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Christine Musselin
Pedro N. Teixeira *Editors*

Reforming Higher Education

Public Policy Design and Implementation

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Christine Musselin • Pedro N. Teixeira
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Editors
Christine Musselin
Centre de Sociologie des Organisations
Sciences Po and CNRS
Paris, France

Pedro N. Teixeira
CIPES and Faculty of Economics
University of Porto
Portugal

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Chapter 1
Introduction

Christine Musselin and Pedro N. Teixeira

Higher education and research have reached the top of governmental agendas, since they are expected to play a crucial role in knowledge societies. In all countries, they have been for many years at the centre of reforms aimed at deeply transforming university practices and governance that are considered poorly adapted to contemporary settings and to the new missions that universities and research institutions are expected to fulfill (Weisbrod et al. 2008; Newman et al. 2004). This stimulated a wave of policy reforms at the national and, in the case of Europe, even at the transnational level. Many higher education systems have presented multiple changes in areas such as funding, governance, quality assurance, organization of the sector and human resources' management (Gornitzka et al. 2005).

The rationales underlying those changes have been the subject of significant debates. In order to explain the reforms in higher education and research, many authors have mentioned the influence of New Public Management (NPM) (Braun and Merrien 1999; Amaral et al. 2003; Meek et al. 2010). This doctrine is said to be responsible for the introduction of managerial techniques borrowed from the private sector, for the systematic recourse to benchmark practices, the constitution of quasi-markets leading to increased competition between higher education institutions, the creation of new agencies (for evaluation, allocation of funding, etc.), the search for performance and efficiency, strengthened university executive leadership and less collegial governance (Ferlie et al. 2008). These interpretations are convincing at an aggregated level but they hardly resist empirical data and more precise analysis.

C. Musselin (✉)
Centre de Sociologie des Organisations, Sciences Po and CNRS,
19, rue Amélie, 75007 Paris, France
e-mail: christine.musselin@sciencespo.fr

P.N. Teixeira
CIPES and Faculty of Economics, University of Porto, Portugal
e-mail: pedrotx@fep.up.pt

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The developments in higher education at the institutional level also suggest that we need to go beyond those general statements and trends. In recent decades, there has been a significant strengthening of institutional autonomy in many higher education systems, notably in Europe (Neave 2009; Neave and van Vught 1991). By reference to the paper of Nils Brunsson and Kerstin Sahlin-Andersson (2000), some authors described this as the "construction of universities into organizations" (Krücken and Meier 2006; Musselin 2006; De Boer et al. 2007; Whitley 2008). The more this trend has developed, the less likely it is that the implementation of policy reforms will be a straightforward and reactive sequence. On the other hand, this growing institutional autonomy has been accompanied by a growing institutional differentiation in many higher education systems (Taylor et al. 2008). This differentiation has had multiple sources, from legal changes to different financial treatment by governments, though it has certainly contributed to making the institutional landscape increasingly more diverse across and within higher education systems (Kehm and Stensaker 2009). Thus, although many higher education systems have shared commonalities in this reform trend, the way they have responded may present significant differences at the national and institutional levels and this will likely have an impact on the way policies are designed and implemented.

The aim of this book is to cover this diversity by looking more precisely at the very content of the reforms, at the reasons that led to them, at the theories, doctrines, ideologies that informed them, but also at their evolution. In this introductory chapter, we will start by setting the context of change that has characterized European higher education over the last three decades. Then, we will reflect upon the extent to which the analysis of policy design and policy reform may be affected by those aforementioned changes. In order to achieve this, the book suggests three different but complementary ways of looking at reforms. Finally, we will present the contents of the volume, organized in three parts, each corresponding to one of these ways and highlighting what can be learnt about specific cases by adopting a specific perspective.

Changing Times, Changed Policies in European Higher Education

In recent decades we have seen a wave of policy reforms in European higher education that have often departed from the traditional public ethos that has historically prevailed in many European higher education systems. Many observers have pointed to the broad reforms in Europe in the 1980s and 1990s and the acceleration in the rate of change and reform since the late 1990s and into the first decade of the twentieth century (Neave 2009; Middlehurst and Teixeira 2012). At the national level, one can identify major policy changes over the last decades in areas as important to the fabric of higher education as the rise of quality assessment and accreditation (Schwarz and Westerheijden 2004; Westerheijden et al. 2007), the transformations in the structure and modes of funding, and significant reforms in the governance and management at the system and institutional levels (Amaral et al. 2002; Meek et al. 2010).

The pace of policy change has been enhanced by the acceleration of developments at the transnational level. In the specific case of Europe, recent decades have been characterized by important policy developments, notably with the development of the Bologna Process and the Lisbon Strategy (nowadays called Europe 2020), which both aimed at the construction of the European Areas of Higher Education and of Research. These two different policy processes, though increasingly intertwined, have had an important impact in higher education, influencing national policies and institutional strategies. Underlying those political processes there was recognition that higher education institutions and systems were central to the achievement of Europe's economic and social goals.

Many of the recent policy initiatives are the result of the tremendous changes that European higher education underwent over the last decades and the need to deal with massification (Scott 1995; Trow 2010). One of the major features of recent decades has been the persistent expansion of higher education, translated in the growth of enrolments, number and type of institutions, and number and type of programs. Moreover, this expansion has been increasingly linked to economic motivations and purposes, with both governments and individuals explicating an instrumental view that regards higher education as a tool for socio-economic change. These changes in the individual and social motivations regarding higher education have had a major impact on the external and internal regulation of higher education institutions, notably by stressing the economic dimension of higher education and its potential contribution to individual and social economic goals (Weisbrod et al. 2008; Slaughter and Leslie 1997).

As higher education has continued to expand, there have also been structural changes at the system level, with new higher education sectors being established or developed further, including the private sector and universities of applied science (Taylor et al. 2008). The boundaries between sectors have become more blurred and in some countries the divides between university and non-university sectors have even been abolished or at least blurred. In those where they have been maintained, they are reportedly under pressure, especially due to the pressures associated with massification of increasing institutional differentiation. This significant differentiation has often been a motivation for introducing additional changes in the systemic and institutional regulation of higher education (Palfreyman and Tapper 2009).

Higher education institutions in Europe and elsewhere have seen significant change in their social and economic missions and, consequently, in their organization and structures (Meek et al. 2010). These changes have been driven by a multitude of complex forces, albeit sharing in general an emphasis on adopting a greater economic and managerial focus in the internal decision-making process of higher education institutions. This changed view about institutions has led to a growing policy concern in rethinking and adapting the contextual framework in which those institutions operate. Hence, we have seen a reconfiguration of the sector alongside market rules, often through policy initiatives (Teixeira et al. 2004; Regini 2011). Important examples of this trend can be found in funding mechanisms (funding students directly instead of institutions; promoting competition among institutions, etc.), but also in the various stimuli towards closer interaction between universities

and industry (favoring the commercialization of research and knowledge). This has been particularly identifiable in countries with a mature higher education sector (Bok 2003; Geiger 2004).

The trend towards expansion has raised significant challenges both for institutions and governments alike. The fact that the number of students enrolled in higher education has multiplied several times in a few decades has translated into growing staff costs and greater investment not only in instructional and research facilities, but also in administrative and student services (Clotfelter 1996; Geiger 2004). The cost of the higher education system has become a significant issue in almost every single country and governments have been struggling to find additional funds to sustain (and often pursue further) the process of expansion. The financial challenge has been further complicated by an adverse financial tendency that characterized the public sector during most of the last two decades (Barr 2004). The so-called crisis of the welfare state has challenged the sustainability of the traditional financial reliance of higher education on public funding (Barr and Crawford 2004) and has launched a series of policy changes and conditioned others not necessarily focused on financial issues.

The policy context of higher education in Europe can also be understood as a move from an expanding sector to a mature industry. In the expansion phase, growth was seen as a major purpose in itself and absorbed the attention of policymakers and institutional leaders. To a large extent, at the time of expansion, the main concern for higher education institutions and policymakers, in order to keep public and social actors satisfied, was how to manage and accommodate larger numbers and a more diverse pool of students. In recent decades, as higher education has moved to a mature phase, external stakeholders have become more demanding and governments have internalized this and will not be satisfied just by adding more activities or expanding existing ones. A more costly higher education attracted increased political and social scrutiny, thus the political environment has given increasing attention to the level of external and internal efficiency of the higher education system (Cave et al. 1997; Teixeira and Dill 2011). This has fostered many policies aiming to strengthen the external efficiency of the higher education system and the promotion of more responsive higher education institutions, which has had important consequences in the organization and structure of higher education.

The landscape of European higher education has also changed significantly over the last three decades, spearheaded by a reform agenda cantered on the dual axis of autonomy and accountability (Neave 2009). Since the 1980s, and from a system perspective, we have seen a move from a “state control model” to a “state supervising model” (Neave and Van Vught 1991) in which the state designs a framework of rules and policy objectives for the system as a whole and institutions have increasing freedom and responsibility to set and pursue their own missions and priorities. Even if in many countries this new model coexists with more traditional forms of governance based on rules and controls, a shift from substantive policies (precisely setting what should be done and how) to more procedural policies (setting principles and aims) has been observed. Nonetheless,

this increase in institutional autonomy has been deepened in a context of growing accountability from governmental and autonomous agencies, with the state emphasizing a more evaluative role rather than one of direct control. With this shifting of authority and direct control from the state to the institutional level, the governance of higher education systems has become more complex and diffused and this has had important implications for the design and implementation of higher education policies.

Moreover, as institutions have received more autonomy and authority, they have become one of the main stages in the unfolding of policy developments. Although internal governance structures may often be largely shaped through national legislation, the strengthening of institutional autonomy has given a greater role to internal and external stakeholders, and thus the definition and pursuit of institutional priorities has become, at least in part, determined through internal negotiation. However, the exercise of institutional autonomy has also been significantly conditioned by the pervasive influence of managerial and economic concerns (Shattock 2006, 2008) which made the internal life of higher education become denser and more conflictive. The increasing influence of the administrative estate (Le Galès and Scott 2010) has challenged the traditional sovereignty of intellectual and professional expertise as a legitimate foundation for institutional decisions (Meek et al. 2010), and other criteria emerge in order to assess higher education institutions' effectiveness in responding to social and economic needs.

Policy Design and Policy Effects in Higher Education – A Broader Approach

As we have seen, the European higher education landscape has been significantly transformed over the last three decades and this has important impacts for the analysis of policy design and policy reforms in this sector. The traditional approaches to higher education policy analysis tend to emphasize that change in higher education is mostly stimulated through government policy initiatives and reforms. In recent years, this has been strengthened by the development of a growing supranational level that, through convergence and conflict, has influenced national agendas of policymaking in higher education. Policies designed at European and national levels have been shaping higher education's purposes, norms and values, and structures and organizations. Nevertheless, there are other forces influencing higher education and promoting change in universities across Europe and elsewhere (Clotfelter 2010). As shown by David Dill in this book, one should not neglect the transformation drawn by market forces, but also by the academic profession. Therefore, one could argue that in recent decades, an important part of policy initiatives should also be understood as an attempt to internalize societal, economic and technological forces of change into the higher education system. In fact, higher education institutions today face a demanding and complex context because they are asked to fulfill

multiple roles and be accountable, through multiple ways of formal and informal assessment, for the extent to which they fully embrace those roles (Stensaker and Harvey 2011; Neave 2009).

The political environment has given increasing attention to the level of external and internal efficiency of the higher education system. As regards the latter, as in many other public services, in recent years it became a rather common statement that higher education institutions should be more efficient in their use of taxpayers' resources (Pollitt 1990). The claim for more accountable institutions suggests that societies have become less confident in their internal working and that institutions do not spend available resources in an efficient way (Bok 2003). The concerns about efficiency refer as well to the degree of external efficiency and the effectiveness of higher education institutions to fulfill relevant social and economic needs. Many governments have been devising policies trying to strengthen the external efficiency of the higher education system and the promotion of more responsive higher education institutions. These developments have already been analyzed by several studies and publications that described those policies and looked at their impacts on higher education institutions (Braun and Merrien 1999; Amaral et al. 2002; Deem et al. 2007), on academics and on academic work (Henkel 2000; Barrier 2010; Leisyte 2011; Slaughter and Rhoades 2004).

