteria and have chosen and monitored the referees.

5. CONCLUSION

The previous pages have highlighted how the VTR is an orderly evaluation exercise based on peer review and that it is able to reach an effective output. As regards evaluation in Italian universities the exercise is discontinuous in its attention to output, in the changing relationship between universities, national government and evaluation bodies, in the enhanced decision-making of universities, in direct involvement of university professors in the evaluation procedure and in attention to communication and the form of the evaluation output.

There are however, shadows over the evaluation exercise, that is to say imperfections or weak areas that may not have affected the outcome of this edition of the exercise but are a threat for the future.

In order to understand the overall impact of the exercise on Italian universities, much will depend on whether it is repeated in the future as the term 'three-year research evaluation' implies. Repetition of the evaluation

exercise and improvements in the weak areas would have important consequences in universities, otherwise the great ferment caused by the VTR is destined to fade away in a short time.

The relationship between evaluation impact and time factors is the central point in Jeliaskova and Westerheijden's paper (2002) and was taken up by Turri (2005) who puts forward the theory that the impact varies according to the stage in the life-cycle that the evaluation process is in (introduction–consolidation–full development–maturity). If the VTR exercise were to be repeated, universities would find themselves in a completely different situation. They would be forced to pass from a situation where they had no idea of the result because the exercise was new, to one where they were aware of the cyclical repetition of evaluation and would thus be spurred on to activate strategies and behaviour that would enhance the quality of their research.

To conclude, the VTR changes the perspective of Italian evaluation by leaving behind the 'state control' model in higher education based on centralized decisions and bureaucratic control with its attention to formal aspects, inputs and compliance with standard processes. The CIVR exercise, on the other hand, enhances the 'evaluative state' model based on autonomous universities and controls of performance (Neave, 1988 and 1998; Osborne and Gaebler, 1992; Pollitt, 1993).

The turning point in evaluation in Italy made possible by the VTR is to be welcomed, although the experiences that have spread throughout Europe in the past decades must also be taken into consideration. The introduction of performance measures inspired by the principles of NPM expose both the evaluation exercise and the activity being assessed to the risk of distortions and paradoxes. The shadows over the evaluation exercise show that the fears are founded. The delay in evaluation in Italy can now be put to good use to avoid committing the same mistakes as other European systems. Experiences in other countries must be well analysed and appropriate steps must be taken by adopting the best solutions, avoiding errors and being unafraid of innovations.

NOTES

1. Grateful thanks are due to Prof. Pieter De Meijer, former Rector of the University of Amsterdam and past President of the Evaluation Nucleus of the University of Padova and Roma Three, for the stimulating debates on VTR.
2. The Areas correspond to 14 scientific-disciplinary areas defined by the National University Committee (CUN) and 6 special areas chosen by CIVR on the basis of their importance in Italy and their coherence with the aims of the National Research Programme (PNR) and the EU research and development programmes.

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Section III (ii)

Innovation and Regional Economies

13. Education and training for innovation in SMEs: a tale of exploitation¹

Stuart Macdonald, Pat Anderson and Dimitris Assimakopoulos

INTRODUCTION

The chapter focuses on the provision of education and training for small- and medium-sized enterprises (SMEs) by the Yorkshire and Humberside Universities' Association (YHUA), a grouping of twelve universities and colleges of higher education in the north of England, funded for this purpose by the European Social Fund under provisions to aid depressed regions with Objective 2 status. The assumption of the YHUA scheme was that higher level education and training for the employees of SMEs would provide these SMEs with the resources they require for innovation. With more innovation, they would become more competitive, creating more jobs and more wealth in the region.

The plight of SMEs attracts the interest of governments everywhere, and governments everywhere intervene on market failure grounds. In this case, there was a specific policy supposition that the unaided market will not propel SMEs to provide higher level education and training for their employees, that SME employees will not provide this education and training for themselves, and that government must consequently intervene. The very nature of the sector – huge, scattered, volatile, diverse – together with the range of problems it faces, make any single, uniform intervention unlikely to be successful. Indeed, so vast is the sector, that gauging any impact of government intervention is always likely to be problematic (see Gibb, 1996).

Rather than attempt any sort of evaluation of the YHUA scheme, this chapter seeks to build on an analysis of information flow in SMEs, undertaken for the YHUA in 2000 (Macdonald et al., 2001). First, the chapter considers, as the YHUA scheme and the European Social Fund did not, the reality of innovation in SMEs. It then looks at YHUA provision of

education and training in the light of this reality. It finds few benefits in terms of innovation in SMEs. The chapter's concluding section searches elsewhere for benefits.

INNOVATION IN SMEs – POLICY AND PRACTICE

Rothwell identifies innovation policy as the link between the abstraction of science and technology policy, and the cold reality of industry policy (Rothwell, 1986). Where SMEs are involved, perhaps the crucial link is between policy of any sort and cold reality. For instance, a simplistic view of SMEs is still common among policy makers who are capable of seeing SMEs simply as nascent large firms that should be exploiting innovation to realize their growth potential. SMEs, it would seem, have no business being small.

Companies that introduced new technologies at least once a year were three times as likely to forecast an increase, or rapid increase in turnover, than those that never introduced new technology. (Marsh, 1996, p. 25)

Of course, many managers of SMEs have no ambitions at all to manage large companies (Reid et al., 1999), and the economy is dependent upon the part that SMEs play in it – as SMEs (Rothwell, 1989).

There is a plethora of schemes by which the UK government affords assistance to SMEs. Many of these schemes are intended to help by boosting SME innovation and hence, so the argument goes, their competitiveness. For instance, the Teaching Company Scheme (TCS) encourages graduates to work in industry so that they may transfer technology from university to firm (see Tiler and Gibbons, 1991; Senker and Senker, 1994). About 90 per cent of the firms participating in the TCS are SMEs. 'The mission of TCS is to strengthen the competitiveness and wealth creation of the UK by the stimulation of innovation in industry through collaborative partnerships between the science, engineering and technology base and industry' (Department of Trade and Industry, 2000).

This linear assumption that innovation results from transferring the information from what is often termed the 'knowledge base' to the firm is fundamental to many of these schemes. Behind the management speak of the Regional Economic Strategy for Yorkshire and Humberside lies the same assumption. The strategy is to: 'create Centres of Excellence clustered round universities to increase the commercial exploitation of higher education's research base' (Yorkshire and Humber Regional Development Agency, nd, p. 4). Unilink, one of the programmes funded by the EC to assist the region's SMEs, is justified in a similar, though less literate, way: 'UNILINK is a university lead [sic] project developed to

help companies solve their technical and design problems using the expertise of the regions [sic] universities and research base' (*RIS Newsletter*, 12 May 2000, p. 2).

There is actually very little evidence to substantiate this model of innovation. Indeed, there is considerable evidence that innovation is unlikely to be produced in this way. Information for innovation comes from a variety of sources rather than from a single 'knowledge base'; it is transferred in a variety of ways, and transfer is an interactive process involving the exchange of information rather than just its one-way flow from those who know to those who do not (Macdonald, 1998; Lybaert, 1998).

Innovation, and perhaps particularly innovation in SMEs, is complex. It is also the product of serendipity and happenstance as much as a managed and controlled process. Yet policy often retains an uncluttered, linear view of innovation. Why this should be is not hard to deduce: it is convenient to be able to justify input in terms of output, to relate resources in to innovation out. So, policy makers and politicians have an interest in preserving the fiction of a linear innovation process, and in ignoring evidence that programmes based on the notion tend to fail (Culkin and Smith, 2000). The many EU programmes to assist SMEs seem especially prone to failure (Mulhern, 1995; Dannreuther, 1999).

Also keeping faith with the linear model of innovation are those to whom the model attributes a seminal role in innovation. This obviously includes scientists and engineers, but also the institutions employing them. Thus, universities have much to gain from acceptance that the innovation of SMEs is the product of a managed, linear process. This belief was never tested in the YHUA scheme: trust in the linear model of innovation and in the performance of its major actors allowed YHUA administrators to let mere participation in the scheme indicate innovation. The success of the YHUA scheme was judged not in terms of innovation, but of numbers recruited. 'The information you provide will not be used to reassess grant, it will be used merely as an indicator for us as administrators to assess how we stand as a regional project in terms of achieving targets' (YHUA memorandum, 18 July 2000).

And so, the more participation in the YHUA scheme, the more innovation could be assumed to result: 'we are in the process of organising a large event to celebrate and disseminate the huge progress made by the regions [sic] universities in addressing SME skill shortages and access to higher level skills by employees of SMEs in the O2 [Objective 2] areas' (YHUA memorandum, 4 August 2000).

The reality of innovation in SMEs can be at variance with the rationale of programmes to increase this innovation. The evidence is that many SMEs are already innovative. They have to be innovative to survive. Their

problems lie elsewhere, the solutions frequently confounded by the burdens borne by SME managers. Basically, SME managers are far too busy coping with a wide range of immediate demands to give much attention to less pressing matters. There is little opportunity to stand back from the fray. Thus, their horizon is limited, their view of the world restricted. The views of SME managers participating in the YHUA scheme are presented in italics throughout the chapter. On this matter, they were as one: a neat and ordered view of more education and training leading to more innovation is in serious conflict with the hectic work style of the SME.

As a small company, and 'hands on' it's difficult to take time to obtain higher qualifications or study at home, like IT, e-business, 'computer-related' studies. We operate 24/7/365.

We would like to develop and expand our staff knowledge and qualifications but as a small company it is very difficult to spare personnel through normal working hours and the expense can be prohibitive.

Education/training and innovation are important, but they are expensive to provide for employees, both in course fees also in lost time (output) which small firms in a competitive market find very hard to justify.

According to a Department of Trade and Industry (DTI) survey of innovation in SMEs, nearly a third earn more than half their turnover from their three largest customers (Marsh, 1996). The typical SME is isolated, which is presumably why SMEs perform so much of their own R&D, and look to their own resources for development. Inevitably, these resources are limited and often inadequate. The result can be frustration, not just with failure in innovation, but also with government exhortations to succeed that are based on a linear interpretation of the means by which SMEs innovate. Managers of SMEs were generally less convinced that education and training led to innovation than the providers of the education and training. Indeed, providers were apparently so convinced of the value of their product that they took little interest in just what subjects were covered in the education and training they provided. Providers seemed to assume that anything the 'knowledge base' cared to supply would generate innovation in SMEs, if only their employees could be recruited. The assumption was not shared by managers of SMEs.

My experience is that of a huge void between education/training and innovation.

My experience is that the link – education and innovation – is tentative. Innovation thrives in business cultures which allow room for this.

Innovation is seeing a need/niche and filling it – I do not believe you can be educated to innovate.

Whilst education may assist in researching or implementing innovation, it is not necessarily required for innovation.

THE YHUA SCHEME

The Yorkshire and Humberside Universities' Association (YHUA) was formed in 1993 by the vice-chancellors of the region's eight universities and four higher education colleges to provide a forum to promote the contribution that the higher education institutions (HEIs) make, individually and collectively, to regional GDP and employment, and to extend the contribution of higher education to regional development. The YHUA office and secretariat were based at the University of Leeds. In all, the European Social Fund has given some £6 million for the region's HEIs to provide courses and programmes for business through the YHUA (*Unilink News*, 2000: 4).

Analysis of the YHUA scheme involved surveying participating SMEs. The intention of the survey was to determine whether the higher level education and training provided did contribute to the innovation of SMEs in the Objective 2 areas of the north of England. After appropriate preparation and piloting, and interviews with a sample of SME managers, questionnaires were sent to SMEs that, according to providers, had participated, or were still participating, in the scheme. Participants were actually employees of SMEs, enrolled in the scheme as individuals. In fact, SME managers played no part in the scheme at all (beyond ensuring that their firm satisfied eligibility criteria), unless they happened to participate as individuals. The direct and immediate beneficiaries of the scheme were those who received money from the European Social Fund to provide education and training. It struck several SME managers that there was no failure at all in this particular market.

Too many 'providers' as you call them [with] no commercial awareness and commercial cost pressures.