Nonetheless, the aim of this book is slightly different, by presenting a collection of chapters looking at these reforms from a rather different perspective, focusing more on the reasons that led to them, on the theories, doctrines, ideologies that inform them, and also their evolution, rather than looking at the very content of the reforms. In other words, this book is interested in policy design. This notion was first introduced by Robert Dahl and Charles Lindblom (1953) and further developed by Helen Ingram and Anne Schneider (see Schneider and Ingram 1997, among many others). In a recent paper, Anne Schneider and Mara Sidney (2009: 105) wrote: "The choice of design elements reflects political and social values, historical precedent, national trends in ideas about 'good' policy, as well as a host of 'local' knowledge that leads to enormous variability in policy designs across time and space." As stressed by these authors, longitudinal perspectives as well national settings are important to analyze policy design.

Adopting a policy design perspective also means being more attentive to the variations in the implementation of these policies and to the reasons explaining these variations (in different countries, in different sectors or on different publics), as well as being aware of the contradictions and redefinitions they raise because of their direct or side effects. This again means focusing more on their dynamic rather than on their immediate effects and looking at the interactive effects between policy implementation and policy design. As highlighted by Giandomenico Majone and Aaron Wildavsky (1984), the theory incorporated in the design of a policy impacts on its implementation, but, reciprocally, the way it is implemented affects and redefines the theory. To achieve these goals, the book suggests three different but complementary ways of looking at reforms. The three parts of the book each correspond to one of these ways and highlight what can be learnt about specific cases by adopting a specific perspective.

Designing Policies in Higher Education: The Importance of a Longitudinal Perspective

One first way to better understand the ongoing reforms is to be attentive to their evolution, to identify their internal contradictions, as well as the redefinitions and reorientations they experience. Building on the study of public policies that take ideas, representations, ideologies and theories seriously (Muller and Jobert 1987; Sabatier 1988; Hall 1989), this approach recognizes that similar conceptions informed and justified most of the reforms led in European countries and that these narratives (Stone 1988) lead to coercive (when imposed by the state or a supranational level) or mimetic isomorphism (when successful countries are imitated), but at the same time it is thought that more attention should be paid to how these ideas, theories or representations are appropriated, translated, received and therefore lead to different policies in different settings. Continuities and ruptures that could characterize these reforms and their more or less erratic development are therefore central. Moreover, more attention is devoted to the mechanisms of diffusion, appropriation and redefinition of the changes, in order to better understand the various influences that intervene, but also challenge, the (often) too rapid conclusions on the existence of increasing convergences among the different countries. It is therefore necessary to look at the ongoing reforms in the light of their trajectories. The politicians developing these reforms naturally put forward their originality and the radical ruptures they introduce between a "problematic before" and a "promising after", but do such arguments resist longitudinal analysis? Different levels of reflection are needed to answer this question. There is a need to compare the content of the ongoing reforms and the arguments that accompany them with those of the previous reforms. It is not sufficient to write that most countries introduced NPM in higher education if one does not ask at the same time: how far do these reforms follow a different orientation to that of the past? Are the current debates new? How do they evolve over time? To what extent are they similar to the reforms led under the same motto elsewhere?

Changes in higher education are shaped by national contexts and debates, and even though on the surface one can identify a common vocabulary and common apparent purposes, the design of higher education policies, like many other areas of public policy, is embedded in national cultural, societal and political contexts. Moreover, and although there has been significant convergence in European higher education systems, one can find a persistence of national difference and peculiarities (Musselin 2005), notably in the distribution of power and level of authority granted to the three main levels within higher education's systems (system, institutional and individual) (see Amaral et al. 2009). These differences in the combination of authority or in the distribution of power among these levels shape policy initiatives and the pace and the forms of their effects, especially in institutional change. Hence, one should bear in mind these differences and the weight of the institutional past when analyzing the design and application of policy reforms in higher education.

The first section of this volume contains chapters that aim to tackle these issues by reflecting on policy design in higher education at the system level. They reflect

on traditional narratives surrounding policy reforms and the pace and the focus of change in higher education and the complexities to steer universities in an increasingly integrated and more competitive global environment. The chapters also stress the relevance of issues such as the delegation of power and institutional interests in molding the capacity of governments to specify the outcomes of universities and to monitor their performance. David Dill's chapter provides a conceptual perspective on this issue, while the other three illustrate different issues linked to policy design.

In his chapter, Dill points out perceptively that a generalization of contemporary studies of higher education is that significant changes within universities are being caused primarily by government policy reforms reflecting NPM. Following this framework, national reforms of higher education often seek to make the nature and distribution of information on academic behavior much more explicit, though new institutional economics also perceives organizational change to be a result of the complex interactions among the regulations of the state, the forces of the market, and social norms. Therefore in his chapter, Dill reviews the impact of contemporary government reforms, changing market forces and alterations in the academic professions on the process of change within universities, exploring what can be learned about the role of information in the functioning of higher education. In his analysis, Dill points out that the observable complexity of university missions contributes substantial uncertainty to current efforts by governments to specify the outcomes of higher education and to monitor institutional performance. For these reasons, Dill advocates that the most effective institutional framework for the university appears to be one designed to help improve the collegial mechanisms by which universities monitor and regulate their own behavior.

In the following chapter, Emanuela Reale and Emilia Primeri analyze university reforms in Italy. Recent policy changes have aimed at introducing deep modifications to the Italian universities' internal governance, downsizing the centralized national decision level and modifying academic institutional settings, boosting the academic institutions to overcome the traditional national paradigm. Their work aims to understand the underlying rationales, motivations and justifications which characterize the actual reforms and to highlight in what respect they act on the set of ideas, principles, values and beliefs, thus cultural and cognitive frameworks, which shape the national academic system. The analysis is supported by historical neo-institutionalism and literature about models of governance and develops a longitudinal analysis of the reform's text from its initial presentation until the final approval, following the several modifications proposed and approved by the various actors. This will highlight the extent to which the supposed innovative character of the reform has been changed since its initial proposal and how traditional features of the national policymaking context shaped and hindered changes in the governance of academic institutions. Their chapter points out how underlying policy designs in the reform process seem to have a major relevance for the evolution of practices and tools that shape higher education's inner life and intended policy changes.

In the following chapter, John Brennan and Sofia Sousa analyze the UK Research Excellence Framework and its impacts for the transformation of research production. The Research Excellence Framework has been introduced by the Higher Education

Funding Council for England as a new system for assessing the quality of research in the UK's higher education. The aim of their chapter is to discuss whether research evaluation systems of this sort lead to the transformation of processes of research production within higher education institutions or whether they are more likely to reinforce existing practices and traditions. They show how the new design of this evaluation system (cantered on outputs, impact and environment) explicitly follows multiple goals (correcting some aspects of the former RAE, providing support for research funding from public opinion at large, rewarding the contribution of research to the society and the economy) but might have further implications that policymakers might not be aware of. In order to develop this argument they discuss how discourses promoted by evaluation systems are capable of transforming (or not) research production in higher education and whether the new system can be seen as a truly "new" discourse. The analysis also focuses on whether such influences and developments can constitute a coherent framework for research or whether they rather constitute a field of tensions that will create new contradictions concerning the kinds of research which *should* be privileged by higher education institutions.

The chapters in this section share several commonalities. They all address the following issues: How are policies in higher education conceived? What narratives play a role and how? What theories and ideas influence them? How are they transformed into policy instruments aimed at transforming behaviors and practices? How independent is policy design in this sector autonomous from the environment and the society in which it takes place? What actors, stakeholders and interest groups are involved in this process and how do they transform it? The chapters therefore all stress the role of the three main factors identified by the huge literature on the construction of public policies – institutions, interests and ideas (or paradigms) – and look at how they combine in higher education policies in different settings and different countries. In their analysis they reflect on critical factors that may hinder deeper changes within academic institutions and the capacity of higher education institutions and groups of internal stakeholders to appropriate externally led policy initiatives and to adjust them to their interests, values and objectives. Several of the chapters in this part also point out that the effectiveness of policy reforms is not only influenced by the distribution of power in higher education systems and institutions, but is also affected by the fact that universities are politically and socially embedded institutions. Their analysis is, moreover, concerned with evolution as they do not look at reforms at a specific moment but take on board a longitudinal perspective in order to understand how policy design evolved over time.

The Complexities of Policy Design in Higher Education – Some Lessons from Comparative Research

A second way to improve our understanding of the ongoing reforms is to look at their implementation in a more comparative way. This, of course, includes comparison between countries, but also other comparative perspectives such as looking at

how one reform will be developed in different regions of the same country, as well as how a specific policy might affect the targeted publics differently, or how comparable reforms will be implemented in different sectors (such as higher education and health, or higher education and the legal sector, etc.). It is useful to question the meaning and the forms of the reforms led in higher education and research in relation to the reforms experienced by other public sectors and to the ongoing reconfiguration of state intervention.

This is all the more useful as NPM and Managerialism have been popular objects of study in recent decades in social sciences in general and in higher education policy research in particular and are considered as having a major influence on reforms. Nevertheless, these have been used in interchangeable ways and often with different meanings (Hood 1991, and see Bleiklie et al. 2011, for the higher education sector). In a way, the notion of NPM is a victim of its own success. There are so many definitions and redefinitions that it becomes more and more difficult to operationalize this notion. If one compares the reforms led in different countries under the motto of NPM, it is easy to observe how this notion is not sufficient in order to understand the concrete changes that were introduced, how they were implemented, or the arguments that justified them. Moreover, the same questions and ambiguities appear as soon as one tries to retrace all the reforms undertaken in a specific country over the last 30 years: viewing all and everything as a product of NPM leads to ignoring the nuances, contradictions and inflexions involved in these processes. Not only have the reforms varied, but also the opinions held by public management scholars about the central elements of NPM have differed (Amaral et al. 2003). Besides the large recognition of the managerial paradigm inspiring the desired changes, not all the European countries implemented the reforms in the same way and at the same time (Pollitt and Bourckaert 2011). There is therefore a need to look at these reforms more comparatively. The variable influence of NPM in different countries has also to be considered and understood. Some recent research (Paradeise et al. 2009), for instance, stressed that most European countries simultaneously led NPM-driven reforms as well as "network governance"-driven reforms, but with different intensity. Such a policy mix should also be considered as well as its impacts.

The second part of the volume therefore focuses on the complexities of policy design in higher education and tries to draw some lessons from comparative research. The chapters of this section all compare the implementation of similar policies in different settings, countries, regions or sectors and reflect on what explains the differences in their results. By so doing they provide new insights into the complexities and nuances of policy implementation in higher education. One of the obvious ways to approach a comparative analysis of policy reforms in higher education is to take two or more countries experiencing similar policy initiatives and/or purposes. However, as is suggested by contributions to this part of the volume, this comparative approach to analyzing policy reforms in higher education cannot be restricted to nationality, and has to pay attention to a multiplicity of variables such as the differences between federal and centralized political systems and the size, breadth and disciplinary profile of higher education institutions. The wider

breadth provides important insights to help identify the institutional conditions influencing the implementation of these reforms and shows how and to what extent they facilitate or hinder their efficiency.

The first chapter in this section by Teresa Carvalho and Sofia Bruckmann analyzes changes from comparative "inter-country" perspective. Taking Portugal as a case study, they aim to understand the similarities and differences between the higher education and health sectors. In their analysis, they point out that these changes involved transformations at the organizational level and for professionals, notably by replacing the traditional organizational and professional order, based on professionals' self-regulation, with a new one based on market assumptions. Their empirical analysis suggests that the traditional bureaucratic way of organizing public institutions is giving way to a rational one, though the effects may be different since deregulation is not similar for professionals in health and in higher education.

In the following chapter, Donald Fisher and Kjell Rubenson reflect on how the analysis of academic capitalism, marketization and accountability leads into a discussion of the restructuring of the state. In their chapter they reflect on the effects on higher education of the relation between globalization theory and state theory, notably by discussing whether globalization leads to convergence or divergence when it comes to the formulation of internal policies. Their analysis compares three case studies of the evolution of higher education policy in three Canadian provinces between 1980 and 2008, and by using both documentary analysis and interviews they argue that as higher education has become more central to the legitimization and accumulation functions served by the state, so higher education policy has been more closely tied to economic and social development.

Finally, in the last chapter, Lukas Baschung elaborates a new analytical framework for university governance which helps to understand differences in the implementation of higher education policies. The framework is constituted, on the one hand, by a number of central NPM and Network Governance elements, and, on the other hand, by four variables, namely the political system, the type and size of higher education institutions, and the type of scientific disciplines. In his chapter he applies the framework to doctoral education's reforms in Switzerland and Norway and examines to what extent elements of the one or the other public management narratives appear according to the four variables.

The chapters in this part provide important insights into the complexities of policy reform in the multilevel structure of government observed in many countries where responsibilities regarding higher education are shared between central and regional governments. The chapters in this part also enable the identification of what makes the higher education specific by looking at the differences in the implementation of rather similar policies. The analysis compares changes in the higher education sector regarding transformations at the organizational level and the attempts to replace the traditional organizational and professional order based on professionals' self-regulation with a new one based on market assumptions, a process similar to those that took place in other sectors inspired by NPM in a comparable sector like health.

Policy Effects at the Meso Level

Another major issue when analyzing policy reforms in higher education refers to the frequent contrast between expected and actual results. Higher education is particularly well known for being a traditionally complex field to be reformed, and higher education institutions have a reputation for resistance to change and subversion of policy initiatives, mainly due to the strong devolution of power to lower levels of the institution (Clark 1983; Becher and Kogan 1991). Many authors have argued that the long history of higher education institutions has nurtured an internal stability that is sustained by certain specific characteristics and features that make it more difficult to promote rapid, sustained and exogenously led change. These perceptions have nurtured the views of policymakers and hence one should pay attention to the extent to which the design of policy reforms in higher education in Europe has increasingly integrated a more careful or even skeptical view of the effectiveness of certain instruments for reforming higher education.

The analysis of policy design and policy reforms in higher education has to take into account the effects of the changes that have taken place in higher education and the way they have affected higher education institutions. Some of the main changes have involved transformations at the organizational level, notably through the decentralization and deregulation of internal processes. The change that has been promoted in higher education in recent decades from a governance model based on the so-called bureaucratic and oligarchic principles to one rationalized according to NPM and corporate principles is likely to affect the internal pursuit of higher education's traditional missions of knowledge discovery, application and transmission. Hence, it is relevant to examine to what extent recent policy initiatives have been integrating these changes into the development of policy tools and road maps.

Therefore the third and last part of the book finally addresses the impact of the reforms. Many of them consist in new acts and new legislative regulations. What do we know about the effectiveness of such instruments on higher education systems? What are the most efficient leverages for change? Reciprocally, which domains, mechanisms, actors, practices, representations and values better resist reforms, or even are reinforced by the attempts aimed at modifying them. It is therefore important to look at how reforms are perceived, the resistance and adhesion to which they give rise and the reconfiguration in power relationships they generate. Most studies led on the implementation of the reforms in countries that began in the 1980s concluded that academics were adapting their practices to the new requirements but only marginally transformed them and remained very much attached to the traditional academic norms and values. Is this still the case now? Are there differences among disciplines in their capacity to individually and collectively adapt? Are there differences within the same discipline according to the seniority and socialization of the staff?

The set of chapters included in the third part of this volume looks at the impact of reforms on the meso level, with particular attention to the level of institutions and

of the academic profession. In the first chapter, Dietmar Braun provides an analytical view on reforms and the transformation of academic fields and institutions by dealing with the impact of governance reforms on the cognitive development of science at the level of universities. His chapter links theoretical insights into the diffusion of new scientific fields in universities with an assessment of recent changes in their management structures. In his chapter he argues that opportunities for new scientific fields to be included depend on the kind of governance regimes ruling universities and compares the bureaucratic-oligarchic governance model with the NPM governance model. The analysis points out that the propensity of universities to include new scientific fields is conditioned by changes in modes of governance and that certain fields may have a greater chance of being integrated within existing institutional structures.

The other three chapters look at similar issues by drawing on empirical research about several European countries that have experienced significant governance and organizational reforms in recent years. The chapter by Maria Nedeva, Kate Barker and Sally Ali Osman starts from the steady and rapid growth of academic literature (and policy debate) on the wide-ranging changes in the universities in the Western world and the fact that these are mostly founded on two problematic assumptions. First, there is the assumption of "unity of object" whereby "the university" has undergone an institutional dislocation and "fragmented" into a plethora of quite different organizations. Interestingly, these organizations vary not only across national landscapes but also within the same funding landscape. The second problematic assumption is the one about the universality of the pressures for change. They consider that this reflects a failure to distinguish between "policies" and "policy instruments" on the one hand, and "pressures for change" on the other. In their chapter, these assumptions are questioned by using information from a study of university change in the United Kingdom at two universities (a research-intensive university and a teaching-intensive university). Their analysis indicates that the pressures for change, as well as the manifestations of this change, are quite different in both cases and that this has led to specific changes in the nature of research and research practices.

The chapter by Gaële Goastellec and Nicolas Pekari analyzes the Swiss higher education system which, during the last few decades, has faced important reforms concerning its structure and governance. As in other European countries, one of the most important changes consists in the strengthening of the research mission of universities in order to increase the competitiveness of both Swiss academic institutions and researchers on the national and international academic markets. Their chapter investigates the effects of such policy reforms at a meso-institutional level (academic career and profession) and their analysis indicates that the introduction and use by academics of the policy instruments have led to different career models.

Finally, the chapter by Patricia Schulz uses an empirical study of the introduction of performance-based funding in German medical departments to argue that, contrary to theoretical claims that recent NPM-inspired university reforms have taken autonomy from academics and given it to university administrations,

some academics have in fact retained their autonomy within the institutional structure of the departments. Senior members of the departments have often even been able to increase their autonomy relative to more recently tenured academics. This points to a similarity between the German and the Swiss case, where, as Goastellec and Pekari argue in this section, the chair structure still influences the universities' internal power relationships. At the same time, university administrators have gained some autonomy and authority, as Braun's theoretical chapter in this section argues. The findings suggest that the distribution of autonomy through governance reforms at universities is not a zero-sum game and certain win-win situations are possible.

One of the main contributions of these chapters is to focus on power redistribution. They look at the concrete effects of reforms on norms, funding processes, scientific tasks, doctoral training programs etc. and how they affect the academic institutions and profession. The comprehensive perspective they use is not only focused on the losers but also on those able to develop strategies in order to benefit from the reforms and acquire a stronger position. They show that some academics/institutions are able to reshape the focus of policy reforms and that others use the reforms to their benefit Reforms therefore provoke new power games and reconfigure power relations. As in the first part of the book, temporal dynamics are also taken into account in order to explain the different paces and degrees of impact of reforms in higher education.

Concluding Remarks

Higher education has experienced significant change over the last three decades. By focusing on policy design in higher education, this book challenges the common view that higher education systems are submitted to a rather standard process of reforms that affect the academic profession and higher education institutions in a similar way. By adopting a policy design perspective, it emphasizes variations.

There are several dimensions that can be explored in the theme of variations. One is that of variations between countries because of the social constructive process experienced by the ideologies and ideas that diffuse from one country to another – and among them principally the NPM doctrine – but are each time differently appropriated, translated and implemented, and also mixed with other conceptions and theories. A second dimension is that of variations within the same country over time because of the redefinitions provoked by the adaptation to the national settings, the contradictions arising from the implementation processes, and the resistance to or (on the contrary) the influence of some specific actors pushing their own specific interests. A third dimension is that of variations also within the same country and between different sectors of public intervention, acknowledging the importance of specific sectorial institutional settings in policy design. Finally, there are variations in the implementation itself as specific groups of actors, specific institutions or specific publics might react differently according to the gains or losses they can expect from the reforms.

We believe this approach can be quite fruitful and make several relevant contributions to the study of higher education and its policies. On the one hand, it strengthens the comparative approach to higher education policy analysis and adopts a longer-term perspective that can help us to develop a more robust and complete analysis of how higher education policies are designed. We hope this effort may stimulate greater interest in the study of policy design and policy effects in higher education and establish possible links in these regards with the larger background of social and European policies. Although higher education has critical peculiarities and ample motives that justify its study, the analysis of higher education policies can benefit from taking into account the development of policies at a broader level. On the other hand, the study of higher education policies can provide important contributions to the study of policy design and policy reforms at large. We hope this volume may be a small but meaningful contribution to both purposes.

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Part I
Designing Policies in Higher Education

Chapter 2
Public Policy Design and University Reform: Insights into Academic Change

David D. Dill

Introduction

I recently walked past the Sorbonne and was reminded of the first trip my wife and I made to Europe in June of 1967. As we passed the Sorbonne that summer day workers were covering the paving stones in the street with Tarmac to prevent the University students from stoning the police. In much of Europe and North America that year, as now, there were student protests about higher education. The literature on higher education of that time was peppered with terms such as "reform" and "revolution" and there were calls for dramatic change in universities. In response to those student uprisings faculties were reorganized in France and in many countries changes were made in the internal processes of university governance. Students, and in Europe staff as well, were provided greater opportunities to participate in university decision-making. However, over time the significance of those supposedly major changes in governance faded as students discovered what their professors already knew – that university decision-making is a rather boring activity. Eventually the energy of university students returned to their age old preoccupations with eating, drinking, political argument, university fees, and sex, not necessarily in that order.

In retrospect it is apparent during that period of supposed fundamental reform, European universities changed only modestly. European academics in the 1970s still looked upon American universities as truly foreign entities, with highly influential but clearly superfluous university administrators, with an abnormal interest in private fund raising, and with bizarre policies like tuition fees. American academics in turn were still confused by the novel degree structures of European universities,

D.D. Dill (✉)
Department of Public Policy, University of North Carolina at Chapel Hill,
917 Emory Drive, 27517 Chapel Hill, NC, USA
e-mail: david_dill@unc.edu

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they were envious of the supreme authority granted university professors, and they were amazed by the extraordinary autonomy accorded supposedly state-funded universities in Britain – what one wit of the day described as "the private management of public monies." I briefly mention this history because in contrast to that period of alleged radical change, the reforms implemented in European universities over the last 25 years have been truly revolutionary.

What has caused these recent significant changes and what are the impacts of these reforms on universities? Some suggest the contemporary changes in universities have been caused primarily by new government policies and regulations. But current theories of institutional change (Greif and Laitin 2004) argue that "institutional refinements" evolve out of exogenous shocks such as the globalization of higher education markets as well as alterations in endogenous processes such as the technology of information. I will explore these assumptions in the following analysis from the perspective of how the study of university change may help inform the design of more effective public policy for higher education.

Clark's Triangle

I begin with the general framework first articulated by our late and revered colleague Burton Clark (1983), the notion that university behavior is influenced or controlled by the respective forces of the state, the market, and the academic profession. In the study of higher education it is ritualistic to cite this framework, but echoing the remarks of the American writer James Agee, I would like to consider Clark's triangle of forces not as a sociologist, a political scientist, an economist, or lawyer – but seriously. My reason for this is that Clark's model is clearly derived from the earlier American Institutionalist School of political economy, which perceived organizational change to be a result of the complex interactions among the regulations of the state, the forces of the market, and social norms. This institutionalist framework has again become significant because many argue that the current policies of national governments, including higher education reforms, have been influenced by the theories of what has been termed the "new institutional economics" (Barzelay 2001; Scott et al. 1997). These new theorists have re-emphasized the broader institutional explanation of organizational change, but they have done so by merging the earlier institutionalist framework with neoclassical economics, emphasizing transaction costs, property rights, and principal-agent relationships (Weimer and Vining 1996).

I have recently completed, with the assistance of a number of international colleagues, two comparative studies of national policies influencing higher education (Dill and Beerkens 2010; Dill and van Vught 2010). The first is a study of the new regulatory instruments for assuring academic quality and the second is a study of the impact of national policies on the academic research enterprise among the leading OECD nations. In the analysis to follow I will draw upon these two studies and related research to discuss what we are learning about the institutional framework

of university change and of the influence on academic behavior of state reforms, market forces and the norms of the academic profession.

The Influence of State Reforms

The role of the state in recent university change is frequently characterized by terms such as "neo-liberal reforms," "managerialism," and the "new public management" (NPM). Of these concepts the "NPM," a term first attributed to Christopher Hood (1991), has been the most widely cited and studied. However, the concept of the "NPM" is not systematically defined (Barzelay 2001). In addition the policy reforms associated with the NPM appear to vary significantly from country to country. That is, they are path dependent, shaped by the particular history and institutions of each nation. Therefore I would like to focus my discussion of the influence of the state by articulating some of the core assumptions of the new institutional economics that appear to be influencing public sector governance (Hood 1991; Weimer and Vining 1996):

- first is the assumption that competition among independent organizations is superior to state monopolies as a means of achieving the social benefits of increased innovation and efficiency;
- second is the public choice assumption that rational user choice is more efficient than government bureaucracy as a means of controlling the rent-seeking behavior of government supported organizations;
- and third is the principal-agent assumption that transaction costs, including monitoring the self-interested behavior of professionals, can be minimized through better specified contracts.