Many providers of education and training services kept detailed records of the courses they provided, but no records of precisely who had received their services, which posed problems for the analysis when a survey list was required. Only when names and addresses were deemed to have commercial value did providers care enough about who received their services to compile lists, lists that they then kept secret from other providers. Based on

available lists collected through the YHUA itself, some 794 questionnaires were posted in October 2000 to SMEs with employees who were, or had been, participating in the scheme. A similar number of questionnaires (800) was posted to other SMEs in the region, their addresses being procured from a commercial database. These were not known to have been involved in the YHUA scheme.

The industry sectors of the comparator group were chosen to match those of the SMEs involved in the YHUA scheme. There were 15 of these: automotive; biosciences; chemicals; construction; design; electronics; engineering and materials manufacturing; environmental industries; financial services; food; freight; medical; multimedia, software and publishing; printing and printed packaging; and textiles and clothing. Sectors were intended, as much as circumstances allowed, to provide samples of SMEs from both high and low technology areas (for example, electronics and textiles). Although the survey adopted the customary definition of a SME as a firm with fewer than 250 employees, the vast majority of SMEs in this sample had fewer than 50 employees.

Despite considerable effort to encourage SMEs to complete and return the questionnaire, the response was rather poor, little more than 16 per cent overall. Time did not permit the sending of reminders, but these would probably not have yielded many more returns. The SME sector is notoriously hard to survey and responses are often low, even when there is real interest in the subject under investigation. There was limited interest in higher level education and training, at least as a discrete issue. Many SME managers in the region saw little point tackling a skills problem in isolation from the other obstacles to innovation in SMEs (see Baldwin et al., 2001). In consequence, these survey results must be regarded as no more than illustrative and indicative; they are not statistically significant.

The link between innovation and education/training for small firms like ours also has a financial aspect – if we are doing well why change, if we are doing poorly how do we pay!! Catch 22.

Overall, some 210 usable responses to the survey were received, 134 from SMEs involved in the YHUA scheme, and 76 from SMEs probably not involved. As there was no discernible difference between the two groups, and certainly not in attitude towards education and training, the returns were simply bundled into one overall group of 210. Questionnaires had been posted to the chief executive of each SME, addressed by name, and these were nearly always the individuals who completed the survey form. They were not unfamiliar with higher level education and training: most of these senior managers were educated to degree level. More were qualified

in engineering (37 per cent) than in any other subject, although – a sign of the times, perhaps – almost as many (29 per cent) were qualified in management and business studies. These were educated individuals, enthusiastic about the general value of education and training as part of the infrastructure of innovation rather than its single source.

I have nearly completed an MBA at Leeds University. . . . This has provided valuable learning and knowledge to enable innovation in a wide variety of disciplines.

Improved education/training is necessary to ensure innovation is both feasible and viable.

On average, these senior managers had been with their current firms for just about 11 years, substantially longer than senior managers in large firms these days. Though the YHUA scheme was justified in terms of education and training making SMEs more innovative, these senior managers insisted that their own firms were already highly innovative. Some 87 per cent of respondents claimed that their company had innovated in the previous five years. This may not seem like much of an achievement, particularly in view of the very comprehensive definition of innovation the survey employed – the introduction of a product or process new to the firm in the previous five years – and in view of the possible tendency of senior managers to portray their firms as rather more innovative than they really are. Even so, such a result does seem to challenge the underlying assumption of the YHUA scheme that SMEs resist innovation and that government intervention is required to make them embrace it.

The assumption also disregarded much of the evidence available to the YHUA. For instance, a recent survey of manufacturing SMEs in South Yorkshire found that three-quarters were innovative (Innovation Advisory Service, 2000: 1), and an earlier study of the patenting practices of SMEs in the UK discovered that 83 per cent of their chief executives considered them to be innovative (Macdonald and Lefang, 1998). Similarly, a report to the Yorkshire Training and Enterprise Councils (TECs) found two-thirds of Yorkshire firms, large and small, were innovative in the sense of having introduced a new product or service within the previous year (Baldwin et al., 2001: 27). SMEs – as their managers often try to explain – have to innovate in order to survive. Innovation was not seen as a function of education and training.

I believe innovation within a company stems from the top and a business structure that is versatile and open to change.

Innovation is mainly common sense and dedication.

Innovation, I believe, is an evolution of ideas that sometimes takes years to surface. And only rarely is a spark of inspiration (but it is nice when it is).

Table 13.1 Employee attributes considered most important for innovation in SMEs (% of respondents)

	Important
Natural ability	70
Experience in the job	58
Experience in other jobs	35
Formal education qualifications	25
Experience in other firms	22

While there are obviously many factors that bear on the innovation of SMEs, the survey concentrated on the contribution of employees, and especially the education and training of employees, to this innovation. As Table 13.1 reveals, natural ability and experience in the job seem to be valued most highly (see Eraut et al., 1998). It is understandable that the YHUA should have concentrated on the provision of formal education and training, for that is the business of its members. SME managers, however, though qualified themselves, had trouble relating formal qualifications to SME innovation. Their innovation was essentially a practical matter.

I think that it is important to have some knowledge of the industry you are involved in to know what will work and how the market and your customers will respond. Knowing how your industry operates is the most important factor in innovation.

In our experience it is not crucial to have high levels of academic qualifications – rather enthusiasm and a willingness to learn, adapt and change is important.

Commercial innovation can only come as a result of experience. . . . It does not necessarily follow that if you give someone extra knowledge they will be innovative.

*I believe the ability to innovate is first, born in people; second, can be improved if people have received education prior to long practical experience. I don't know whether education **after** experience is as good.*

The survey also revealed that, in as much as these respondents considered education and training relevant to their innovation, it was training rather than education that they really valued. Their favoured providers were colleges of education rather than universities or consultants hired by

Table 13.2 Preferred intensity of provision of education and training (% of respondents)

Day courses	57
Part-day courses	23
Distance learning	11
Weekend courses	6
Week courses	3
Total	100

Table 13.3 Level of education and training considered most appropriate to SME innovation (% of respondents)

Apprenticeship	25
GNVQ/BTECH	25
First degree	17
GCSE	16
Foundation year	8
Masters degree	6
PhD	3
Total	100

universities and, as Table 13.2 shows, day courses were overwhelmingly preferred to any other intensity of provision. This preference for day release is compatible with what is known about small firms being unable to cope with prolonged absence of staff.

Table 13.3 indicates the value these SME managers attached to practical qualifications (see Entorf and Kramarz, 1997; Senker, 1997). Many SME managers yearned for a return to old-style apprenticeships, now almost phased out in the UK.

When an apprentice is taken from Humberside Council run organisation, they spend too many days away on courses not of use to the lad.

The three dimensional degree courses at colleges of art seem to have isolated silversmithing trade students. Though there are few trade students nowadays, they used to go to the college of arts and crafts part-time and night classes to complement their apprenticeships.

Inevitably, the apprenticeship issue brought complaints from managers who felt they bore the cost of training for the benefit of others, a market failure that the YHUA might well have used to justify training at public expense.

We have been active in training both apprentices and mature staff. Unfortunately, we have suffered from over-training where after training, staff have moved to other companies.

When apprenticeship support from the government of the day was removed, warnings were issued from industry that the dilemma that we are in now would occur. Manufacturing will not invest in training because those who don't invest steal from those who do.

Table 13.3 is revealing, not so much in the prominence of training over education, for this was predictable, but in the relative value attached to a university degree, not that the YHUA scheme subsidized university degrees. These respondents were not at all hostile to university education, valuing it as much as school-leaving qualifications. University degrees are now very much more common in the UK than they were even a few years ago and employers are more familiar with them than ever before. However, these SME managers perceived an important distinction between education and training, and they were convinced that universities should be providing the former. They were absolutely scathing towards universities they thought were failing to educate.

I become more and more depressed at the reduction in standards of first degree level in universities – especially ex-polytechnics.

The quality of graduates we are now interviewing is disappointing, their ability to solve problems in an innovative manner is decreasing.

The main problem in training is getting people to think! This is obvious but a very difficult thing to do in practice.

Level of qualification not as good as previous years and still void between qualification and what industry requires.

Just over half of respondents reported participating in government-subsidized initiatives to encourage the education and training of their employees. As two-thirds were supposedly participants in the YHUA scheme, it would seem that a good few senior managers of SMEs were unaware that the providers of their education and training were being subsidized by the scheme. Even so, those that were aware considered both the education and training received, and the subject matter taught, to be generally appropriate to the firm's innovation. Now this is curious, for these very same managers were generally doubtful about the relevance of education and training to innovation in SMEs. The explanation may be that they were critical of the principle of subsidizing education and training for innovation in SMEs, but more sympathetic towards receiving the subsidy themselves.

The individuals who participated in this subsidized education and training came from all parts of the spectrum of SME employees, with senior managers as likely to participate as manual workers and clerks. Interestingly, though, respondents – senior managers themselves – would have preferred fewer junior employees to attend and many more middle and senior managers (Table 13.4). This may reflect the dominant role of universities in the supply of education, such education being considered more appropriate for managers than for other workers.

The SMEs in this survey were surprisingly outward-looking, many of them estimating that external information makes a major contribution to their innovation (see Macpherson, 1992). As Table 13.5 reveals, most of this information came from predictable sources (Gibbons and Johnston, 1974). It is firmly established in studies of SMEs that the major external sources of information for their innovation are customers, suppliers and competitors (Senker, 1986, 1997; von Hippel, 1988; Rothwell, 1991). Table 13.5 makes it

Table 13.4 Status of participants in education and training schemes (% of respondents)

	Likely to attend	Should attend
Senior managers	24	25
Middle managers	27	32
Junior managers	21	20
Clerks/administrators	23	8
Other	5	15
Total	100	100

Table 13.5 External sources of information considered important for innovation in SMEs (% of respondents)

	Important
Main customers	64
All customers	54
Suppliers	48
Competitors	41
Trade associations	33
Professional associations	30
Own group headquarters	26
Consultants	23
Universities	21
Research associations	19
Government	11

clear that the major sources of information for innovation for these SMEs were no different. Customers, especially a few major customers, were far and away the most important source, followed by suppliers and then by competitors (see Rothwell, 1991; Baldwin et al., 2001). The least useful external sources of information for innovation were government departments and agencies, universities and consultants – basically the providers of education and training on which the YHUA scheme depended.

It is extremely difficult for small companies to get help with ideas from organisations like universities! Can you help please?

Very few respondents reported any sort of networking or exchange of information for other information. Information for innovation was seen as either available for nothing, or as something to be bought. There was little evidence of searching for information and, indeed, managers of SMEs are unlikely to have time to spare for searching, much less for building up the contacts and networks necessary to secure a regular and reliable supply of external information for innovation.

Getting information can seem like walking round a maze, and not at all simple, as it should be.

. . . we pay for advice from independent source who collates articles each month into a news sheet – approximately 16 sides A4.

Information networking demands relationships that allow information to be exchanged, normally for information of equal value. This is vastly more sophisticated than the concept of a pool of knowledge to which SMEs contribute and from which they can all draw. Yet, even this rudimentary pooling system was unfamiliar to most of these SME managers. This discovery is significant: without the communality of the information pool, or the interdependence permitted by networks, each SME is very much alone. For the information required for innovation, each is forced to depend on its own resources. And while network action stimulates further interdependency, isolation is equally self-perpetuating.

All our innovation to date has been inspired and executed within our company.

By far the most important means by which these SMEs acquired external information for innovation were reading specialist technical and trade journals (see Small Business Research Centre, 1992), keeping track of the competition, and talking with friends and colleagues in their own industry (Table 13.6). Such findings confirm what is already known about the world

Table 13.6 Means by which SME managers acquire information for innovation (% of respondents)

Reading technical and trade journals	63
Talking with friends and colleagues in the industry	59
Keeping track of the competition	58
Market research	39
Reading professional research papers	38
Attending conferences and seminars	38
Talking to employees of innovative firms	37
Copying the innovation of other firms	33
Visiting innovative firms	28
Informal transfer agreements with other organizations	22
Formal transfer agreements with other organizations	20
Participating in government training programmes	16
Hiring employees of innovative firms	15
Watching TV or radio	10

of SMEs, that this is an environment in which information for innovation comes from managers keeping their eyes and ears open for snippets that just might be useful for change within the firm. Agreements to acquire information for innovation from other firms were of little importance, even at the level of hiring employees from innovating firms. But just about as useless in providing the external information vital for innovation – as incidental as watching television – was participating in government training programmes.

Government sponsored training is too bureaucratic and obscure – thus we never use it.

ASSESSING THE BENEFITS OF THE YHUA SCHEME

Linear models struggle to explain the innovation of SMEs. They reveal only that SME innovation is different, a revelation from which it is all too easy to conclude that SME innovation is somehow inadequate (Rothwell, 1992). While programmes based on the supposition that innovation is a linear process – of which the YHUA scheme was one – are unlikely to encourage innovation, there may well be benefits elsewhere. Belief that innovation is ultimately dependent on the ‘knowledge base’ maintained by universities, and made accessible through the education and training the latter offer SMEs, is a belief that directs resources to universities and not necessarily to SMEs.

Universities are now organizations in which the bottom line is as important as it is in any SME. They have to be competitive and have had to change greatly in order to compete. Their own innovation as they struggle

to create a market for their services is every bit as impressive as that of their customer SMEs.

Firstly funding agencies such as the RDAs, Regional Government Offices, the new Skills Councils and the Small Business Service can be persuaded to give priority to exploiting the philosophy of using sector specific, learning partnership between HEIs, NTOs [national training organizations] and small firms as a strategy [to] deliver regional economic development based upon embedding Lifelong Learning in SME sector firms. Secondly it is necessary to persuade relevant UK and European funding agencies that priority should be given to funding the development of new sector specific, self study learning systems covering those issues where owner/managers feel competence enhancement is a route through which to deliver improved organisational performance. (Chaston, 2000: pp. 7–8)

In selling services in a non-academic market, especially one assumed to be unsophisticated, university marketing can sometimes intrude into the presentation of research. For example, one academic survey of the innovation of one hundred SMEs in South Yorkshire also seizes the opportunity to drum up business: ‘85% said they would be interested in hearing more about the services available through the Institute of Work Psychology’ (Institute of Work Psychology (n.d.), p. 7). And a commercial testimonial decorates the front of a collection of case studies from another northern university: ‘PrintNET has streamlined our computer system, saving us time and money. We would highly recommend PrintNET’s services to other companies’ (*PrintNET Case Studies*, 2000).

If SMEs were quite pleased to accept the education and training services offered by YHUA providers – and the survey evidence here suggests they were – it may be because these providers went well out of their way to emphasize that there would be no cost to the SME. Consider the marketing of one university:

Can Your Company Afford to Ignore over £3,000 worth of **FREE, DEGREE LEVEL MANAGEMENT TRAINING?** TWO degree-level courses being run at the University of Leeds are **FREE** to selected print and packaging SMEs. . . . All this is available absolutely **FREE OF CHARGE** to people working in independent companies employing less than 250 staff in and around the following ESF [European Social Fund] Objective areas: South Yorkshire, Wakefield, Pontefract, Castleford, Bradford, Batley, Dewsbury, Cleckheaton, Hull, Grimsby, Scunthorpe and Beverley. [original emphasis] (*PrintNET Newsletter*, 2, October 2000)

£4,600 (per employee) of training to support your staff development – **FREE TO YOU.** [original emphasis]

It was not always immediately evident in promotional material just whence the funds to pay for the education and training were to come. One leaflet

did make clear the conditions of funding, but only in small print on the back page. Much larger print on the front page declared:

The University of Leeds is offering **20 FREE PLACES** on **Open and Distance Learning (ODL)** courses to help you acquire these new skills. It doesn't matter if you have no formal qualifications or haven't studied for some time. [original emphasis] ('Learning works' leaflet, University of Leeds, 2000)

Leeds Metropolitan University, with the backing of the European Social Fund, are offering you as an employer an opportunity not to be missed. . . . Free training and staff development. **YES, ABSOLUTELY FREE!** [original emphasis] (leaflet, Leeds Metropolitan University, 2000)

Promotional material emphasized that funds had already been allocated and were simply waiting to be spent: 'PrintNET has up to £400 000 to spend on helping Yorkshire businesses to innovate and to make the most of new technology' (*PrintNET Newsletter*, 1, April 2000). Perhaps inevitably, the YHUA scheme confused the distinction between education and training as commercial products, and education and training as public goods. One university manager interviewed was quite clear that commercial pressures required any information presenting the YUHA scheme in a poor light to be suppressed:

We had lots of negative comments [about YHUA education and training], but we wouldn't want to show these, would we?

CONCLUDING THOUGHTS

It is hard to be positive and constructive about the YHUA scheme. The best that can be done is to note that the SME managers surveyed were pleased to receive free education and training. But this is a classic special pleader situation: those who are given something for nothing generally think it a good idea that they be given something for nothing. The main problem with the YHUA scheme was that it was driven by neither market, nor by government. SMEs had almost no influence on the supply of education and training because they had access to no funds with which to express demand. Nor had government planned what education and training SMEs should have; this was determined by what the providers cared to supply, and by what both they and the scheme's administrators could justify in terms acceptable to the European Commission. The YHUA scheme brought benefits to the providers of education and training for SMEs, but it is hard to believe that the scheme did much for the innovation of the region's SMEs (see Oztel and Martin, 1998; Dannreuther, 1999).

There is a tendency for policies and programmes to assist SMEs to be just a shade patronising (for example, Department of Trade and Industry, 2000) as if SMEs need parental guidance until they grow up (Lawton Smith et al., 1991). SME managers in this survey did not need the YHUA scheme to tell them that innovation was important for business. They were also well aware of the role of education and training in innovation and of the essential difference between the two (Senker, 1981; Hyland and Matlay, 1998). SME managers valued challenging education and relevant training.

My son, who is a 2/1 university graduate, has helped me with thoughts of innovation. Being a small firm we react and try to innovate but generally our education level is GCSE/B. Tech which satisfies the electrical installation work we do.

Found our latest student on placement to have greatest number of 'new' ideas in IT/Internet but the lad with GCSEs has more understanding of practical side of the business.

SME managers also valued quality. Poor quality education could easily deter innovation.

There can be a tendency for 'lower level' education to provide a barrier to innovation by providing answers rather than frameworks for questioning. There seems to be little positive development on innovative 'right brain' thinking.

It seems that the distance between the European Social Fund (ESF) policy makers and the local managers of SMEs in Yorkshire and Humberside prevented the former from gathering any direct feedback from the latter. Policy makers seem to have been quite unaware of the sort of education and training provided by HEIs to encourage SME innovation in the region. Feedback would undoubtedly have highlighted some of the issues discussed above. It might also have persuaded ESF policy makers to withdraw support from programmes such as the YHUA scheme, and to redirect scarce resources to innovation programmes appreciated by SME managers rather than university administrators.

Evidence elsewhere suggests that providers of education and training have some trouble keeping up with the pace of change in some of the SMEs they serve (Cooper, 2000). They can be quite oblivious of the real obstacles to SME innovation: SME managers lack resources, especially the time and energy, to do more than just survive. Because SME managers are forced to focus on daily existence, their picture of the world beyond is often hazy. Providers of education and training are much more familiar with this external environment, and might introduce SME employees to aspects of it. The benefits would be neither immediate nor easily measurable, but they might

be significant, and they might eventually be reaped by SMEs themselves. In some contrast, the benefits of the YHUA scheme seemed to go only to the organizers and providers of education and training. The successor to YHUA, Yorkshire Universities, mentions the provision of education and training in its current strategic plan only as part of the context in which it works, not as one of the organization's objectives. 'The Yorkshire Universities [sic] mission statement is: "Promoting collaboration which benefits higher education and the region". The strap line for publicity material, letter-headings, etc. is "A Regional Voice for Higher Education"' (Yorkshire Universities, 2003).

Meaningful contact between SMEs and the 'knowledge base' cannot depend on the belief that universities possess information and have only to reveal their information to SMEs for them to innovate. This was the belief implicit in the YHUA scheme. SMEs depend on key customers, competitors and suppliers for the information they need for innovation. They do not depend on universities. ESF policy must espouse a more realistic view of innovation if it is to have any relevance at all to the requirements of SMEs.

NOTE

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14. European and regional disparities in human capital: the case of Italy

Paolo Emilio Signorini

1. INTRODUCTION

Human capital is at the heart of European economic policy. More and better investments in knowledge, according to the Lisbon strategy, will benefit from greater mobility in product, labor and financial markets. Knowledge capital accumulation is deeply affected by the attitude of students, teachers, workers, banks and entrepreneurs towards long-term benefits, risk taking, product and process obsolescence and the like.

So far, the interpretation of the Growth and Stability Pact together with a long-standing tradition of continental political economy have hindered the integration of research and higher education investments in a broader and competitive European economic policy.

Moreover, the distance between knowledge and politics is written in western political thought, so there may be more than budget constraints or welfare state values to explain the modest contribution of Academia to European growth. Also, universities are often remote from business: apart from in the UK and US, they are not used to competing; they don't have shareholders or 'aggressive' stakeholders; they don't apply most of the organization principles developed by institutional economics.

Similarities should not obscure differences among member states: cross-national data show that Italian universities perform most of the national R&D activities but need to bridge the gap with more competitive European institutions.

Notwithstanding harsh political and institutional confrontation, in the last decade Italy has experienced reforms in the university system. There is a general political consensus about the need to intervene in our higher education system but quite different opinions on how to do it. One thing is for sure: implementing education reforms requires massive funding which could be difficult in times of budget cuts. European structural funds are not affected by national fiscal conditions and have already helped in implementing some reforms, but further measures have to be included in the next

2007–2013 programming period (the programming periods mentioned in this chapter refer to the National Strategic Framework of the Italian Government).

2. ACADEMIA AND GDP

‘The idea of a University’ is part of a larger essay by Michael Oakeshott where universities are conceived as places about learning, acquiring capabilities and carrying out research through the best possible nurturing and development of ‘judgment’, the highest activity of the mind.¹ Is this a conservative view of education, concerned more about educating people to think than competing in a global economy? It is not easy to answer this question.

There are several reasons why teaching and research should be tested by their capacity to produce positive results for businesses and society, democracy, knowledge intensive economies and budget constraints. However, too much emphasis on predictable results, business needs and scientific orthodoxy can hinder freedom of the mind. In Academia, both accountability and intellectual ‘anarchy’ should be considered values.

Distant and uncertain benefits need long-term funding from government and business. Separation of knowledge and politics can be traced back to some 2500 years ago, when Plato first attempted to serve as a counselor to Dionigi – the tyrant of Siracusa in *Magna Grecia* – and after almost being put to death decided that intellectuals need their own ‘protected’ space to seek truth, and conceived *Accademia* as a place from where philosophers could advise the rulers of the *polis*. Hannah Arendt tells us that this changed over the centuries, and that ‘our idea of academic freedom has not been shaped by the platonic hope to influence the *polis* from a protected intellectual space and politics from philosophy, but by *apolitia* that is the indifference of academia towards politics’.²

Where scholarship and research are largely tested by market principles that regulate the overall economy – such as in the best US and UK institutions – researchers are concerned with publication and judgment of their peers and they are more willing to move on and occasionally spend some time in the private sector.³

In continental Europe, higher education still focuses on spreading general culture and professional training, under the ‘welfare state’ assumption that in education a decent average quality is better than a few elite establishments.

The link between knowledge and competitiveness is undisputed. Economic performance is much stronger where investments in research are

well above 2 per cent of GDP, such as in the US and Japan, than in continental Europe where competitiveness in research is declining.

It is more questionable whether universities are best equipped to undertake such investments and hand over the results to businesses. Some data, revealing an increase in co-authorship between universities and industry researchers, may support the argument that partnership in research is growing throughout knowledge-based economies. R&D projects show very high returns when carried out by university laboratories that operate in international networks and, unlike corporate or government owned facilities, are constantly being refreshed by the arrival of clever new brains.⁴

However, according to the OECD, 'academic research adds to the overall stock of the pioneering knowledge on which industrial research draws for major breakthroughs, but firms' innovative efforts – even in science-based sectors – rely more on interaction with competitors, suppliers and customers than information from universities and public sector research'.⁵ Recent trends tend to blur the traditional distinction between basic and applied research in favor of a new 'curiosity driven' approach in research, where interaction among scientists, scholars, engineers and entrepreneurs is pervasive throughout the innovation process.