In the case of higher education reforms these assumptions are most visible in the following types of policies:

- the facilitation and freeing of market forces by the adoption of competitive mechanisms for the allocation of government support for universities and by the reallocation of intellectual property rights;
- empowering users by mandating the provision of academic quality information to students as well as by increasing utilization of tuition fees for university funding;
- and specifying contractual relations between government and the universities by tying research funding to clearly defined indicators of university output.

The central contribution of the new institutional economics to the design of public policy consequently is to make assumptions about the nature and distribution of information in human behavior much more explicit (Weimer and Vining 1996). In examining the impact of contemporary government reforms on change in universities, I would therefore like to explore what we are learning about the role of information in the functioning of higher education.

Rivalrous Competition

James D. Watson's (1968) personal account of the discovery of the structure of DNA over 30 years ago clearly demonstrated that rivalry is intrinsic to the academic life. Academics have long competed for research grants from national research councils as well as for academic prestige via peer reviewed publications and international scholarly awards such as the Nobel Prize. But government support for universities in most countries other than the US was provided primarily by institutional block grants allocated to institutions on an incremental basis. This has changed (Dill and van Vught 2010) and now most of the leading OECD countries are allocating some portion of their general university funds (GUF) competitively for designated purposes such as:

- research doctoral students
- distinguished faculty chairs
- grants for research infrastructure
- research centers of excellence
- graduate or research schools
- and funds to achieve institutional "world-class" status

Less visibly, academic rivalry is also increasing in many countries because in dual funding systems the proportion of research funds allocated via institutional block grants is declining and the proportion allocated competitively through research councils is growing (Dill and van Vught 2010).

One obvious impact of the new emphasis on competitive allocation by government is the growing stratification of higher education systems with an increasing concentration of resources in research-intensive universities. Many have criticized this new emphasis on research concentration as violating the established norm of "egalitarian homogeneity" among universities, or what the British have termed the "gold standard" of academic quality. But our recent comparative study of national policies (Dill and van Vught 2010) clearly revealed that in most OECD countries, including the pre-1992 universities in the UK, research doctoral production and research funding were as in the US much more concentrated in certain universities than was publicly acknowledged. The more recent policy emphasis on the competitive allocation of institutional support (GUF) has made this hierarchy much more visible, but did not create it. In contrast it is worth noting that The Netherlands (Jongbloed 2010), which has retained one of the most homogenous university sectors, has been able to accomplish this by maintaining a clear differentiation between teaching-oriented and research oriented higher education – a binary line – so that much of their recent national enrollment growth in tertiary education is absorbed in a separate, vocationally-oriented, polytechnic sector.

From an economic perspective, the introduction of greater competition into higher education should lead, not only to increased productivity, but also to greater allocative efficiency for society as universities become more diverse in their missions, because rivalry supposedly requires universities to respond more effectively to the needs of their relevant users.

Although the evidence of increasing research concentration is readily apparent in many countries (Dill and van Vught 2010), the competitive allocation of government support has not yet led to the expected increases in socially beneficial institutional diversity. Instead, most national university systems are increasingly influenced by what I will humbly term "Dill's Iron law of Academic Reputation," which may be stated as: "While not all universities are world class, all members of academic staff believe *they* are world class." This professional belief may be admirable at the individual level, but when broadly shared among academic staff in increasingly autonomous universities, this collective academic norm becomes a major driver of institutional homogeneity. The eagerness to increase individual and institutional academic reputations impels all universities in the new, more competitive environment to imitate the leading research universities rather than to diversify their missions and profiles. All universities try to recruit and employ the best scientists, that is, those scholars with the highest recognition and rewards, the highest citation impact scores, and the largest numbers of publications. To better compete for reputation, all universities seek to increase their research expenditures and attract the most talented PhD students, creating a continuous need for extra resources. In the US, for example, the fastest growing component of national expenditures on research is institutional expenditures (Dill 2010), a category that includes institutional revenues derived from other sources – including student tuition – that are cross-subsidizing research. In sum, a major dynamic driving all universities is an increasingly costly and socially inefficient "academic arms race" for research reputation (Brewer et al. 2002; Van Vught 2008), in which academic norms appear to play a significant role.

As previously suggested the nature of academic information may be relevant to achieving the allocative efficiencies expected of greater competition. For example, recent econometric studies in the US suggest that research funds allocated competitively to universities through peer review by the National Science Foundation are associated with research publications and patents, but increases in industrial support for university research are positively associated with research output only when competitively awarded federal research funds remained dominant (Adams and Clemmons 2009; Foltz et al. 2005). In short, US corporate support for university research may not be efficiently allocated. Similarly subnational and regional governments are increasingly investing in research at their local universities as a means of stimulating economic development. But our comparative analysis also suggests local governments frequently lack the political will and/or the expertise to allocate their research funds to the most worthy projects through competitive awards and merit-based peer review (Geiger 2010; Zumeta 2010). Instead they "scatter" their funds in response to the demands of more proximate stakeholders. Therefore as national policies encourage more diverse sources of financial support for publicly funded universities, public policies that clearly identify through rigorous peer review national centers of excellence in teaching, research, or service can provide valuable information – a market signal if you will – that may lead to more socially beneficial investments in academic research by subnational governments, corporations, and other patrons.

Finally, in evaluating the effectiveness of competitive allocation policies it is important to assess the true transaction costs of these processes. In the US for example over two-thirds of the funds expended on academic research are allocated by the federal government on a competitive basis to individual researchers and teams (Dill 2010). But a recent survey suggests that the time spent on applying for and administering these research grants may be contributing to observed declines in American research productivity. US academic scientists now report spending 42 % of their research time filling out forms and in meetings required for pre- and post-grant work (Kean 2006). This suggests that an appropriately balanced dual funding model for universities may still be most efficient for society.

Intellectual Property Rights

Another example of national higher education policies influenced by the new institutional economics is the attempt to create new marketable goods by the reallocation of intellectual property rights. The much imitated intellectual property rights legislation in the US, known as the Bayh-Dole Amendment, was motivated by a desire to more rapidly transfer basic university research to the market. Therefore patent and licensing rights for government sponsored academic research were re-allocated to universities to increase incentives for knowledge transfer. The Bayh-Dole policy was not implemented in order to create a major new source of funding for higher education, but in the now more competitive global market for higher education, the adoption of similar knowledge transfer policies in other countries has motivated many universities to create technology transfer offices as a means of "cashing in" on their research outcomes. The evidence from our comparative study (Dill and van Vught 2010) suggests the majority of universities in the OECD countries are at best breaking even and many are suffering net losses from their investments in technology transfer activities. While many universities expect their technology transfer investments to bear significant fruit over time, the institutions that do reap some financial benefit from patenting and licensing are the most highly ranked research universities. Even in these institutions there tends to be a natural limit to the amount of revenue that can be earned from technology transfer. Patents and licenses are influential on technical innovation in a relatively small number of industries, biotech being the most celebrated case (Cohen et al. 2002).

One unintended impact of the new intellectual property rights policies is their influence upon the core processes of academic research. By increasing incentives for universities to patent and license their discoveries as a means of raising revenues, some research tools and theoretical results traditionally freely available to other scholars and researchers are now being restricted. This "anticommons," or constriction of open science (Heller and Eisenberg 1998), may lessen the economically beneficial "spillovers" that have been the primary justification for public subsidies of basic academic research.

Furthermore national policies with a "one size fits all" emphasis on the "hard" outputs of academic research may undercut the institutional diversity that benefits society. A recent comparative study (Lester 2007) revealed that the knowledge transfer processes emphasized in current national innovation policies – i.e., patenting, licensing, and new business formation – were not the most important contributor to local and regional development. Although some "world class" universities produce technology artifacts that are transferable globally, for most universities effective knowledge transfer is a more local process, contingent upon the nature of industrial development in the regional economy. Universities do help create new businesses, but more commonly they help to modernize mature industries, support the expansion of existing businesses into new fields, and assist in the relocation of industries. In these roles the provision of capable science and technology graduates for the regional economy, traditional publications, and consulting and contract research on technical problems with local business and industry are much more significant channels for influencing technical innovation than are patents and licenses (Cohen et al. 2002). Universities also provide a unique "public space" (Lester 2007) for local business practitioners, in which they can meet during research conferences and industrial liaison programs to discuss the future direction of technologies, markets and regional industrial development in a non-collusive way.

Potentially all comprehensive and technical universities, not just "world class" institutions, can make this contribution to regional development. The critical factor in designing effective national policies for regional development appears to be a more nuanced understanding of the role information plays in technology transfer. As noted most influential on local innovation are the "softer" knowledge transfer processes such as publications, meetings, consultants, and the hiring of new PhD graduates, whose added expertise is a primary means of transferring academic knowledge to industry (Cohen et al. 2002). Therefore universities need incentives to engage in studies and consultations designed to better understand their own research strengths, the development and circumstances of local industry, and the most appropriate channels for aligning the university's capabilities with the needs of the local economy (Lester 2007). The Finnish National Centers of Expertise Program (OECD 2007) provides one highly regarded model along these lines, helping universities to better integrate their research expertise with local industry and business, and thereby serve as nodal points in regional networks of innovation.

Information and Student Choice

The national policy that reflects the second major assumption of the new institutional economics is the emphasis on empowering users both through a greater reliance on tuition fees to finance universities and through provision of better information on academic quality. Given my recent comparative study of national quality assurance policies (Dill and Beerkens 2010), I will therefore focus this analysis on current assumptions about the role of information in student choice.

The customary assumption for an efficient market is that consumers and producers possess "perfect" information – truly rational choice requires economic agents who are well informed about both price *and* quality (Teixeira et al. 2004). Consequently it is believed that if student consumers have sufficient information on the quality of university academic programs their choices will provide a powerful incentive for universities to improve those programs, thereby increasing the human capital that benefits society.

However, the accumulating evidence suggests the many commercial league tables now developing around the world fail to address the identified information deficiencies in the higher education market (Dill and Soo 2005; Hazelkorn 2011). Developing valid indicators of academic program quality to inform student choice is a complex and costly challenge. Moreover, for-profit league tables already enjoy substantial sales and influence among higher achieving students, university personnel, and opinion leaders, by producing *institutional* rankings based primarily upon indicators of academic prestige, which have doubtful validity as predictors of student learning (Pascarella and Terenzeni 2005). Furthermore the emphasis on institutional prestige in these commercial rankings corrupts the presumed link between information on academic quality and university efforts to improve academic programs. In pursuit of institutional rankings, many universities have instead responded to market competition by emphasizing admissions marketing, "cream skimming" their applicants to focus on the admission of the highest achieving students, and increasing institutional expenditures on research reputation (Dill and Beerkens 2010). As a result many universities have made a limited investment of academic staff time and institutional resources in improving the academic standards of programs in which recruited students enroll.

The failure of the commercial sector to adequately address the need for valid user information on the quality of academic programs has motivated a number of non-profit initiatives to provide more socially beneficial information. These include the well-designed academic program rankings developed in Germany by the Center for Higher Education (CHE) and now being adopted in a number of other countries (Beerkens and Dill 2010). These rankings present information on academic subjects rather than whole institutions, information truly relevant to student choice, and the rankings were carefully developed by knowledgeable professionals utilizing existing research as well as surveys of student needs.

But even these rankings have limitations as a guide to effective student choice (Beerkens and Dill 2010). For example, the reliability of the program-level surveys of students is debatable given the low and/or highly variable response rates among the students surveyed in different fields. There is also an association between rankings scores and institutional size. Finally the reported differences among subjects or institutions are modest and scores tend to be stable over time, thereby providing limited guidance to student decision making.

Furthermore international research on student choice does not lend much support to the presumed association between information on the quality of academic programs and student enrollment (Dill and Soo 2005). In mass higher education systems quality rankings and ratings influence the educational decisions of a relatively small

segment of the student population, primarily those of high ambition and achievement. The education choices of most students are influenced by a wide variety of educational, social, and personal factors, including the immediate consumption benefits of education, which suggests that the individual decisions of even well informed potential students are unlikely to provide a strong incentive for the improvement of academic programs. To summarize this point in the simplest possible terms, how many parents of potential university students believe that the rational choices of even better informed teenagers is the best way to preserve civilization? Instead, as I will suggest below, information on the quality and performance of academic programs is most likely to lead to beneficial improvements if we focus on its use in the rational choices made by the producers of higher education – that is the academic staff. Recall that a necessary assumption of efficient markets is that *both* users and producers have access to "perfect" information on cost and quality.