Even where the economy is in good shape – such as in the UK – the supply of graduates in mathematics, physics and chemistry is lagging behind demand by employers. Since annual salary increases and employment rates amongst science and engineering graduates and postgraduates show above-average performance, one might think that career opportunities for highly skilled people in research do not compensate for initial sacrifices.⁶

Everybody seems to acknowledge the link between high standards in education and growth, but the dialogue between universities and society at large has never been an easy one. Intellectuals think their work is always underestimated while governments give less than what they promise and what it is probably worth.⁷

3. THE BURDEN FROM THE PAST

Higher education in Italy is deeply connected to the ideologies that dominated the nineteenth century in Europe; economics and management principles still have to pierce the cultural veil.

A newly appointed CEO of 'Italian Higher Education Inc.' should start from this legacy: a declining number of students enrolling in scientific courses (–5.2 per cent in 2004 for Sciences and –1.5 per cent for Engineering); an ageing cohort of academic staff (58 per cent over 50 years old; Japan follows with 42 per cent) with a median age for newly appointed

permanent researchers (the starting career level of permanent staff) of 44 years old in 2002 compared to 34 in 1999; one third of US postdoctoral researchers per 1000 workers (half the EU average; lowest wages in EU); highest student/teacher ratio among EU-15 member states (22 compared to a European average of 16), due to the lowest number of academic staff among member states with a similar population.⁸

Because Italy's GDP relies essentially on low research intensive activities and growth is lagging behind, market demand is an even weaker incentive than in the UK for students to take up science, engineering and technology courses.

Because admission criteria are not clear and uniform among different universities, secondary schools do not prepare their students adequately to enter scientific graduate courses, and universities cannot make up the educational gap.

As a result, for the second year, there are only two Italian universities in the world's top 200 universities, according to a recent ranking that takes into account peer review, employers' opinion, number of citations by each academic staff member, staff to student ratio, percentages of international staff and students.⁹ No wonder only 2 per cent of foreign students come to Italy compared to 30 per cent to the USA, 12 per cent to Germany and the UK, and 9 per cent to France.¹⁰

Flexibility is most valuable in a market economy but it needs to be adjusted when applied to higher education, especially in Italy. We have a long-standing tradition of close ministerial surveillance of new courses or closures and changes of existing ones. Funding is heavily dependent on public budget. Permanent teaching staff are appointed for life under opaque procedures; they cannot be sacked or even redeployed to another faculty in the same university for the simple reason that their duties are not specified by statutes, bylaws or individual contracts; they don't move from one university to another and hardly ever go abroad to teach for more than one semester or year.

Total capital expenditures for *higher education* have increased since the middle of the 1990s. However, annual expenditures per student (around 7500 euros) were only 34 per cent of per capita GDP in 2003, compared to a 39 per cent European average; they are around £18 600 at Oxford.¹¹

In terms of university funding, around 0.8 per cent of GDP comes out of the fiscal budget (1.2 per cent is the European average) and covers around 65 per cent of total expenditures, while private funding – families, charities, businesses – has recently declined. Student fees cover around 12 per cent of total expenditures.

Fiscal budget allocations in *research* are 0.6 per cent of GDP, close to the EU average, but per capita expenditures are 129 euros, compared to 217 in France and 204 in Germany; Italy spends 1 per cent of total research

expenditures in defense, a lot less than the UK (30 per cent), France (22 per cent) and the USA (57 per cent).

Some argue that Italian universities depend excessively on public subsidies. Raising more funds from private entities, non-profit organizations and students would make a wealthier and more competitive university; moreover, fiscal budget conditions are far from being able to tackle the backlog in university capital and current expenses.

The new Growth and Stability Pact has indeed eased the *excessive deficit procedure*, taking into account persistent modest economic growth and applying longer deadlines for correcting excessive deficits. However, no separate treatment has been accepted for capital expenditures since they have clear upfront fiscal costs and uncertain long-term positive effects on growth and investments quality.¹² While in 2004 public expenditure in the euro area was 47.7 per cent of GDP, much higher than in research intensive economies such as Japan (38.6 per cent) or the USA (34.3 per cent), the European Central Bank has recently pointed out that better public sector performance is not usually correlated with more public spending; this points to declining marginal returns of higher public spending and the possibility of attaining favorable outcomes for key policy objectives with much lower spending.¹³ Some member states, Spain and Ireland, reformed the fiscal budget in the 1980s and 1990s and succeeded in reducing their total public expenditures while not affecting investments in knowledge; on the other hand, larger countries face strong political opposition to rationalizing income transfers and subsidies and the costs of the public sector.

Government funding will ultimately be affected by budget constraints. Knowledge investments have not suffered so far, due to their crucial role for economic competitiveness, but creative research increasingly requires a long-term funding commitment, while universities are mostly financed by conditional grants for short-term projects. Teaching and research are increasingly fulfilled by contract staff, whose status is becoming an issue in several member states. Italy has around 30 000 contract staff (as in the UK); in 1995, contract staff comprised 11.4 per cent of permanent staff compared to 33 per cent today. Their growing numbers, inadequate training, uncompetitive salaries and career uncertainty represent a real disincentive for young people to start a career in higher education.

4. REFORMS, ONGOING STRATEGIES AND PROSPECTIVE CHANGES

Ideological inheritance, poor mobility of students and teachers, and fiscal budget constraints should be taken into account when considering reforms

in higher education. While no sudden and revolutionary changes would be feasible, several long-term proposals have been adopted in the last decade.

First is the introduction, starting in 2000, of a new '*cursus honorum*' with a basic degree after three years; a second-stage 'specialization degree' taking two further years; and a 'doctoral diploma' after another three years.¹⁴ The aim is to reduce drop-out rates while turning out graduates better suited to the job market. Italian students' mobility among national universities and towards foreign universities is very low, with eight out of ten students attending a university in their home region due to the inadequacy of specific housing policies and scarcity of financial aid.¹⁵ European funds could promote public-private partnerships to build new houses in urban areas with major housing problems for students to buy or rent at discounted prices with the help of their parents.

In 2005, further changes have been approved. An 'up or out' system for contract staff has been introduced, whereby each institution may enroll teachers coming from foreign universities up to ten per cent of permanent staff. Partnerships between universities and business have been strengthened, with the provision of sponsored tenure positions and research projects.

Time will tell whether the 'up or out' system can work properly in terms of career expectations of contract staff. Overall, the legal status of teachers remains too vague; they are responsible or involved in almost any activity within the university (teaching, research, evaluation, appointment), without a clear discipline concerning their duties and potential conflict of interests. Also, they should not be involved in administration, financial control or other technical activities.¹⁶

Also a gradual change in the criteria for public funding has been foreseen by the Ministry of Research, Education and University: 30 per cent according to the total number of enrolled students; 30 per cent on the basis of quality results (evaluation of teachers by students; job opportunities in 1/3/5 years from graduation); 30 per cent for research quality measured in terms of recent international publications and patents; the residual 10 per cent is flexible. Budget funding of universities depending on research quality has proven quite successful in the UK following the introduction of the RAE; professors are now appointed mostly on the basis of their research productivity.

Reforms are easy to write in laws but difficult to implement when the numbers are so great in terms of population (students and teachers) and costs (1-3 per cent of GDP). Overall, Italian universities now benefit from greater teaching and funding autonomy and they are more aware that competition in knowledge and research is greater and greater worldwide.

In times of national budget cuts, the European structural funds can help a great deal to improve Italy's higher education. Financial allocations for

the period 2000–2006 were around 1.3 billion euros and 0.8 billion respectively for research and school programs. Universities and research institutes can schedule their investments well in advance according to the seven-year financial distribution of these funds.¹⁷

The Research National Plan 2005–2007 and the Research National Program 2000–2006 supported both demand by research/IT-intensive firms and supply of skilled graduate and postdoctoral human resources.

Pushing demand requires a more effective and closer dialogue between universities and firms. SMEs traditionally invest in research much less than large firms but they are responsible for a substantial share of Italian GDP.

Since 2000, more than 1400 million euros – including both European funds and private co-financing – have been invested in research, mostly by SMEs. In 2004, incentives for research and innovation were about 20 per cent of total incentives. Reducing crowding out of knowledge-intensive investments by automatic and general purpose incentive schemes is a priority of the next programming period; the latter should stay only for entrepreneurs who also carry out IT and research investments.

To tackle the backlog in the equipping and refurbishment of universities, some measures have co-financed infrastructure and IT investments and helped create a more suitable ‘research environment’ to solve specific needs of medium and large enterprises.

Poor demand by SMEs is probably due to weak marketing strategies by universities and research laboratories.¹⁸ Future demand will be likely to benefit from European co-financing of MSc courses where private enterprises took an active role in the project phase (48 per cent of total masters) and placement (38 per cent). Also, in February 2006, the Ministry for Research, Education and University assigned 5.7 million euros to new *industrial liaison offices* in 12 university partnerships whose primary function is to promote an intellectual property culture among research/teaching staff with special focus on patents and licensing issues.¹⁹

Measures promoting university spinouts did not perform well. The Lambert Review suggested that – even in a much more competitive environment such as in the UK – there has been too much emphasis on spinouts and not enough on licensing technology to industry; even more so in Italy where one third of our deficit balance of trade in IT goes to royalties, patents and copyrights.

Further measures should be taken in the next programming period, adopting patent and copyright policies already implemented by leading universities worldwide:²⁰ promoting research and scholarship for the greatest possible public benefit; providing adequate recognition and incentives to investors through a share in any proceeds from their inventions; recognizing appropriate equity rights to outside – government or private – sponsors;²¹ assuring

research independence and integrity of inventors.²² Criteria for sharing profits between universities and inventors should maximize high quality research output: the former – providing financial and staff (including student) resources, facilities, equipment – should be rewarded for adopting a long-term capital expenditures commitment; the latter – providing intellectual brightness and passion for research – should be able to compensate hard work and medium-term sacrifices with potential monetary reward in the long run.

There are some ambiguities about the benefits of a close relationship between universities and business. First, the correlation between regional high technology agglomerations and research universities has probably been overstated and should be further examined.²³ Second, while labor mobility from universities to business is stronger, industrial support of academic research is lower than Canada, Germany and the UK.²⁴ For most industries, patents and licenses involving inventions from universities were reported to be of minor importance, compared with publications, conferences, informal interaction with university researchers and consulting: it is quite surprising that industry stresses the importance of activities that typically fulfill the academic researchers' commitments to 'open science' and it invites some skepticism about the benefits for businesses deriving from more entrepreneurial universities.

The Bayh-Dole Patent and Trademark Amendments Act of 1980, enabling academic institutions and small businesses to retain title for inventions resulting from federally supported R&D, is welcomed as the policy change responsible for the sevenfold increase in university patents in the last 20 years compared to the doubling of patents for the country as a whole. Recent studies pointed out that the growth rate of the ratio of research university patents to academic research spending remains surprisingly constant through the 1963–1993 period, suggesting no structural break in trends in universities' patent propensity; also the dramatic advances in biomedical science may explain most of the patenting activities of US universities.²⁵ And finally, royalties and licensing revenues are only 1 to 3 per cent of the research budget at MIT.²⁶

A stronger and better supply requires more students choosing scientific subjects and postgraduate studies in Science, Engineering and Technology (SET); higher salaries for scholars, teachers and staff; better career opportunities in Academia and for those who move across to industry.

University admission offices started recruiting campaigns in secondary schools with positive results in the number of new applications and reduced migration from one degree to another by uninformed students; further progress, in terms of total number of graduates, requires secondary school staff to play a greater role as mentors. Under the new Title V° of the Italian Constitution, regional governments play quite an active role in the school

system, especially at the secondary level where students choose whether to keep studying or get a job. European funds in 2007–2013 should call for a greater institutional partnership – between the Ministry and the Regions – towards students’ orientation, including measures rewarding staff members who spend time and effort in placement activities. At the moment, we have too high a turnover rate of people responsible for advising secondary school students on future studies.

Students should also be advised during their academic life. Initiatives should be taken to strengthen the role of tutors in terms of powers and diffusion across universities.

European funds have co-financed 686 PhD courses, and 70 per cent of them concern SET topics. This should help provide an adequate turnover of teachers, even though we are still short of the EU average.

Placement services have been co-financed successfully in several universities, and business involvement has significantly improved. As a result 70 per cent of students completing co-financed PhD courses found an adequate job within 6 months of graduation;²⁷ quite surprisingly, almost 50 per cent of them started working outside the university.

Evaluation has been strengthened with respect to teaching and research. About 17 000 research projects, coming from all 77 national universities and 25 independent research institutes, have been examined under the *peer review* method involving more than 6600 experts including foreign and business representatives: 30 per cent of these projects were considered ‘excellent’ and another 46 per cent ‘good’. Job opportunities after graduation have been successfully monitored by a Consortium of several universities called ‘AlmaLaurea’. However, evaluation still needs a better governance with a clearer distinction between central and local responsibilities; ‘independent’ experts should play a greater role when evaluating teaching performance and research quality.

Student satisfaction has been evaluated, albeit with modest enthusiasm, with respect to intellectual and pedagogical instructors’ capabilities, general mentorship, organization, infrastructures and equipment.

Lessons from the use of European funds in 2000–2006 will be extremely important for the next programming period and policy-makers, academics and practitioners should pay great attention to this unique opportunity to turn higher education strategy into reality.

5. CONCLUSIONS

It is undisputed that governments have become more demanding – in terms of measurable economic returns – with their investments in research and

higher education. This is because they believe in a strong link between knowledge and economic growth and because their fiscal budget conditions oblige them to do so.

The influence of market principles within Academia has been accepted sooner where universities are private, albeit non-profit entities, who compete for students, teachers and government funding; but it is spreading in other economies, namely in continental Europe.

Nonetheless, the integration between Academia and business is often controversial. Financial incentives to academic innovation projects, spin-outs and patents receive too much emphasis, while universities are mainly concerned with long-term results in public interest activities (education, training and curiosity-driven research).

Also the relationship between politics and higher education has never been an easy one; public funding must look for long-term policies and results, but governments should stay out of universities. However, it is difficult to ask politics not to intrude when essential political decisions are at stake: universal education or elite institutions, self-evaluation of curiosity-driven research or independent evaluation of applied research, national standards enforced by central governments or territorial competition in a federal framework.

The Italian higher education system has been undergoing major reforms since the late 1990s, but the gap between more competitive knowledge-based economies has widened. Further and better quality investments are needed to guarantee an appropriate education for our students: this can be achieved through a long-term strategy committed to raise more funds for human capital expenditures, taking care of public budget constraints and the small size and labor intensive predominance of Italian firms.

European structural funds are helping with rising human capital expenditures. In the programming period 2000–2006 some positive results have been achieved: more PhD and MSc courses in SET topics; greater liaison between universities and firms; greater attention to placement activities and SMEs' needs.

Understanding and measuring the output of our universities has also been improved as a natural consequence of the growing importance of monitoring and evaluation of public investments throughout the world economies.

Priorities for the next programming period should include: rewarding permanent and contract staff who spend time and effort in mentorship, high quality research, evaluation and placement activities; reducing crowding out of knowledge-intensive investments by automatic and general purpose incentive schemes distorted by short-sighted expectations; better marketing strategies by universities to stimulate demand by SMEs,

stressing the importance of typical academic activities such as publications, conferences, informal interaction with university researchers and consulting that are most welcomed by entrepreneurs.

NOTES

1. *The Voice of Liberal Learning: Michael Oakeshott on Education*, Yale University Press, 1989.
2. *Was Ist Politik? Fragmente aus dem Nachlab*, Hannah Arendt and Ursula Ludz, Piper, Munich and Zurich, 1993.
3. *University Research in Transition*, OECD, 1999.
4. *Lambert Review of Business – University Collaboration*, December 2003.
5. *Idem*.
6. *The Report of Sir Gareth Roberts' Review*, April 2002.
7. *The Intellectuals and Socialism*, Friedrich A. Hayek, Institute of Economic Affairs, 1998.
8. *Università e sistema della ricerca. Proposte per cambiare*, M. Cammelli and F. Merloni (eds), Il Mulino, 2006; *L'Università in cifre, Quaderni della Direzione generale per gli studi e la programmazione*, www.miur.it/ustat/documenti/pub2005/u01.pdf.
9. 'World University Ranking', *The Times Higher Education Supplement*, October 2005.
10. 'Il peso dell'istruzione nei bilanci pubblici', *Analisi Italia*, I, 2005.
11. 'Oxford's Academic Strategy: A Green Paper', *Oxford University Gazette*, 135 February 2005.
12. 'The Reform of the Stability and Growth Pact', Monthly Bulletin, European Central Bank, August 2005. In 2004 only 3 out of 12 euro area countries (Belgium, Spain and Finland) had 'close-to-balance or in-surplus budgetary positions'; four had excessive deficits; seven had debt-to-GDP ratios above the 60 per cent reference value, with two still having debt ratios above 100 per cent of GDP.
13. 'The Importance of Public Expenditure Reform for Economic Growth and Stability', Monthly Bulletin, European Central Bank, April 2006.
14. This new organization reflects the framework of the so-called 'Bologna Process' started in 1999 and updated in Prague 2001, Berlin 2003 and Bergen 2005.
15. *Università e sistema della ricerca. Proposte per cambiare*, op. cit.
16. *Idem*.
17. Financial allocations for the 2000–2006 period are included in several tables on the following Internet sites: http://www.dps.tesoro.it/documentazione/qcs/PON_rmp/PON_Ricerca/VI_PON_Ricerca.pdf and http://www.dps.tesoro.it/documentazione/qcs/PON_rmp/PON_Scuola/IV_PON_Scuola.pdf.
18. *Rapporto di aggiornamento della valutazione intermedia – PON Ricerca 2000–2006*, ISMERI EUROPA – IZI, December 2005.
19. 'Decree n. 280, 26 February 2006', Minister for Research, Education and University. ILO financed by the decree are sponsored by the following Universities: Milan, Turin, Siena, Padua, Bologna, Rome, Salerno, Sannio, Palermo, Reggio-Calabria, Bari, Sassari.
20. 'Statement of Policy in Regard to Inventions, Patents and Copyrights', Harvard University, www.techtransfer.harvard.edu/PatentPolicy.html. Harvard University first adopted a patent policy in 1934 with subsequent amendments in 1986 and 1998.
21. *Guide to the Ownership, Distribution, and Commercial Development of MIT Technology*, Massachusetts Institute of Technology, <http://web.mit.edu/policies/13.1.html>. The federal government funds a significant amount of research at the Institute, and the Institute is obligated by federal regulations to report promptly to the appropriate federal agency any inventions conceived or reduced to practice during the course of a government-sponsored research program. The Institute similarly is obligated to report inventions to its industrial sponsors who provide financial support for research.

22. 'Intellectual Property Policy', ORPA, Princeton University, www.princeton.edu/patents/index.htm, 2005. A university or any inventors – faculty or other employees of the university – may not accept positions on the board of directors or other significant responsibilities in the licensee company that affect adversely either the inventor's own independence or the integrity of the university.
23. S.W. Leslie, 'The biggest "angel" of them all: The military and the making of Silicon Valley', in M. Kenney (ed.), *Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region*, Stanford, CA, Stanford University Press, 2000.
24. 'Universities in National Innovation Systems', D.C. Mowery and B.N. Sampat, in *The Oxford Handbook of Innovation*, in J. Fagerberg, D. Mowery, R. Nelson, Oxford University Press, 2005.
25. 'Universities in National Innovation Systems', op. cit.
26. *Innovation, Technology Transfer and Licensing*, Karin Rivard, MIT Technology Licensing Office, 2005.
27. 'Rapporto sulla prima fase del progetto Placement Alta Formazione', MIUR – ISFOL, February 2005.

Afterword

Pasquale Gagliardi

The debate on university reform has often been marred by parochialism, from diverse points of view, at least in Italy. The various actors involved – academicians, politicians, the business world, families concerned about the futures of their children – tend, perhaps inevitably, to prioritize their specific and short-term interests. Academia privileges defence of its autonomy and traditions; politicians, the consensus obtainable from emphasis on the reform of the school system as part of a government programme; firms, the services expected in terms of contribution to competitive innovation and availability of skilled personnel matching their needs; families (whose opinions are conveyed by the media), the ability of university education to ensure good jobs for their children. The problem is rarely seen as authentically ‘public’, as a matter concerning the long-term common good: it seems as if these actors find it difficult to raise their gaze and broaden their perspective. The debate is parochial in another sense as well: the arguments adduced to sustain one cause or another are generally factual, pragmatic, logical, as if great institutional transformations are not driven by ‘extra-logical’, power-symbolic reasons as well (see Czarniawska, 2005, quoted by Thrift, in this volume). Even more rarely is the debate framed in an international context: in general, references to developments in other countries are random and anecdotal, and if the United States are cited it is to mythicize them, regardless of the heated debate in progress on the other side of the Atlantic (Readings, 1997).

The first and most evident merit of this book is that it enables comparisons to be made: which is the best antidote to parochialism, because it enables easier distinction to be made – with reference to both problems and solutions – between what is contingent, local and short term and what is potentially recurrent, global and long term. The first feature to emerge with clarity from such comparison is that, almost everywhere in the world, the traditional university system, perhaps for the first time in its millennial history, is being seriously challenged *from outside*. The reform projects and experiences analysed principally concern the European countries, and they seem mainly dictated by the political desire to make the university systems of the European countries comparable and fungible. Nevertheless, not only

the Australian case illustrated by Ryan et al., but especially the references that many authors make to developments on other continents, remind the reader that the phenomenon is largely *global*. The policies of the European Union are justified with reference to planetary phenomena: the advent of the knowledge economy; the end of the monopoly by universities of knowledge production; the increasing shortage of investible public resources; the new and strong social expectations placed on universities.

These expectations can be synthetically defined as expectations concerning the *measurable utility* of the knowledge produced and disseminated by universities. On the one hand, the onset of these expectations reflects the increasing current awareness of the key role that universities can perform in sustaining a country's competitiveness in the globalized economy. On the other, this development can simply be seen as a manifestation of the progressive, and apparently unstoppable, rationalization of social life. There is no doubt that the systems of cooperation based on criteria of instrumental rationality distinguish the social landscape of modernity. Society gives these systems priority in the task of translating collective values, desires and purposes into social action. And 'organizations' (utilitarian forms of social aggregation deliberately created to achieve specific ends) progressively replace or penetrate communitarian forms of aggregation – natural, spontaneous, shaped by tradition and cemented together by shared values. Churches no longer rely solely on providence or the spontaneous generosity of their members to obtain subsidies but instead resort to marketing techniques. Any self-respecting sports club – even an amateur one – must have a 'manager'; voluntary associations recruit professionals; utopian communities strive to translate idealistic visions into operational plans and goals; the professional primacy of doctors in hospitals is threatened by the increasing intrusiveness of administrators. It was predictable that, sooner or later, a phenomenon of such social pervasiveness would affect the socially important sphere of institutional life constituted by the school, and especially the higher education system. This has bred the idea of the 'school-as-enterprise' (or the 'school-as-organization') which has been gradually translated into social practices.

It seems that these developments entirely bear out Weber's predictions that the model of 'bureaucratic' administration, founded upon principles of instrumental rationality, legality and certainty, would gradually replace other models of administration by virtue of its intrinsic technical superiority, and that rationalization would imprison humanity in an 'iron cage', erasing cultural differences and producing what Weber called 'the disenchantment of the world'. As is well known, the theory of the iron cage has been subject to critical revisions. Di Maggio and Powell (1983), in their celebrated essay which founded organizational neo-institutionalism, did not

deny the standardization of structures and the engaging of individual behaviours, but they attributed these effects, not to the universal adoption of rationalization, but to the tendency of organizations to ceremonially adopt organizational forms embodying collective myths.

The adoption by universities of management models typical of utilitarian organizations (regardless of whether the superiority of such models is objectively demonstrable or whether it is mythically taken for granted) requires a *radical change* whose nature is well-documented by some of the contributions to this book. The presumption that targets of measurable utility can be set for universities from outside, and that the rationality of the processes generated to achieve them can be verified (identifying and perhaps imposing certain 'best practices'), calls into question a feature typical of traditional academic culture, namely self-referentiality. Above all, it reverses the relative importance of the two principal bases of the external consensus for universities. The 'discursive' legitimation – deriving from professing a socially appreciated value like the production and diffusion of knowledge – becomes less important than the 'operational' justification deriving from the adequacy of performance with respect to expectations (Ebers, 1995). The difficulty of the change required may be underestimated if one does not reflect on the fundamental distinction between values and goals. A value owes its orientative force to its 'unachievability', to the perennial tension between the ideal and the action which endeavours to achieve it. A specific goal, however ambitious, automatically reduces and impoverishes the value that it seeks to translate into a measurable result, and it loses – once accomplished – the ability to direct and motivate the action.