Finally, in contrast to the market for first degree-level education where the orientation and maturity of student applicants limits the influence of user information on improving academic programs, the global market for research doctoral students appears to reflect classic economic assumptions (Dill 2009). Many universities compete aggressively for the most able international students and provide full financial support to admitted research doctoral applicants. Doctoral students, who pursue advanced degrees primarily for vocational reasons, are older and more educationally experienced consumers. Consequently in choosing academic programs doctoral applicants are less likely to be influenced by consumption benefits, social factors, or geographical considerations and more likely to be swayed by valid information on doctoral program quality. In this more perfectly competitive global market, the well-designed National Research Council rankings of research doctoral programs in the US, which are the only university rankings subsidized by the federal government, are not only highly influential on student choice, but have motivated measurable improvements in research doctoral programs in a number of leading US universities (Dill 2009). Given the demonstrated positive influence of research- doctoral graduates on economic growth in developed countries (Aghion 2006), the adoption of research doctoral quality rankings appears to be a particularly well-justified public policy and one worthy of greater attention in Europe (Van Bouwel and Veugelers 2009).

Performance Funding

The third national policy that reflects the assumptions of the new institutional economics is performance-based funding or contracting. Performance-based funding of university research, based upon measures of outputs such as publications and citations, has been adopted in a number of countries. The most frequently cited example of this policy is the Research Assessment Exercise (RAE) in the UK (Henkel and Kogan 2010). Performance-based funding appears to have increased academic research productivity and possibly also its quality, stimulating research

potential that previously may not have been effectively mobilized (Hicks 2008). Universities are adopting more strategic approaches to their research activities with reported improvements in the organization and management of research programs (Dill and van Vught 2010). However, performance-based funding may also have negative impacts on university research (Hicks 2008). The focus on peer reviewed publications may limit excellence, motivating a greater similarity of research at the upper levels. The emphasis on publication counts may also encourage some researchers to become more manipulative in their publication patterns, slicing their research into smaller topics and more numerous articles. The impact of performance-based funding also appear to be spasmodic, creating an initial jolt to the overall system, which initially motivates all universities eligible for the funding to increase research productivity, but lessens over time. Performance funding also appears to promote the previously identified stratification of universities, concentrating research in those institutions with greater numbers of internationally recognized academic staff, more resources, and already-established global reputations (Crespi and Geuna 2004).

The challenges of applying effectively performance-based funding to university research are consistent with several problems clearly predicted by the principal-agent model (Weimer and Vining 1996). In the case of the RAE for example (Henkel and Kogan 2010), the complexities of measuring academic research have required continual adjustments in the output indicators, the costs of regularly peer monitoring university research performance have been high, and there have been continuing concerns about controlling inefficient cross-subsidies in universities, which produce the multiple outputs of teaching, research, and public service. A problem mentioned previously as well with regard US research funding.

In addition the attention awarded to performance-based funding has distracted policy makers and analysts from more viable research assessment approaches. For example the Netherlands has implemented a different research assessment system for its universities, one not focused on indicators of research publication, nor linked to university funding (Jongbloed 2010). Alternatively, every 6 years each university is required to carry out an external peer review of its research programs by internationally respected researchers. These reviews must follow a Standard Evaluation Protocol (SEP) designed by the universities in collaboration with a national research organization. The SEPs emphasize the scientific productivity, academic quality, as well as long term vitality of each research program and employ a variety of information sources including on site interviews, university self-reports, and bibliometric evidence. This research assessment system appears to have had very similar positive impacts on research productivity, research quality, and improvements in each university's strategic management of research as the much more highly publicized performance funding systems in the UK and Australia (Jongbloed 2010). But the more collegial and qualitative research evaluation process developed in the Netherlands has not produced the same amount of rancor and divisiveness among the members of the academic profession, nor contributed to the same degree of research stratification as in these other countries. Furthermore compared to the RAE, the system in the Netherlands appears to have been more stable in design,

possibly less costly to run, and likely provides more nuanced and useful information to each university on means of improving its research activities. Consequently this type of research evaluation will likely make a more effective and durable contribution to improving the academic research enterprise over time.

The Influence of Market Forces

To this point I have followed the traditional narrative that suggests university change has been influenced primarily by government reforms. But as noted at the outset, I would like to take seriously Burton Clark's assertion that there are three forces influencing university change. Therefore we need to examine the independent effects of market forces on universities.

Economists who study industrial organization (Scherer and Ross 1990), which is the relationship between market structure and firm performance in an industry, have traditionally acknowledged the important role of government regulation on firm behavior, but have also emphasized that the nature of relevant technology influences the basic conditions of industry structure. Over the last 30 years technological change, the nature and pace of which is itself shaped by market forces, has had a significant influence on the degree of rivalry in higher education. A number of economists have argued that the rapidly declining costs of international travel, of communication, and of information storage, as well as the development of the Internet and the world-wide adoption of English as the language of commerce and higher education, have contributed significantly to increasing competition among universities and among academic researchers (Hoxby 1997; Kim et al. 2009; Black and Stephan 2010). The new technology is also fundamentally altering the basic techniques of teaching, learning and research within universities.

Changes in communication and air travel for example have clearly increased competition among universities by making overseas and web-based academic programs economically viable, but they have also fostered global competition for the best students, especially at the research doctoral level, which is so important to national innovation. These new basic conditions of the higher education industry have also altered what may be termed the "technology of discovery." For example, collaboration in research has markedly increased over the last 30 years as measured by the mean number of authors of published papers (Black and Stephan 2010). The rate of growth of collaboration among academic researchers correlates with the expansion of e-mail, the diffusion of the internet, and the development of low cost access to large data bases in the sciences and social sciences. We now also have a common language of research as increasing numbers of European academic journals in the sciences and social sciences have switched from their native language to English. One important effect of this change is the greater access to publication now provided to non-native researchers. As a consequence the playing field among academic researchers has been leveled and this has further increased the degree of academic competition worldwide. For example, a recent study of research productivity

in economics and finance (Kim et al. 2009) revealed that the locational advantage of academic membership in an elite university has declined over time. While being affiliated with a top university provided a positive effect on research productivity in the 1970s, this effect weakened in the 1980s, and disappeared in the 1990s. The researchers attribute this decline to innovations in communication technology.

These changes in the technology of discovery are paralleled by significant changes in the technology of instruction. Innovations in communication technology are substantially altering the way even the most traditional universities teach and assess their students. World-wide we are seeing the rapid adoption of modular instruction and continuous assessment as the primary means of organizing student learning (Dill and Beerkens 2010). Is this change being driven by the exponential growth of academic knowledge, by the need for academic staff to focus on specialized research, by government reforms? Each of these forces likely makes some contribution to the observed reorganization of university instruction, but I would suggest that as in research the primary driver of change in instruction is market forces.

In summary, as we recently experienced with national policies designed to restore financial markets following the 2008 global recession, much of government regulation is best understood as a reaction to alterations in market structure influenced by technological change. In this light it is well to recall the original Sorbonne Joint Declaration signed in Paris in 1998 by the assembled ministers of education. The ministers called for "Progressive harmonization of the overall framework of our degrees and cycles … aimed at improving external recognition and facilitating student mobility as well as employability" (p. 3). In other words degree reform was needed in order to create a more easily "readable" set of qualifications so that European graduates could better compete in the new, more global labor market. In short, the Bologna reforms of higher education were a reaction to market forces that are beyond the control of individual universities or nations.

The Influence of the Academic Profession

If, as I have briefly tried to suggest, market forces are a primary driver of change in universities, what then is the contemporary role for the third force in Clark's triangle, the academic profession? In a fascinating analysis of the evolution of the French university Musselin and Paradeise (2009) note that prior to the reforms of 1968 the "university" in France was only a territorial gathering of faculties. In the immortal words the poet Gertrude Stein once used to describe the city of Oakland, California, there was "no there, there." The university as a collective actor did not in fact exist in France. Since the 1968 reforms the French university has increasingly become a collective enterprise, with greater autonomy and authority over its academic activities. While as a consequence French university presidents have become more active and influential leaders, thereby suggesting the "managerialist" stereotype, Musselin and Paradeise (2009) suggest the new university collective decision making bodies

that evolved also have become influential mechanisms, exerting greater collegial control over university strategic planning, resource allocation, and curricula.

This evolution of the university into a more corporate entity with greater collegial control over its core activities provides I believe the critical insight into the nature of change and reform in contemporary higher education. In a recent study on controlling public services, the NPM scholar Christopher Hood (2004) outlined three primary means of control that correspond with Clark's original triangle: "oversight," or controlling individuals through government regulation; "competition," or controlling individuals through rivalry; and "mutuality," or controlling individuals through the horizontal influence of peers. In higher education we would term "mutuality" collegial control. Hood's comparative study, which included current national policies on academic research, led him to challenge the prevailing view that government reforms have caused a decline in the academic profession's control of universities. Rather he suggests that collegial control of universities may have actually increased over time, but in a different form. That is, a move away from "mere coexistence – peaceful or otherwise – among autonomous scholars," and a shift toward greater collegial control of the individual in the form of "more peer review of performance in teaching and research" (Hood 2004, 197–198). Let me illustrate Hood's point with some recent examples of the development of collegial controls over research doctoral education and academic quality assurance.

In an effort to improve the scale, productivity and quality of research doctoral programs a number of European countries encouraged the creation of research or graduate schools that were actually collaborative doctoral programs in a particular subject field among a number of universities. In an evaluation of such graduate schools in Finland (Dill et al. 2006) we discovered substantial variations in performance within and between such network schools because of the obvious challenges of coordinating policies and practices across subject faculties in different universities. We noted that in the US a "graduate school" is not a collaborative mechanism across universities for delivering a particular doctoral degree, but rather a collective mechanism of the academic staff within a single institution for assuring the quality of research and training in all of a university's research doctoral programs. As such a graduate school is a collegial mechanism for developing and enforcing policies and procedures on issues such as the approval of new doctoral programs, doctoral admissions processes and criteria, the award of university-based financial support for doctoral students, the supervision and research experience of doctoral students, and the reviews and defense of doctoral theses. Because of a desire to better control the quality of their research doctoral degrees, universities in a number of EU countries, including France, are now implementing similar institution-based collegial mechanisms for the control of doctoral education. As Hood notes such mechanisms may lessen the autonomy of individual professors and faculties, but increase collegial control by the overall university faculty.

Recent government reforms have also led to the adoption of external quality assurance mechanisms designed to maintain and improve academic standards in all university programs. Our research (Dill and Beerkens 2010) suggests that the policy

instruments that have had the greatest impact, in that they increase incentives for collective action by academic staff to improve program quality, are subject-level external reviews or accreditation processes. The most effective and legitimate such quality assurance processes in the views of academic staff have adopted methodologies featuring carefully trained peer reviewers, who are supported during the review process by professional staff, and employ systematic, standardized procedures, and protocols. An important contributor to the effectiveness of these approaches is the application of widely accepted norms of scholarly inquiry in an evidence-based approach to quality assurance. For example the teams conducting accreditation reviews for the Teacher Education Accreditation Council (TEAC) in the US (El-Khawas 2010) apply traditional scholarly rules of evidence such as the consistency and representativeness of the data provided by institutions as well as the validity and reliability of student assessment methods.

However, external reviews or accreditations of all subjects, which are more typical of European quality assurance policy, are costly to sustain for an entire system, their benefits tend to decline over time, they do not assess the effectiveness of the university's own collegial mechanisms for assuring quality, and these processes are in conflict with the general trend toward increased university autonomy. Therefore it is likely that most countries will move toward an academic audit type of review of the core collegial processes by which universities themselves assure the standards of all their academic programs. The academic audit process developed in Hong Kong offers one useful model of this approach (Massy 2010). The Hong Kong audits review each university's processes for approving and evaluating academic programs, the processes for evaluating and improving teaching and student learning, and the processes for assuring the integrity of grading and marking standards. The audits evaluate the effectiveness of these collegial processes by assessing their impact on the academic quality of a representative sample of academic programs.

As I noted earlier, information on the quality and performance of academic programs might therefore prove more socially beneficial if we focus on its responsible use in the collegial processes for assuring academic quality within universities. The availability and systematic application by collegial bodies within universities of valid and reliable information on student retention, student progression, and graduate outcomes by subject field could thereby help improve the performance of all academic programs.

In sum, public policies that provide incentives for universities to develop and reform their core collegial processes strengthen the capacity of the academic profession to improve the performance of higher education.

Conclusion

In conclusion, I have tried to suggest throughout this extended tour of the forces influencing change in higher education that assumptions made about the nature and role of information in higher education crucially influence the effectiveness of

policies designed to steer universities in the more competitive global environment. An important variable in the principal-agent model that is at the heart of the new institutional economics is task complexity. As noted the obvious complexity of university-level education, research, and service contributes substantial uncertainty to current efforts by governments to specify the outcomes of universities and to monitor their performance. For these reasons the most effective institutional framework for the university appears to be one that helps to improve the collegial mechanisms by which universities monitor and regulate their own behavior. The form of these collegial mechanisms must necessarily change over time in response to new circumstances and new technologies. But one reason the university, which first emerged in the twelfth century, has continued to be a vital institution for society, and if anything is of greater importance today, is that it has the capacity as a collective community to assure the integrity of its core processes.

Contemporary examples such as the academic audit process in Hong Kong, the research assessment process in the Netherlands, and the regional development initiative in Finland suggest how well designed public policies can provide useful incentives for the necessary internal reforms universities must make in the new environment of higher education. I believe the available evidence supports the view that as universities become increasingly autonomous, the public interest will best be protected by strengthening the collegial processes by which universities themselves maintain their academic standards, validate their research, and assure the value of their service to society.

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Chapter 3
Reforming Universities in Italy: Towards a New Paradigm?

Emanuela Reale and Emilia Primeri

Introduction

Higher education institutions (HEIs) have been characterized, in the last 20 years, by deep changes for their social and economic roles, organization, and structures (Maassen and Stensaker 2010). Different forces have driven changes within HEIs: external pressure for change, arising, for example, from the European Union, with its policies for education and research (Drori et al. 2006; Leresche et al. 2009; Gornitzka 1999; Féron and Crowley 2002), and the national reforms aiming at modernizing universities, granting them greater autonomy and borrowing management-type decision mechanisms and logics (Paradeise et al. 2009; Van Vught 2007; Krücken et al. 2007). Beside the large recognition of the managerial paradigm inspiring the desired changes, not all the European countries implemented the reforms in the same way and at the same time.

Using the case of Italy, the work aims at: (a) understanding the underlying rationales, motivations and justifications which characterize the actual reform, and (b) highlighting in what respect the reform addressed the cultural and cognitive frameworks which shape the national academic system. Our hypothesis is that a reforming process, to drive significant changes in an institutional paradigm, must act towards the main features, ideas, values and assets which support it (Hall 1993), and that, instead of sudden changes, gradual transformations are more likely to be observed. Thus, we questioned whether the policy design of the reform, and the tools it proposes, would support changes in the dominating paradigm allowing the academic system to move from the bureaucratic-continental model to a new model of governance (Capano 2008; Maassen and Stensaker 2010; Reale and Potì 2009). Reform implementation is not explored at this stage; rather the focus is on the design and

E. Reale (✉) • E. Primeri
Institute for Research on Firm and Growth CERIS, National Research Council CNR,
19, Via dei Taurini, 00185 Rome, Italy
e-mail: e.reale@ceris.cnr.it; e.primeri@ceris.cnr.it

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contents of the reform and how it acts with respect to the main features of the national paradigm. Possible trajectories of academic institutions and the transformation of the HE system it might put forward are finally discussed.

Historical neo-institutionalism and literature about models of governance frame the analysis. A longitudinal analysis of the texts, from the presentation until the approval through the several modifications proposed and approved by legislative actors, is exploited, in order to highlight the innovative character of the reform and traditional features which still emerge and that can burden the announced paradigmatic changes in the governance of academic institutions.

We intend to contribute to deepening the discussion on academic reforms policy design, addressing how the combination of the three main factors indicated by the literature on the construction of public policies, namely institutions, interests and ideas, can shape the national paradigm. We also want to explore how underlying policy designs in the reform process have major importance in the evolution of practices and tools that shape the academic decision process, organizational choices and institutional settings, according to expected – and intended – changes.

The chapter is structured as follows. This section introduces the theoretical assumptions leading the work. The methodology and the set of documents used to discuss previous and current reforms of the HE system in Italy are presented in section "Theoretical Assumptions". The reforming processes undergone in the past are outlined in section "Methodology" through a discussion of the contents and purposes of the main laws aimed at reforming the Italian academic system. The recent reforms and the policy process, which led to its approval is introduced in section "The Reforms of the HE System in Italy: A Brief Overview". Section "The Reform of the Governance of the HEIs Introduced by Law 240/2010" discusses the innovative character of the reform design, and tries to underline the extent to which it challenges the domestic features of the Italian academic system. The changes introduced during the parliamentary process are presented, pointing out those modifications, which represent, with respect to the original reform design, a shift from the proposed in-depth change of those features, which characterize the Italian HE system, through the introduction of innovative governance instruments and assets, to a different and 'softer' design. The conclusions discuss whether the reform, in its final version, leaves unchanged, or rather only softened, the traditional features of the Italian context, allowing path dependency to emerge, and the policy's legacies to constrain transformation processes.

Theoretical Assumptions

Policies designed at European and national level affect the regulations, norms, and values of higher education systems and academic institutions: while the former accounts for changes driven by exogenous forces, the latter focuses on factors internal to the institutions to explain transformations.

However, many authors, on the one hand, argue that stability characterizes academic institutions. Universities as organizations show specific characteristics and features,

because of their core tasks, research and training, which cannot be easily standardized, and which characterize them as loosely instead of tightly coupled systems (Weick 1976; Van Vught 2007; Krücken et al. 2007; Musselin 2007). Mahoney and Thelen (2010) showed that institutions are often related to the idea of persistence, therefore different approaches – sociological, historical and political – are focused more on explaining the continuity of institutions rather than change. On the other hand, scientific literature also observes that institutions do undergo changes, which are often not paradigmatic but limited in terms of the objectives and the instruments used. Notwithstanding the common idea that institutions undergo changes, different approaches emerge.

Historical institutionalism and path dependence, which underline the continuity of some distinctive patterns of an institution over change (Mahoney and Thelen 2010), allow the analysis of national policies driving changes in the academic institutions to be framed (Peters 2004). The basic idea is that path dependency characterizes policy choices and actions, meaning that policies at any time are influenced by policy choices made earlier. The patterns of policy and institutional choices created by a government then persist unless there is sufficient force to overcome the inertia that characterizes policies, or unless ideas, which shape them are not substantially changed. Differently from a perspective based on structuralism, which considers changes to be determined by exogenous pressures, historical institutionalism focuses on the normative and cognitive elements that are context-related and can determine different paths of change. The approach stresses the importance of the "domestic setting in which innovation lands", that is the domestic factors which seem to determine to what extent and according to what type of domestic setting new policies are introduced. Changes are shaped, then, by the national settings they are embedded in (Krücken et al. 2007; Bleiklie and Kogan 2007; Reale and Potì 2009; Capano 2008; Maassen and Stensaker 2010), so that different trajectories of changes in higher education systems can emerge as well as clear policy legacies. According to this view, Lenschow et al. (2005) underlines that "actors' choices with respect to following, adapting, or ignoring foreign examples are influenced by dominant ideas (policy paradigms or even more general view of the world)". Moreover, he specifies, "policy specific political discourses, thus the ideas and narratives behind policies and policy change are set within the broader culture of a country".

It is worth recalling here the literature about regime types and about models of governance to delineate the characteristics of a national governance system and to explain the reform capacity of a country. The continental model is characterized by a combination of academic, corporation and governmental bureaucracy, while the role of the university institutional level is weak because of the absence of trustees and the substantial role played by academic corporations (Paletta 2004; Bleiklie and Kogan 2007). So far, different distribution of power and level of authority granted to the three main levels within the HE system characterizing the university includes: the work-floor units (professors, departments and faculties), the university bureaucratic apparatus and trusteeship, and the governmental political and administrative authorities. Differences in the combination of authority or in power distribution among these levels shape the model of university (Clark 1983; Harman 1992; Huisman 2006; Neave 1996) and help to frame institutional change.

More recently, it was suggested that as governance "refers to the possible ways in which policy actors combine to solve collective problems" (Capano 2011: 1625), the structure of the governance reveals the role governments want to play: restructuring the hierarchical relationships with the universities, setting procedural or self-governance modes of steering, or steering at a distance. The quoted 'ideal' modes of governance depend on the level of governmental specification of the goals to be achieved, and the means to be used.

Hall (1993) introduced the importance of ideas as elements shaping policies and institutions, raising the question of whether to foster changes, ideas need to be modified. Ideas are defined as the beliefs, principles and values, thus the normative and cognitive elements, which influence both the design and the strategy of policy change. Policy paradigms are defined as the cultural and cognitive frameworks governing the policy process and policy changes. This allows the dynamics of changes, as well as the contents of policies, to be depicted. The extent of change in a policy paradigm depends mostly on its inadequacy to solve problems in an existing context and the existence of an alternative paradigm. According to some scholars, reforms aimed at innovating an institution should then act on the system of ideas in a given context, replacing the existing paradigm with a new one. Other authors underlined that changes do not consist often in a paradigmatic about-turn, nor in a unidirectional effect of ideas on changes, but in incremental modifications to the existing policy design, coming from bidirectional interactions (Musselin 2000).

These assumptions support the idea that there are several modes of institutional changes, which can be identified, distinguished and compared (Streeck and Thelen 2005). Notwithstanding the different factors which can be the cause of institutional changes, either endogenous (as internal reform processes or economic changes) or exogenous (as internationally driven changes and new regulations) factors, the process of change can be incremental (e.g. through piecemeal changes) or due to unexpected conjunctures. The results of changes can be different too. In the former case, changes might result in the continuity of previous conditions or in their gradual transformation, whereas in the latter situation, which is an abrupt process of change, no significant modifications can be observed, but a real rupture and substitution of previous situations. Reforming processes, by the way, mainly aim at introducing new paths and new logics of actions in institutions and institutional settings, so that gradual transformations are more likely to be observed than break down with respect to previous conditions (Streeck and Thelen 2005).

Streeck and Thelen (2005) also propose five patterns of gradual transformative changes, which help to qualify them according to different observable empirical settings: displacement, layering, drift, conversion and exhaustion. The first category refers to changes as consequences of shifts in the balance of powers and arrangements within an institution rather than their revision and amendment. As for the second category, layering, changes result from the introduction of new elements and arrangements in a given institution. Drift, on the other hand, could occur without explicit intervention but as a consequence of changes in existing conditions surrounding an institution. The fourth category presented, conversion, can be considered as the main result of policy action as it follows new goals, functions and

purposes introduced by policymakers. Finally, exhaustion indicates the gradual collapse of an institution rather than an abrupt process.

Based on these categories, changes in institutions can depend on modifications introduced or occurring through different processes with respect to the initial and original settings. However, as abrupt modifications of the HE system are rarely observed, the capacity of a reforming process to drive transformative changes could be discussed in two different ways. One would be by looking at modifications implemented by the higher education institutions, thus as a consequence of reform taking place; the other, by looking at the contents and rationales of the reform, thus discussing what the reform intended to act upon beyond its implementation, which is the focus of this work.

We investigate the measures, norms and rules put in place by present reform in its initial and final formulation, and differences between the two, in order to highlight legacies of the past, which might have influenced the reforming process.

Accordingly, the types of changes that are supposed to be implemented could be different from the expected ones declared in the objectives and aims driving the reform, and they are also taken into account as possible trajectories of changes stemming from the modifications introduced by the reform. The gap between the rhetoric of the reforms, the instruments they proposed to foster changes and the limited effects they produced or are willing to produce (Clark 1983; Capano 2003) should then emerge.

Methodology

Italy has not participated in the reforming processes affecting most higher education systems in Europe since the beginning of the 1980s, mainly aimed at improving the universities' competitiveness and managerial capabilities (Paradeise et al. 2009), reshaping their role and mission toward the society and challenging the national character of academic institutions. In the 1990s (Reale and Potì 2009), instances of increasing the internationalization and efficiency of higher education institutions were translated into the reforms of Italian HE, modifying academics' recruitment procedures, funding criteria, strategies and curricula design (Woolf 2003). Institutional autonomy, accountability, efficiency, competitiveness, internationalization and steering at a distance became daily discourses on reforms of universities, anticipating expected profound changes in the academic landscape and in the governance of HEIs, which, by the way, have been rarely observed. "Institutional sclerosis" and path dependency have often been the rule (Braun 1999), leaving almost unmodified the structure of the HE system, the balance between different decision levels and the institutionalized practices internal to academic institutions as well as their organization. Few universities, where a combination of internal facilitators of change (leadership, strategic governance, scientific specialization and internationalization) and environmental factors (local government, strong international connections) (Ferlie et al. 2007) were favorable to transformation,

showed the capacity and the will to self-reform, experiencing changes and innovative management models.