An attempt to replace knowledge as a value in itself with knowledge that has 'returns' which are demonstrated or demonstrable can only be viewed as a direct assault on the cultural identity itself of the university. When Thrift a) calls the university a 'global public good'; b) rejects out of hand any view of public higher education as a producer of private assets that produce private returns; c) asserts that the mission of the university is to produce 'broad-based people and basic research that are needed for broadly based problem-solving and innovation regardless of application' Chapter 1 in this volume; and d) stresses the irreplaceable role of the international community of 'peers' for the evaluation and progress of science, he is probably identifying a hard core of issues non-negotiable for those who have chosen to make intellectual work their profession, unless they accept the psychological and social costs of what may amount to outright apostasy. Thrift's thesis is taken up by Wedlin and Hedmo, who also assert that scientific research can only be evaluated and governed by the community of peers. And the realistic and dispassionate account of Keenoy and

Reed shows that British academics, whilst accepting that the new managerialism has irreversibly permeated the British universities, and whilst also complying with the practices of 'performance management' imposed by the government, remain faithful to the values incorporated in a professional discourse which emphasises collegiality, openness, freedom, and 'employ this discourse to construct their identity as teacher, knowledge-pursuer and knowledge-creator' (Chapter 10 in this volume).

The radical nature of the change often envisaged by the current projects for reform is shown by another circumstance. In general, these projects call for an organic bond, a capacity for communication and exchange, an understanding between universities and businesses that has never existed in the past. As is well known, the university and the business world – despite many praiseworthy attempts to link them, and with the due exceptions of certain technical-scientific faculties first founded as vocational schools at the service of firms and subsequently incorporated into the university system – have always been separate spheres of institutional life. Indeed, they embody one of the fundamental cultural polarities that we use to structure and make sense of everyday experience: that between thought and action, theory and practice, knowing and doing, culture and competence, all of which are distinctions and oppositions, ultimately related to the distinction and opposition between the mind and the body that traverses much of Western thought.

It is likely that new linkages with the world of business are essential for the survival of universities today. But it is equally evident that establishing these patterns of exchange entails the transformation of deeply-rooted mentalities and attitudes. The counterproof for this statement is the fact that the two cases of successful collaborations between university and business reported in this book (those of the Polytechnic of Lausanne, described by Callaert et al., and of the City University analysed by Creagh and Verrall) concern polytechnics, where the emphasis on applied research is not seen as abdication or barter but as the obvious consequence of the fact that in the engineering sciences understanding requires application, and vice versa.

The book shows that – besides polytechnics – business schools (by definition the repositories of the managerial culture which universities today are required to adopt, and long accustomed to dialogue with enterprises) can perform a crucial role in experimentation with models of exchange and interaction between universities and businesses, in filtering and adapting to academic culture the impact of the reform policies that governments impose in light of the new social expectations towards universities. This thesis, brilliantly argued and documented by Hopwood in his contribution, is borne out by the fact that the majority of the contributors

to this book work at business schools. Their affiliation with institutions in a certain sense hybrid, long experienced in management of the interweaving between 'knowing that' and 'knowing how', and more accustomed to a multidisciplinary approach to problems, accounts for their ability to analyse the manifold tensions and the heterogeneous dynamics produced by projects for reform.

Exemplary demonstration of this ability is provided by Marie-Laure Djelic, whose chapter explores the challenges and the opportunities offered to PhD education by the Europeanization of programmes. On discussing changes that European universities must undertake to manage a matter of such crucial importance as education to knowledge production in the globalized economy, Djelic stresses the need to reconcile numerous contrasting demands: homogeneity and difference, national dimension and the European perspective, market and politics, basic research and applied research, disciplinary specialization and an interdisciplinary approach, academic culture and managerial culture, autonomy and coordination. Her analysis highlights the complexity of problems which do not lend themselves to superficial solutions. But at the same time it shows that these can be concretely addressed by inventing new spaces for intermediating and overcoming the sterile opposition between old (familiar) and new (extraneous) modes of action. This is a laborious process, but it is the only one possible.

In any case, as Engwall efficaciously shows when analysing the growth, professionalization and upgrading of information activities in Swedish universities, the joint effects of normative, coercive and mimetic pressures seem to have initiated a process that has irreversibly taken universities out of the ivory towers to which they have hitherto so carefully guarded access: they have left isolation to become increasingly embedded in their environments. Once again using the analytical categories of neo-institutional theory (which prove particularly suited to interpreting the process of university reform), Engwall envisages new 'organizational fields' comprising governments, universities and firms, and whose organizational structures will tend progressively to resemble each other.

Engwall's observation reinforces a thesis sustained or adumbrated in other chapters, and which I count among the important results yielded by the comparative exercise that the book permits: no serious university reform is possible without the active contribution of all three of the above actors, and the mimetism of structures does not imply confusion, overlap or exchange among their respective roles. This thesis puts paid to proposals for reform that envisage superficial shortcuts such as those which postulate the end of politics and the advent of the market as the sole arbiter of the survival of educational institutions. Such shortcuts usually disguise their crassness with the promise of autonomy and an invitation to universities to prove

their worth by becoming ‘cultural enterprises’ able to survive on their own in a fiercely competitive environment. Although some academics seem flattered by these shortcuts (I still remember with amusement the rector of a large Italian university who, when I introduced him as such before his speech at a round table which I was moderating, corrected me by saying: ‘Please, I am not the rector of university XXX but the CEO of a business which invoices a million euros every year!’), their proponents forget that the majority of universities around the world have received public funding, or anyway guaranteed resources, without their right to exist ever being questioned, and that they are accustomed to operating in a situation of monopoly or, in the best of cases, largely imperfect competition. Why should universities suddenly have to learn how to behave like businesses? Why should they be abruptly obliged to learn how to reason in terms of market share, strategic positioning, and profitability of educational products? The most evident proof of this cultural incapacity (which is not a fault but the simple consequence of a state of fact and a history) is the ingenuousness and sometimes blatant ignorance of the world ‘out there’ with which – at least in Italy – universities have often interpreted the needs of the business world and exploited the opportunities for autonomy offered by reform projects. Once again, it may be that these competences and these new cultural orientations are gradually acquired, but it is unthinkable that the state should be indifferent to the fate of a ‘public good’ like the higher education system.

This is not a matter of choosing between two equally unsatisfactory alternatives: a state which relinquishes policy-making on research and education or, contrarily, a state which minutely scrutinizes the modes and results of education and research. This book – and particularly the contribution by Raivio – suggests a third route: decisive public intervention in the *overall planning* of the higher education system, with the intent of creating a versatile and diversified system rather than a homogeneously mediocre one. I believe that the best way to conclude these reflections is to remind the reader of the lucid remark made in Raivio’s foreword: the weakness of the European university system compared with that of the United States derives, at least to the same extent, from the smaller amount of resources allocated to education and research, and from the abysmal way in which that smaller amount of resources is invested in Europe compared with the United States.

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Index

- Abbott, A. 32
Abma, T. 224
academic entrepreneurship (and)
 133–5, 139–50
 application as inherent part of
 understanding 139–42
 cooperative scenarios moderating
 concerns and appropriate
 practices 146–9
 role of financial and human capital
 in 142–6
'Activating knowledge' 18
Alasuutari, P. 231
Amdam, R.P. 56
Amsterdam treaty 162–3
Anderson, D. 177, 178, 179
Antonacopolou, E. 6
Arendt, H. 259
Armstrong, S. 96
Australia, higher education in (and)
 101, 171–87, 208, 271
 academic staff 177–9
 Bureau of Statistics (ABS) 175
 Commonwealth Tertiary Education
 Commission (CTEC) 174
 Corporations Act 177
 Education, Science and Training,
 Department of (DEST) 173,
 175, 176, 177, 180, 181, 206, 208
 Higher Education Contribution
 Scheme (HECS) 174, 179
 Higher Education Support Act, 2003
 (HESA) 174, 175, 176, 177
 Higher Education System (AHES)
 171–3, 182–4
 changing nature of 173–5
 future of 182–3
 Higher Education Workplace
 Relations Requirements
 (HEWRRs) 177
 institutional governance and labour
 relations 176–7
 international students 180
 National Board of Employment
 Education and Training
 (NBEET) 174
 National Governance Protocols 176,
 177
 National Protocols for Higher
 Education (MCEETYA) 183
 New Public Financial Management
 (NPFM) reforms 171
 New Public Management (NPM)
 reform agenda 171–2
 *Our Universities Backing Australia's
 Future* 175
 public accountability and central
 control 175–80
 research, changes in 181–2
 research quality framework (RQF) 82
 students as consumers 179–80
 teaching, changes in 179–80
 Teaching and Learning Performance
 Fund 180
 Vice Chancellors Committee
 (AVCC) 179
 Workplace Productivity Program
 176
Axelrod, P. 154, 159
Azoulay, P. 134
Bäcklund, J. 56
Bailyn, L. 150
Baker, C.R. 224
Baldwin, G. 178
Baldwin, S. 244, 245, 250
Barsoux, J.-L. 65
Belgium 134, 137
 Katholieke Universiteit Leuven 134,
 137
 Law School and Centre of
 Advanced Studies in Law and
 Economics 65
 University of Gent 65

- Bennis, W.G. 102
 Bergen Communiqué 122
 Berlin Communiqué 122
 Bernal, J.D. 27
 Birnbaum, R. 24
 Bishop, J. 181, 182, 183
 Bleiklie, I. 227
 Blumenthal, D. 133
 Boden, R. 1
 Boffo, S. 224
 Bok, D. 19
 Bologna Follow-up Group (BFUG) 122–3
 Bologna Declaration 32, 100
 Bologna Process, the 5, 31, 32, 107, 114, 119, 120–23, 162
 and Magna Charta Universitatum 31, 120
 Bologna Process and business
 education (and) 93–112
 change and national contexts 102–7
 British 103, 106, 107
 German 103–4, 106, 107
 French 104–7
 evolutions in progress 99–101
 harmonizing different traditions 94–9
 strategic risks for institutions 107–9
 two-cycle system 104–5
 Bologna *universitas studiorum* 6
 Bouckaert, G. 189, 221, 223, 227
 Bourdieu, P. 4
 brain drain 6, 51–2
 Brennan, J. 206, 229
 Brenno, E. 222
 Breschi, S. 134, 139
 Brint, S. 1
 Brooks, H. 134
 Brunsson, N. 118
 business schools, university-based 74–80
 and interdisciplinary potential 76–80
 management of 74–6, 77
 and marketing 74–5, 77
 and relation to wider world 80–82
 business schools 70–89, 276
 conclusions on 88–9
 Copenhagen 87
 IMD 87
 INSEAD 65, 71
 intellectual culture of 86–7
 interdisciplinary mode of organizing 82–6
 London 71, 81, 96
 Manchester 79, 96
 problematic issues for 86–8
 university-based 74–82 *see also*
 business schools, university-based
 Business Schools Advisory Group 96
 Cadbury, R. 207
 Calderini, M. 134
 Cambridge University 26, 73, 82
 Carayol, N. 138, 139
 changes in academic field 42–6
 coercion 42–4
 and forces in interaction 46
 imitation: comparing and exchanging 45–6
 socialization 44–5
 Chaston, I. 252
 China 6
 and Chinese students/PhDs 6, 51, 52
Chronicle of Higher Education, The 22
 Citati, P. 4
 Clark, B. 172
 Clark, W. 19
 Clarke, J. 189
 Clinton, B. 5
 Coaldrake, M. 176
 Coaldrake, P. 206
 Coase, R. 71
 Cockburn, I. 137
 Cohen, L.R. 133
 Cohen, W.M. 133, 134
 Coleman, S. 223
 Commission Européenne 99, 101
 communication, professionalization of 33
 Competitive Council 124
 Confederation of European Union Rectors' Conferences 65
 Considine, M. 172, 180
 consultancies/consultancy boutiques 20–22, 73
 contributors/contributions: rationale and content 11–12
 Cooper, A. 254
 Council of Europe 121, 122

- Country Research and Development Information Service (CORDIS) 115, 158
- Credit Transfer System, European (ECTS) 99, 100–101
- Culkin, N. 241
- Curie 61, 64
- Currie, J. 224
- Czarniawska, B. 9, 18, 24, 270
- Dannreuther, C. 241, 253
- David, P.A. 137
- Davis, G. 101
- De Boer, H. 206
- De Wit, H. 26
- DeAngelo, H. 102
- Debackere, K. 146
- Deem, R. 188, 189, 192, 193, 195
- degrees, harmonization of 108
- Derrida, J. 1
- DiMaggio, P.J. 32, 271
- Directorate-General (DG) Education and Culture 126
- Directorate-General (DG) Research 125
- Djelic, M.-L. 56, 61, 115, 274
- Doz, Y. 55, 56
- Dreher, G. 98
- Drori, G.S. 32
- Ebers, M. 272
- Ecole Polytechnique Fédérale de Lausanne (EPFL) 135–7, 142, 149
- Economic and Social Research Council (ESRC) 192
- Economic Co-operation and Development, Organisation for (OECD) 45, 51, 172, 175, 180, 206, 223, 260
- Economist, The* 105
- education and training for SMEs *see* small and medium-sized enterprises (SMEs)
- education hubs 5–6
- Education Policy Institute 22
- Edwards, R. 71
- Elton, L. 223
- enacted mechanisms, qualitative investigation of (and) 133–53
- academic entrepreneurship 133–5, 139–49 *see also main entry*
- combining scientific and entrepreneurial activities 135–9
- Enders, J. 99, 113, 114
- Engwall, L. 33, 55, 274
- Enteman, W. 189
- Entorf, H. 247
- ERASMUS (European Community Action Scheme for the Mobility of University Students) 5, 51, 61, 64, 119, 162
- Eraut, M. 248
- ERCEG summary report 124
- Erichsen, H.-U. 97, 106
- Etzkowitz, H. 32, 49, 133, 154
- EURACTIVE 115
- Europe, Council of 121, 122
- European
- Association of Institutions in Higher Education (EURASHE) 121, 122
 - Central Bank 262
 - Doctoral Programmes Association in Management and Business Administration (EDAMBA) 61
 - Doctoral School on Knowledge and Management (EUDOKMA) 61
 - Doctorate degree: ‘Doctor Europaeus’ 64–5
 - requirements for 65–6
 - Foundation for Management Development (EFMD) 7, 117
 - Heads of Research Councils (EUROHORCS) 124
 - Higher Education Area (EHEA) 119, 121–2, 123, 126
 - Institute for Advanced Studies in Management (EIASM) 53, 61
 - Institute of Technology (EIT) 18, 126, 158
 - Network for Training in Economic Research (ENTER) 63–5
 - and participating economics departments 63–4
 - Network for Quality Assurance (ENQA) 122
 - Quality Improvement System (EQUIS) 117

- Research Advisory Board (EURAB) 123
- Research Area (ERA) 119, 123, 126
- Research Council (ERC) 18, 114, 120, 123–5
 - Scientific Council of 124–5
- Science Foundation (ESF) 62, 123
- Social Fund (ESF) 239, 254, 255
- universities, Salamanca convention of 121, 122
- Universities Public Relations and Information Officers Association (EUPRIO) 46
- University Association (EUA) 53, 56–7, 64, 65, 121, 122
- University Institute 65, 67
- European Commission 18, 117, 119, 122, 207
 - agenda documents 18
- European Community 161
- European Council 119, 123, 124
 - Barcelona 119
 - Lisbon 119, 123, 126
- European Parliament 49, 50
- European Union (EU) 18, 58, 64, 123, 126, 128, 271
 - and Europe of Knowledge 118–20
- Evatt Foundation 177–8
- Exworthy, M. 188, 189

- Farnham, D. 189
- Farrell, C. 189
- Fergusson, R. 190
- Ferlie, E. 188, 189
- Figa Talamanca, A. 222
- Financial Times* 17
 - and MBA ranking programs 117
- Fitzgerald, L. 189
- Florida, R. 133, 134
- Flynn, R. 189
- Fong, C. 102, 107, 109
- Foray, D. 137
- Foucault, M. 190
- France/French 51, 99, 120, 124, 157–8, 207, 261
 - Association Française des Entreprises Privées (AFEP) 207
- Grandes Ecoles 70, 94, 97, 104–5, 106–7, 158
 - higher education system of 97
- La Sorbonne 108
- Mouvement des Entreprises de France (MEDEF) 207
- Polytechnique-CRG (Centre de Recherche en Gestion) 65
- Principles for Corporate Governance 207
 - university system 71
- Frank, D.J. 1, 7
- Frank, T. 190
- Freidson, E. 191
- Friga, P.N. 102
- funding of education/training for SMEs 252–3
- Furusten, S. 56

- Gabler, J. 1, 7
- Gaebler, T. 206, 233
- Gagliarducci, S. 163
- Galison, P. 27, 29
- Gallagher, M. 182, 206
- Garcia-Valderrama, T. 138
- generally accepted MBS practices (GAMP) 108
- genius loci* concept 3–4, 6, 10
- Genua, A. 133, 221
- George, G. 139
- German(y) 51, 94–7, 99, 103–4, 106, 120, 124, 157–8, 207
 - academic research 265
 - Bachelor/Master system 103–4, 106
 - business schools 70–71, 72
 - Cromme/Corporate Governance Code 207
 - Diploma Kaufmann 106, 107
 - and foreign students 261
 - higher education framework 96–7
 - universities 73
- Gibb, A. 241
- Gibbons, M. 2, 32, 154, 240, 249
- Gloeckler, G. 105
- Goffee, R. 194
- Goldfarb, B. 146
- Gothenburg convention of European students 121, 122
- governance
 - issues/rules 8
 - new modes of *see* higher education and research, re-regulation of

- reform *see* governance reform: City University, London
 systems 32
 via markets 32
 governance reform (and) 205–8 *see also* France/French; German(y) and governance reform: City University, London
 commercial misadventure and corporate governance reform 206–7
 contemporary British HE
 governance critique 207–8
 HE and New Public Management (NPM) 206
 Netherlands Tabaksblat Code 207
 governance reform: City University, London 208–20, 273
 Charter and Statutes 217
 Corporate Governance and Membership Committee of Council (CGMC) 208, 212
 lessons learned 212–15
 confronting obstacles to change 214–15
 emphasis on strong communication 213–14
 guiding coalition sponsoring change 212
 principled and systemic approach to reform 212–13
 major outcomes of agenda at 209–12
 cultural changes 211–12
 formal changes 210
 Senate 212, 213, 215
 unresolved paradoxes 215–17
 Graduate Management Admission Council (GMAC) 99
 Growth and Stability Pact 262
 Gray, R. 182
 Greenbury, R. 207
 Grey, C. 189
 Groot, T. 138
Guardian, The 22
 Gulbrandsen, M. 134, 137, 138
 Guthrie, J. 171, 175–6, 180, 181–2, 183

 Hackman, J.R. 145
 Halford, S. 188, 189
 Hampel, R. 207

 Handerson, G. 221
 Hane, G. 133
 Hanney, S. 113
 Harfi, M. 50, 51
Harvard Business Review 23
 Harvey, J. 221
 Hayes, R. 224
 Healy, G. 181
 Hedmo, T. 93, 114, 115, 116, 118, 272
 Hellström, T. 154
 Henderson, R. 137
 Henkel, M. 222, 229
 Henrekson, M. 146
 Higgs, D. 207
 High Level Working Group report 124
 higher education
 as industry and cultural circuit 21
 governance reform *see* governance reform (and)
 and research *see* re-regulation of higher education and research
 Higher Education Funding Council for England (HEFCE) 188, 208
 higher education ideas industry (and) 20, 21–4
 consultancies 20–22
 fashion 24
 growth of 20–21
 media 22
 research assessment 23
 Hindo, B. 105
 Hirst, P. 116
 Hood, C. 189, 221
 Horgan, J. 156
 Horton, S. 189
 Houdayer, P. 96
 Huisman, J. 224
 human capital, European and regional disparities in (and) 258–69
 academia and GDP 259–60, 261
 evaluation 266
 funding 261–2, 263–4
 criteria for 263
 European 263–4, 266
 higher education and past ideologies 261–2
 reforms, ongoing strategies and prospective changes 262–6, 267
 Research National Plan/Program 264

- Humphrey, C. 171
 Hyland, T. 254
- ideas *see* higher education ideas
 industry (and)
- Illing, D. 182
Independent, The 22
- information activities 31–42, 274 *see*
also changes in academic field
 interacting processes of 38–40
 exposure 38–9
 protection 39
 and interacting rules 39–40
 buffering 40
 training 40
 organizing processes of 35–7
 expansion 35–6
 professionalism 36–7
 upgrading 37
 promotion of 40–42
 branding 41
 boosting 41–2
 research into 34–5
- intellectual property 27
- Italian/Italy 5, 70, 99, 120, 258–69
 assessment exercise in 12
 and foreign students 261
 GDP 261–4, 264
 Government 10
 higher education reforms 262–6,
 267–8
 and human capital *see* human
 capital, European and regional
 disparities in
 Mezzogiorno 5
 National Strategic Framework of
 the Italian Government 259
 Padua *universitas studiorum* 6
 PhD courses in 266
 research assessment exercise (VTR:
 Italy) 221–36 *see also* main entry
 researchers and scholars in UK 10
 Title V^o of Constitution 265–6
 Università degli Studi di Torino 65
 University 10
 and university funding 261–2, 266
- Jacobsson, B. 116, 118
 Jacques, R. 190
 Jeliaskova, M. 233
- Jensen, R.A. 148
 Jessop, B. 190
 Johns, A. 27, 28, 29
 Johnston, R. 249
 Joly, P.B. 147
 Jones, L.R. 171
- Kaul, L. 20, 27
 Kean, L. 189
 Keenoy, T. 189, 192, 202, 272
 Kellaway, L. 17, 26
 Kells, H.R. 229
 Kerr, C. 214
 Keynes 109
 Kieser, A. 97
 Kipping, M. 94, 104
 Kittler, G. 29
 Knight, R. 99
 Kogan, M. 113
 König, R. 157
 Kooiman, J. 114
 Korten, D. 190
 Kramarz, F. 247
 Kuhn, T.S. 156
 Kunda, G. 224
- Lacetera, N. 137
 Lambert, R. 205, 208
 Lambert Review 208, 264
 Lange, T. 221
 Latour, B. 156
 Lavelle, L. 96, 102
 Lawton Smith, H. 254
 Leadbeater, C. 191
 League of World Universities 45
 Lee, Y.S. 133
 Leeuw, F.L. 223, 230
 Lefang, B. 245
 legislation
 Bayh-Dole Patent and Trademark
 Amendments Act (1980) 265
 Högskolelagen (The Higher
 Education Act), Stockholm 43
- Leslie, L.L. 1, 172
 Leydesdorff, L. 32, 49, 154
 Lindblom, C.E. 31
 Lindsay, A. 181
 Linqvist, S. 43
 Lisbon European Council 119, 123,
 126

- Lisbon objectives 50 *see also* PhD education in Europe (and)
 Llewellyn, S. 191
 Locke, S. 206
 London School of Economics (LSE) 23, 83
 London School of Economics and Political Science 71, 73, 83, 84 and Interdisciplinary Institute of Management 84
 Lucas, L. 195
 Lundvall, B.-A. 162
 Lybaert, N. 241
 Lyotard, J.F. 28