So far, the reforms and laws approved in Italy until now introduced modifications to the university system, for example granting greater autonomy and introducing new ways of assessing academic institutions, but did not allow the HE system to be reshaped; for example, it is still based on equality as the main principle; the balance of powers and the organization internal to the academic institutions remained linked to a collegial and bureaucratic model of governance. Rather, reforms have been re-contextualized and harmonized with the dominating principles of systemic and institutional governance (legality, equality, bureaucracy and collegiality), turning out to be an evolutionary adaptation of the existing paradigm, and hindering the move from the bureaucratic-continental model to a new model of governance (Reale and Potì 2009).

The Law n. 240 of December 30th 2010 was announced as a paradigmatic about-turn of the national HE policy, aimed at improving the quality and the efficiency of the academic system in Italy and at introducing deep modifications to the Italian universities' internal governance, downsizing the centralized national decision level and modifying academic institutional settings, boosting the academic institutions to overcome the traditional national paradigm. The process started in 2009 with a proposition for a law decree transformed in Law n. 240 on December 30th 2010. It was intended to push forward instances for changing the configuration of the Italian academic system, adopting as keywords 'efficiency', 'effectiveness', 'accountability', 'quality' and 'transparency', overcoming the localism, and promoting the merit of individuals and organizations. Because of these aims, it merely acts upon (a) the governance of academic institutions and (b) recruitment of academic staff, which represent the central issues of the reform.

In this work we deal with the former feature: the internal governance. Literature on university governance indicates leadership, strategic governance, scientific specialization and internationalization as factors internal to the universities that can sustain and facilitate changes. Among these factors, governance, thus the way in which universities are governed and the way they make and implement their own decisions, is widely considered by the literature of structural importance as the factor enabling universities to undergo changes foreseen by laws and regulations (Luzzatto and Moscati 2007; Capano 2008; Woolf 2003). The actual reform rationale is analyzed as well as its consistency, with the declared objective of fostering changes in the dominating academic system paradigm, allowing it to move from the bureaucratic-continental model to a new model of governance (Capano 2008; Maassen and Stensaker 2010; Reale and Potì 2009). The focus is not a comparison between present and past reforms and the effects produced, rather we investigate what present reform intends to do and what measures are proposed to achieve these aims. We also try to figure out the critical factors of the reform that might hinder in-depth changes within academic institutions, leaving them almost unchanged. Possible patterns of transformations in the HE system and in the governance of academic institutions, which might occur from other factors related to the reform, are also discussed.

We delineate how underlying policy designs in the reform process seem to have major importance in the evolution of practices and tools which should shape the academic decision process, organizational choices and institutional settings,

according to expected – and intended – changes. We recall here the definition of policy paradigm as the set of ideas, principles, values and beliefs, thus cultural and cognitive frameworks, which contribute to shaping and governing policies, policy process and policy instruments (Hall 1993).

The aim is to point out whether the declared aim of the reform to allow a paradigmatic change of the university system in Italy has been translated into tools and instruments that could challenge the cultural and cognitive frameworks that govern the policy process, thus the set of ideas that determine the mechanisms of resistance, adaptation and/or transformations towards changes.

The questions we address in the chapter are: What rationales and motivations shape the reform? What new assets for the institutional governance does it put forward? To what extent does the reform act towards critical factors, such as path dependency and policy legacies, which could lead to a reproduction of the existing system? Is the reform likely to challenge the existing dominant paradigm inducing radical or incremental change?

The study is based on several documentary sources: literature about university governance systems both in Italy and in Europe, and more recent data (Eurydice 2008), policy documents, statements, guidelines, position papers and discussion papers commenting on the relevant changes introduced by the reform (CUN-National University Committee 2009). Also, documents and proceedings from national conferences and seminars are taken into account (MIUR 2009).

Law texts (see Appendix 1) are also considered both for past laws and for current reform text.

The following prospect (Prospect I) presents in more in detail the articles of the initial and the final reform text taken into consideration and discussed in the work to outline the differences emerging as a result of the parliamentary works and influences of forces internal to the academic system.

Prospect I

Regulation	Subject	Articles mainly considered in the discussion
Decree 1905/2009	Reform of the university system. Regulations concerning the organization of universities, the recruitment of academic staff and delegation to the Government for the measures concerning the improvement of the quality and efficiency of the university system. The decree was presented by the Minister in November 2009.	Title I, artt. 1,2,3 Title II, art. 5
Law proposal 3687	Reform text with amendments approved by the Senate in July 2010 presented to the Deputies Chamber.	Title I, artt. 1,2,3 Title II, art. 5
Decree 1905b/2010	Reform finally approved by the Deputies Chamber in November 2010 and issued by the Senate on 23rd December 2010.	Title I, artt. 1,2,3 Title II, art. 5
L.240/2010	Law issued by the President of the Republic on 30th December 2010 and published in the Italian Official Journal on 14th January 2011.	Title I, artt. 1,2,3 Title II, art. 5

A longitudinal analysis of the reform text, from its presentation to the approval through the several modifications proposed and approved by legislative actors, is then carried out.

We consider the mentioned items as explanatory variables to be used for heuristic purposes to clarify the arguments and rationality elaborated within the policy discourse, thus to depict the rationales, motivations and justifications underlying the reform of the HE recently approved (Hanberger 2001).

The Reforms of the HE System in Italy: A Brief Overview

We can outline three main reforms periods in Italy and we briefly describe them, trying to focus on modifications they introduced (or were willing to introduce) with respect to the governance of higher education. We differentiate changes with respect to systemic governance and institutional governance, the first relating to the system and the second to the way academic institutions are governed.

Until the 1980s, the HE system remained almost unmodified, despite he enlargement of the system, both in terms of the number of students and of institutions, which characterized almost all the HEIs asking for a reconfiguration of the role and types of universities. Besides this, the reforms introduced in this period mainly aimed at solving the problem of the status of the teaching personnel, which grew substantially in quantitative terms during the 1970s, with a strong increase in teachers with non-permanent positions, asking for a new stabilization of their work contract.

A second period can be identified from the 1980s until the beginning of the 1990s. The reforms that took place in this period were mainly addressed at providing universities with institutional autonomy and at reducing the control of the state over academic institutions. The Decree 382/1980 defined the universities as "the most important research institutions in the Italian research context" and introduced a dedicated budget for research activity; the departments were established as the key organizational sites of research management at the local level; doctoral courses were promoted for the first time in the country; the new role of Researcher was defined and two levels of professors, i.e. Associate Professor and (Full) Professor, were established. An important step forward was represented by the law 168/1989, which introduced the principle of autonomy for the universities and established provisions aimed at producing some important structural changes in the higher education and research sector, enhancing accountability, efficiency and effectiveness.

A third period began in the 1990s and can be traced until 2009. External factors such as the Bologna Process and internal factors such as the improvement of internationalization pushed for greater changes in the academic system (OECD 2001). Like many other countries, Italy started a broad reform process, which invested in

the public administration as a whole and also schools and universities.[1] The Bassanini law[2] introduced important innovations in the Public Administration which also affected the higher education system that were mainly driven by the aims to introduce measures to improve managerial capacities and organizational efficiency according to the new public management principles. Universities were granted a larger space of action, according to the principles of subsidiary and decentralization of the administrative action, and the concepts of accountability and transparency were introduced as leading principles for their actions.

A new autonomy, both procedural and substantial, was granted to the universities in the 1990s. On the one hand, this guaranteed universities with a sufficient self-government capacity; on the other hand, the new autonomy was not balanced by adequate instruments pushing forward the accountability and transparency of academic institutions (Reale and Potì 2009; Paletta 2004; Capano 2008). Universities mainly responded to these pressures by adapting their behaviors for the accomplishment of the Government's aims, but their decisional and organizational capacities improved to a very limited extent. The Rector's leadership was strengthened, although his/her power was in many cases circumscribed by the control of the coalitions of professors sustaining his/her election and re-election; the configuration of the two main governing bodies – the Academic Senate, mainly governed by professors internal to the universities, and the Administrative Board, mainly representing the universities' stakeholders – did not evolve, nor did the role of the external stakeholders' components become relevant (Paletta 2004).

So far, past reforms were not intended to carry out in-depth changes either with respect to the configuration of the HE system or the organizational patterns of the universities; rather, some innovations were introduced such as evaluation, but its use as a steering and regulation tool remained weak (Reale 2010).

A new wave of reforms has affected Italy in recent years. The public debate on the need for increasing efficiency, effectiveness and accountability in the public administration, and, in the frame of its general redesign promoted by Law 15/2009, the so-called "riforma Brunetta",[3] the higher education system was again under revision.

At the beginning of 2009, a new law n.1 cut down dramatically the Government core funding (FFO) of universities, establishing a few rules for resource allocation and personnel recruitment, and putting lots of universities under the possible burden

[1] The institution of the Ministry for Universities and Science and Technological Research (MURST, then changed to MIUR) is dated to this period.

[2] Law 59/1997.

[3] Law 15/2009, "Delegation to the Government to improve public offices' productivity, efficiency and effectiveness, the transparency of public administrations and new regulations of functions assigned to the CNEL (National Council of the Economy and Labour) and to the Court of Auditors", came into effect with Decree 150/2009.

of not covering their basic current expenditures, especially those located in the south, often characterized by a lower performance compared with the universities of the north. It also foresaw:

- The amount of the FFO that was cut being allocated on the basis of the performance of universities in education, research and achievements on the basis of the formula;
- Universities that did not respect the threshold for the personnel costs (which should not exceed 90 % of the FFO) could not hire new personnel in the forthcoming year;
- Universities were no longer allowed to use all the resources made available by the turnover for hiring new personnel, but could use only a share of 50 %;
- Changes in the national rules were designed to limit the nepotism affecting university recruitment as well as the advantage given to local candidates.

The law was approved after a long debate, involving policymakers, stakeholders and academics. The impact was very high, since it affected the basic resources of the universities (core funding and turnover), and reduced substantially the margin of manoeuver for recruitment, pushing Universities to reconsider their internal management. The reform 240/2010 recalled this law in its general aims, with respect to the need for more transparency and accountability as basic requirements to change the university system.

One of the most relevant items was the conflict that emerged among the academics, confirming the presence of different, rather divergent views on the future and the role of the university, and the presence of a deep diversification within the communities. One evidence of the divisions between the academics was the emergence in 2007 of a new association – the AQUIS – joining those universities, labeled as 'virtuous', because of the presence of at least one of the following requirements: a personnel cost below the 90 % threshold, an international reputation for being included in one international ranking of universities, a critical dimension (more than 15,000 students). Twelve universities out of forty qualified joined the association, whose positioning was generally perceived as tentatively to create an alternative buffer institution with respect to the existing Conference of Italian University Rectors (CRUI).

The Reform of the Governance of the HEIs Introduced by Law 240/2010

Our analysis of the university reform under Law 240/2010 is related to the changing of: (a) the actual configuration of the HE system, (b) the internal governance of Italian universities, (c) the evaluation activities internal to universities, which represent constitutive elements of the national paradigm referred to above. Differences between the initial and the final designs with respect to these factors are discussed.

Changes in the Actual Configuration of the HE System

Two main provisions are introduced, which represent important innovations for the Italian HE system. The first concerns the possibility for universities to change their statute from public bodies to private not-for-profit foundations.[4] This can be decided autonomously by the universities, on the basis of the majority of votes of the Academic Senate. The universities that decide to turn into private foundations maintain the possibility to provide higher education courses recognized by the Government. They can set up organizational and management assets different from public universities, in order to comply with their new juridical status. As an example, they can decide on the composition of their governing bodies, which could include both public and private organizations. The second innovation[5] envisages the possibility for universities to federate, or to merge, with other universities, or non-academic institutions (e.g. higher technical institutes). The federation or merging together should be based on a common project, which describes the motivations and the aims for it, the allocation of structural and human resources and the governance rules decided by the new institution.