 Macdonald, S. 239, 241
 McGill, M.E. 33
 McInnes, C. 178, 179
 MacKenzie, D. 79
 McLaughlin, K. 189
 McLennan, G. 23
 Macpherson, A. 249
 Mairesse, J. 138
 Management Development, European Foundation for (EFMD) 93, 94
 management of higher education/universities 17–19, 24–6, 271–2 and administrator-managers 25 commercialism 19 and player-managers 26 spending and funding 18–19, 275 top-down 25–6
 managerialism, definition of 189
 Mangematin, V. 147
 March, J. 60
 Marginson, S. 172
 Marias, J. 4
 Marie Curie Actions 5, 61
 Marie Curie Research Training Networks 64
 markets and hierarchies 31–2
 Marquand, D. 192
 Marsh, R. 240, 242
 Martin, B. 221
 Martin, S. 253
 Master's degree in Business Administration (MBA) 21, 75, 94, 95–9, 102–7, 160 and Association of MBAs (AMBA) 96
 ranking programs 117 vs bachelors 102–3
 Masters of Science in Management (MSc) 95–6
 Matlay, H. 254
 Matt, M. 138, 139
 Max Weber Programme/Fellowships 67
 Mazza, C. 94
 MBA *see* Master's degree in Business Administration (MBA)
 media and communication 33
 media and universities 31–48 *see also* changes in academic field and information activities
 Meek, V.L. 206
 mentoring and bureaucracy 23
 Merle, J. 154
 Merton, R.K. 135
 Meyer, J.W. 1
 Meyer, M. 135
 Miller, D. 102
 Miller, P. 70, 116
 Minelli, E. 226, 227
 modernization agenda 17–21
 Moravcsik, A. 115
 Morgan, K.J. 223
 Morley, L. 189
 Morris, J. 189
 Mörth, U. 113, 115
 Mottis, N. 7, 11, 107, 109
 Mulhern, A. 241

 National Tertiary Education Union (NTEU) 177, 178, 179
 Neave, G. 227, 233
 Nedeva, M. 1
 Nelson, B. 175, 182, 206, 208
 Neumann, R. 171, 175–6, 180, 181–2, 183
 New Public Management (NPM) 171–2, 192, 201, 206
 Newman, J. 189, 190
 Noble, D. 133
 Noll, R.G. 133
 Noordegraaf, M. 224
 Nowotny, H. 32

 O'Toole, J. 102
 Oakeshott, M. 261
 Olson, O. 171

- Ormerod, P. 27
 Osborne, D. 206, 233
 Osborne, T. 23
 Ouchi, W.G. 31
 Oxford University 8, 26, 73, 82
 management of 26
 new governance structure for 8
 and Saïd Business School 85–6
 Oztel, H. 253
- Parker, M. 189
 Pasteur's quadrant 139, 142
 Patten, Lord 124–5
 Payne, A. 115
 Perkin, H. 192
 performance management in British
 universities (and) 188–204, 273
 departments, HODs and academics
 196–200
 hybrid university 200–202
 managerialism, varieties of 189–92
 research assessment exercise (RAE)
 returns 196–200, 201
 research sources and methods 192
 top-level management: VCs and
 PVCs 192–6
 persistence of university as institution
 6–11
 Pfeffer, J. 102, 107, 109
 PhD program(me)s 8
 American model 53
 CLEI International PhD 65
 PhD Education, Europeanization of
 (and) 56–68
 dilemmas for European doctoral
 education 56–8
 gaps and challenges 58–9
 accountability gap 59
 application/transformability gap
 59
 diffusion/relevance gap 59
 limits 60
 relevance and accountability 58
 strategies for integrated doctoral
 space 60–68
 ad hoc collaboration and external
 Europeanization 60–63
 development of networks 63–4
 integrated European PhD
 program 64–8
 PhD education in Europe (and) 49–56,
 266
 Americanized programs 54–5
 brain-drain 50–51
 concluding remarks on 66–7
 diversity of 52–3
 doctorates in European tradition
 53–4
 intellectual and structural
 background to attractiveness
 52
 national training for national
 markets 55–6
 researchers, numbers of 50
 PhDs/PhD students 95, 145–6
 Pierre, J. 115, 116
 Plant, A. 71
 politics and markets 31–4
 Pollitt, C. 189, 221, 223, 227, 233
 Polyanyi, K. 26–7, 29
 Powell, W.W. 32, 271
 Power, M. 116, 188
 Power, M.K. 223, 224, 230
 Powers, J.B. 137
 Prague Communiqué/summit 100, 121,
 122
PrintNET Case Studies 252, 253
 Propper, C. 224
- QAA teaching audit 197, 198
 quality assurance industry 23
- Rae, I.D. 213
 Ramirez, F.O. 1
 Randazzese, L.P. 134
 ranking of universities 22, 117, 161
 Readings, B. 270
 Reale, E. 223
 Reborá, G. 221, 223, 224, 230
 Reed, M. 188, 189, 190, 273
 Reich, R. 20
 Reichert, S. 222
 Reid, R. 240
 re-regulation of higher education and
 research (and) 113–32
 Bologna Process, the 114, 120–23 *see*
 also main entry
 common 'Europe of knowledge'
 118–20
 discussion 126–8

- European Research Council 114, 123–5
 governance networks 115–16
 multi-level governance 125–6
 new regulations in European management education 116–18
 research 18, 50, 156 *see also* surveys/research
 assessment as global industry 23
 funding for 19, 261
 in Canada 265
 pioneering of operational 71
 results, popularization of 42–43
 Research Assessment Exercise (RAE) 9–10, 28, 189, 196–200, 201, 222–4
 research assessment exercise (VTR: Italy) 221–36
 and Committee for the Evaluation of Research (CIVR) 224
 drawbacks and weaknesses of 230–31
 and peer review 222–4
 strong points and innovations in 226–30
 attention to output 228
 changes in relationships 228
 communication and form of evaluation output 229
 direct involvement of academics 229
 enhanced decision-making 228–9
Research Fortnight 22
 Review of Higher Education Financing and Policy, Committee for the 206
 Rhoades, G. 172, 175
RIS Newsletter 241
 Roberts, G. 23, 28
 Rooney, D. 32
 Rose, N. 116, 190
 Rosenau, J.N. 115, 116
 Rothwell, R. 240, 249, 250, 251
 Rüegg, W. 1, 2
 Ryan, K. 98
- Sahlin-Andersson, K. 33, 56, 114, 115, 116, 118
 Salamanca convention of European universities 121, 122
 Salminen, A. 206
- Salter, B. 223
 Sandholtz, W. 115
 Scandinavian Consortium for Organizational Research (Scancor) 67, 84
 Scase, R. 189, 194
 Schofer, E. 1
 Schulz, C.N. 3
 secrecy, global history of growing 27
 Seglen, O.P. 222
 Senker, J. 240, 247, 249
 Senker, P. 240, 254
 Sevón, G. 9
 Shachtman, M. 102
 Shah, T. 206, 229
 Shane, S. 146
 Sharp, S. 223
 Shattock, M. 24, 25
 Sheehan, B. 179
 Shenton, G. 96
 Shore, C. 114, 116
 Slattery, L. 101
 Slaughter, S. 1, 172, 175
 small and medium-sized enterprises (SMEs) 5, 239–57, 264
 apprenticeship issues in 247–8
 DTI survey of innovation in 242
 employee attributes for innovation in 246
 EU/EC programmes for 240, 241 and European Social Fund (ESF) policy 254, 255
 funding for education/training for 252–3
 information sources for innovation in 249–51
 innovation in 240–49
 and managers' comments/experience 242–3, 244–51, 253–4
 obstacles to innovation in 254
 and subsidized education initiatives 248–9
 surveys of participating 243–5
 and Unilink 240–1
 and university degrees/education 248
 YHUA scheme *see* Yorkshire and Humberside Universities' Association (YHUA)
- Small Business Research Centre 250
 Smeby, J.C. 134, 137, 138

- Smith, D. 241
 Smith, P. 223, 230
 Smith, R. 206, 207
 Social Thought, New Nations and
 Mathematical Biology,
 Committees on 83
 Soete, L. 18
 Sorbonne Declaration 99–100, 120–21
 Sørensen, J. 115, 116
 Spain 71, 124, 262
 and Madrid as European education
 hub 6
 Squires, J. 23
 Stedman, L. 176
 Steele, A. 223
 Stokes, D.E. 139
 Strange, S. 127
 students
 as clients 179
 expectations of 179
 foreign 6, 10, 51–2, 180, 261
 intellectual quality of 179
 mobility of 5
 PhD 145–6
 and researchers exchange 161
 Students in Europe, National Unions
 of (ESIB) 21, 122
 surveys/research
 Innovation Advisory Service on
 SMEs 245
 Yorkshire Training and Enterprise
 Councils (TECs) 245
 Sweden 42–3, 45–7, 274 *see also*
 changes in academic field *and*
 information activities
 Academic Convent of VCs
 (Stockholm) 45
 Association of Swedish Higher
 Education 45
 Coordinating Board of the Swedish
 Research Councils (FRN) 42
 Government of 42–3
 information officers, Nordic network
 of 46
 Nordic University Administrators
 (NUAS) 46
 Scandinavian Consortium for
 Organizational Research 84
 Swedish Agency for Higher
 Education 46
 Swedish Information Society 46
 Swedish Marketing Association 46
 Switzerland 135, 142–3
 Tabaksblat, M. 207
 Talib, D. 223
 Tapper, T. 223
 Tarde, G. 21, 24
 Thévenet, M. 107
 Thompson, P. 190
 Thrift, N.J. 21, 29, 270, 272
 Thursby, M.C. 148
 Tiler, C. 240
Times, The 22
Times Higher Education Supplement
 22
 Tiratsoo, N. 96
 Torfing, E. 115, 116
 Torfing, J. 116
 Training for Mobility of Researchers
 (TMR) 62, 64
 Turnbull, N. 207
 Turner, L. 138
 Turri, M. 222, 223, 224, 227, 230,
 233
 UNESCO 155
 UNESCO/CEPES 122
 UNICA (network of universities from
 the capitals of Europe) 45
 Unilink 240–1
Unilink News 243
 United Kingdom (UK) (and) 18, 20,
 94, 99, 120, 124
 academic research in 265
 foreign students in 261
 government and SMEs 240
 Leadership Foundation 22
 Tavistock Institute for Human
 Relations 71
 Teaching Company Scheme (TCS)
 240
 Top Management Programme 22
 Trade and Industry, Department of
 (DTI) 254
 University of Leeds 243
 United States of America (USA) (and)
 260, 262, 275, *see also* United
 States of America (USA):
 universities

- American Association of Collegiate Schools of Business (AACSB) 93, 94
- business schools 72, 107
- Carnegie and Ford Foundations 72, 73
- classified documents and secrecy (USA) 27
- foreign PhDs in 51–2
- Master's in Business Administration (MBA) 95, 96
- model of PhD courses 8
- News and World Report 22
- PhDs in 52, 53, 54–6
 - spending on higher education 18
- United States of America: universities
 - Chicago 78, 83, 96
 - Graduate School of Business 72, 78
 - Cornell 65
 - and French students 51
 - Harvard 22, 96
 - Business School 72–3
 - Massachusetts Institute of Technology (MIT) 18, 29, 158
 - Michigan 79
 - ranking of 22
 - Stanford 96
 - D (for Design) School 84
 - Wharton 96
 - Yale 79
- universitas studiorum* 5, 6
- universities for/as public good 19–20, 27, 272
- university (and)
 - as institution 6–11
 - challenges for 2–6
 - creation and diffusion of knowledge 156–8
 - cultural identity of 272
 - external constraints 160–63
 - 'good' of society 158–60
 - and innovation 251–3
 - intrinsic problems of 163–4
 - management of 271–2
 - social expectations 271
- University Chairmen, Committee of (CUC) 208
 - Code of Practice 208
- university mission 155–6, 164
- university reforms: tension between form and substance 17–30
 - conclusions 26–9
 - higher education ideas industry 21–4
 - management/management ideas 24–6
- Üsdiken, B. 95
- Vagnoni, E. 172, 181
- Val Thiel, S. 223, 230
- Van Looy, B. 134, 135, 138
- Vavakova, B. 133
- Voice of Business in Europe (UNICE) 121
- von Hippel, E. 249
- Walsh, K. 191
- Weber, M. 53, 67, 190, 271
- Wedlin, L. 93, 114, 115, 272
- Westerheijden, D. 233
- Williamson, O.E. 31
- Willmott, H. 12
- Wilson, D. 224
- Wolf, A. 18
- Work Psychology, Institute of 252
- Wright, S. 114, 116
- Yorkshire and Humberside Universities' Association (YHUA)
 - scheme 239–55
 - assessing benefits of 251–3
 - pros and cons of 253–5
- Yorkshire and Humber Regional Development Agency 240
- Regional Economic Strategy 240
- Yorkshire universities 255
 - mission statement of 255
- Zellner, C. 146
- Zuckerman, H.A. 137
- Zupan, M. 103