Both the provisions seem to strengthen the autonomy of universities with respect to the possibility to define strategic objectives and assets, pushing the system of HE education towards a different configuration. Nevertheless, two main constraints emerge. Differentiation of the universities seems to be promoted more on the basis of their juridical status – private foundations or public universities – than on the basis of the specific mission attributed to them (education, research, professional training), which is not modified, both types of institutions being entitled to carry out teaching and research. Also, in the case of federation or fusion of different universities, the reform does not envisage a differentiation in terms of their institutional function or the qualifications they provide. The fusion and aggregation of universities can be decided on the basis of regional proximity rather than on the basis of different specialization, research infrastructures and missions. So, the reduction of the costs related to the existence of numerous academic institutions within the same local context seems to be the main aim rather than a rationalization of the HE system, in a line of continuity with the political will to reduce the role of the State as main funder of the HE system. Moreover, the possibility for universities to turn into private foundations must be agreed by the majority of the components of the Academic Senate, which represents the academic professionals, and no clear provisions are offered about the changing status of professors, at present considered as civil servants. It is not clear, either, which academic body (Rector, Academic Senate, Administrative Council) is in charge of decisions regarding the federation or the fusion of universities, how this impacts on human resources both for universities

[4] The previous DPR 254 of 2001 allowed universities only to establish private foundations for the management of teaching and research activities.

[5] Title I, art. 3.

and the other institutions, as well as the real gain of this transformation with respect to the possibility of attracting more government funding and resources.

No major differences emerge in the initial design and the final reform, which also envisages the possibility for the universities, those who can prove to be financially reliable, to modify their status, and the need for change to be realized by academic institutions with no expenses for public finances.

Reforming the Governance of Universities

Important changes are introduced in the organizational patterns of the universities. We describe them by distinguishing between the governing bodies of the universities and their internal organization.

The reform constrains the autonomy of universities, obliging them to adopt a specific set of governing bodies – the Rector, the Academic Senate, the Administrative Board, the College of the Auditors of Accounts, the Evaluation Units and the General Director – and determining a few basic principles for their composition and functioning. Universities can decide on a different internal organization autonomously only in two cases: if they have less than 500 professors (full, associated and researchers), or if they have gained the stability and sustainability of the budget, and with an excellent performance in both teaching and research. Small size, financial sustainability and excellence are then the reasons allowing modification in the governance design. The former is a simple quantitative requirement whereas the latter two are qualitative performance requirements; both are determined by specific government procedures, to be implemented through the supply of criteria, indicators, standards and assessment exercises developed by the National Agency for the Evaluation of Universities and Research (ANVUR).

The Rector is assigned increased powers and responsibilities with respect to the past.[6] He/she is in charge of the definition of: (a) the main objectives and aims related to both the scientific and the didactic activities of the university; (b) the proposal of the 3-year plan for the university, according to the advice of the Academic Senate. Also, the appointment procedure is deeply modified. With respect to the past, the Rector is not necessarily a professor internal to the university but can also be from another Italian university. In the case of an external professor being hired as Rector, funds related to his/her position are transferred and the vacant position can be filled according to new regulations concerning the hiring of academic professors.[7] A unique mandate of 6 years is foreseen and cannot be renewed.

As for the Senate, the reform[8] regulates its composition, which can vary according to the size of the university, and establishes a maximum of 35 members, elected

[6] Title I, art. 2, par. 1 lett. b,c,d,s.

[7] Art. 2, par. 1 lett c.

[8] Title I, art. 2, par. 1 lett. e,f,g.

for two tiers at least, among full professors, of which one tier must be a department director representative of the different scientific areas of the university. The Rector and a delegation of students are also members of the Senate. Components of the Academic Senate, except for the Rector and the department directors, cannot be appointed to other academic responsibilities. Its mandate lasts 4 years and can be renewed only once.

The Academic Senate is entitled to address binding opinions with respect to teaching and research activities, services addressed to support students, other decisions concerned by the 3-year university plan and, more importantly, the financial accounts and the yearly and 3-year budgetary plans. It approves, jointly with the Administrative Board, regulations concerning teaching and research activities and can decide, with a two-tier majority of its members, on a motion of no confidence in the Rector.

The responsibilities assigned to the Administrative Board (Title I, art. 2, par. 1 lett. h,i,l,m) concern the strategic orientation and decisions of the universities, the approval of the financial and human resources plan and the deliberation of the constitution or the abolition, in agreement with the Academic Senate, of new courses and branches of the university and the appointment of the General Director, after the Rector's proposal and in agreement with the Academic Senate. The composition of the Administrative Board is also modified. It must be composed of 11 or less members, and it should also include, besides the Rector and student representatives, three or at least two external members who have to be selected among Italian and foreign candidates, highly specialized and qualified and with managerial competences, according to the rules settled by the university in the Statute or through public competitions.

The General Director (Title I, art. 2, par. 1 lett. n,o), who replaces the former Administrative Director, holds managerial tasks already settled by Decree 165/2001, to the extent that these are compatible with new university regulations, and is mainly in charge of the management and the organization of university-related services and non-scientific staff, according to indications provided by the Administrative Board. The General Director is hired, on the basis of a 4-year private law contract, which can be renewed.

The internal organization of the universities, traditionally based on the division of faculties, in charge of teaching, and departments, in charge of scientific research, is also modified and simplified (Title I, art. 2, par. 2 lett. a to g). The departments are in charge of both teaching and research activities and they are assigned to related decisions, thus cancelling the faculties as organizational units within universities. Grouping those belonging to similar scientific areas also must cut down the number of departments. The academic staff is, as a consequence, reduced to a maximum of 35 or 40 members depending on the size of the university (number of permanent professors and researchers). Intermediate structures, not exceeding the number of 12, can be settled up between more than one department and these would be in charge mainly of the coordination of teaching activities and the support of research.

Some differences emerge between the initial and the final text of the reform with respect to the governing bodies of the universities, whereas limits are introduced with respect to their internal organization.

As for the governing bodies of universities, in both texts the strengthening of the role of Rectors clearly emerges. However, in the proposal presented in November 2009, the election procedure also envisaged high qualification and managerial experience as criteria for selection, thus reinforcing the role of the Rector as a manager of the university. The mandate, in the final text of the reform, cannot be longer than 6 years, whereas in the initial reform two mandates were possible for a maximum of 8 years (as for the Academic Senate and the Administrative Board). Moreover, in the initial reform design the possibility of rectors being hired from other universities was not linked to the need also for funds to be transferred and the vacant position to be filled according to new regulations for academic recruitment. This new provision appears as a twofold limit: on the one hand, it allows more competitive and attractive universities to recruit the Rector externally without worsening the internal budget; on the other hand, it represents a risk for less competitive universities which might be forced to fill the vacant position at their own expense.

The separation of functions between the Academic Senate and the Administrative Board was more evident in the initial reform than in the final one. The Administrative Board was initially assigned the functions related to the orientation, initiative and coordination of both scientific and research activities, traditionally attributed to the Academic Senate, as the representative body of the academics. Its role and power were reduced in the final reform by the attribution to the Academic Senate of the power to address binding opinions both on teaching and research activities, services addressed to support students, as well as other financial decisions. Also, the possibility for the Senate to address a motion of no confidence against the Rector was introduced in the final text, (the consensus needed to propose the motion was changed from the ¾ to the two tiers of the Senate members). It is worth noting that the initial reform proposal also foresaw a simplified Academic Senate composition: only a few details were provided, mainly concerning the number of the members, 35, as a binding rule for its composition. The final reform text provided further details on the composition of the Academic Senate, which should include at least 2/3 permanent professors of which 1/3 should be department directors. So far, in the final reform the Academic Senate composition seems to be reshaped, then, to a limited extent and a shift towards a more traditional configuration can be observed.

Differences also emerge with respect to the composition of the Administrative Board. The number of members, 11, did not change, whereas initially the reform envisaged the Board to be composed of at least 40 % of members external to the university, this provision being reduced in the final reform to three or two members only. Moreover, in the initial reform the General Director -the leading managing figure was nominated by the Rector after appointment of the Administrative Board, and the agreement of the Academic Senate was not required; the agreement of the Senate was introduced in the later text of the reform.

No significant changes, between the initial law and the one approved in December, can be observed with respect to the internal organization of the universities (faculties and departments) apart from the possibility of labeling the faculties

in a different form (the law indicates the possibility to set "horizontal structures for the coordination of teaching activities").

Evaluation Institutionalized

Finally, the reform also acts with respect to the organization, the composition and the tasks of the Internal Evaluation Units (NUVs-Nuclei di Valutazione) (Title I, art. 2, par. 1 lett. q,r). They have to be composed mainly of members external to the universities and a member of the academic staff can coordinate them. A commission is supposed to support the Internal Evaluation Unit, composed of students and professors, elected within the departments.

Self-evaluation should become a consolidated practice within universities (Title II, art.5, par. 1 let. c). Accordingly, universities are asked to organize it autonomously, in order to ensure compliance with quality standards, to support meritocracy and to improve scientific performance, reporting the assessment results to the MIUR. Self-evaluation activities should concern both teaching and research (Title I, art. 2, par. 1 let. r) and should be carried out by the NUVs, which are also assigned the responsibility, jointly with the ANVUR, of assessing the scientific structures and staff.

In this respect, some differences between the initial reform proposed by the government and the final text emerge. Initially, few details were provided about the evaluation activities, and the NUVs were mainly assigned to carry out the evaluation of teaching activities. Thus, the provisions about the NUVs' tasks and competences in the final reform text have been enlarged, although the linkages with the ANVUR have been strengthened. As for the NUVs, the final text of the reform maintains the innovative presence of a delegation of students, but it also states that the coordination role can be assigned to professors internal to the university, previously not envisaged. As a whole, the role and the power of the NUV is not really defined: notwithstanding the members are appointed by the universities (the Rector or the Boards, according to the Statute), it seems more a local unit, which provides data, analysis and information to the ANVUR, with the autonomy that the university Statute would eventually attribute, and the real space of maneuver that the Rector or the Board would effectively recognize.

Discussion

Past reforms of the HE system in Italy presented several constraints and they did not achieve the expected results. The diversification in the HE offer did not occur. The number of universities multiplied mainly as a consequence of increasing participation by a larger number of students. Besides increasing the number of academic institutions, their mission was not regulated differently, for example by dedicating

some universities to teaching and others to research, nor were different regulations envisaged for the diplomas they issued. Thus, the academic configuration of the HE system was left unmodified without ad hoc differentiations or regulations. Higher education remained the privilege of universities regulated by common rules defined at the Government level according to the principle of equality (same regulations for all universities with no regard to their quality of teaching and research, same legal value of diploma).

Collegiality, being considered the basis for the freedom and democratic character of Italian universities, remained the bulk of the decision system. Innovative management models, smoothing the collegiality features of academic decision processes and improving the leadership capacity of Rectors, were experienced only in a few universities. The Government's attempt to promote the autonomy of universities did not succeed: decisional processes, power distribution and organization were not modified, not even such changes were declared as main aims to be achieved through the reforms. The internal organization of academic institutions was neither rationalized nor did it simplify the main academic activities, teaching and research, remaining shared between two different structures, the faculties and the departments, often with overlapping responsibilities and tasks, and a previous system based on chairs also remained unchanged. Neither did the redefinition of the curricula imposed by the Bologna Process force a modification of the internal organization of the universities. Evaluation remained weak and also self-evaluation processes improved only in a few universities, where favorable circumstances were present. Evaluation Internal Units (NUVs), established in 1999, did not perform the expected role: they were overwhelmed by their double responsibility towards both the Ministry, which indicated the aims and objectives of their activities, and the university, which appointed the majority of the members of the NUV (Dente 2006). So far, evaluation has often fallen into routine activities instead of being implemented as a process to improve academic organization and outcomes. The State has maintained a strong regulatory role towards academic institutions, although no observable effects on universities, especially those performing poorly, have been observed.

The reform approved in December 2010 aimed to introduce in-depth transformations into the Italian academic system, the internal governance of universities being one key feature to be transformed. We focused our analysis on three main factors considered as indicators of the changes introduced by the reform: the modification of the HE system configuration, the organizational patterns, and the evaluation activities carried out at the university level; we observe how the reform was designed in order to act upon them. We also compare the initial reform presented in November 2009 with the final text approved in December 2010 in order to allow changes introduced during the policy negotiation process to emerge. The analysis does not describe a before-and-after situation; rather, it points out, through the analysis of modifications introduced to the legislative text, how and in what respect the initial rationales and aims have been shaped differently.

As for the first issue observed, the reform introduces new provisions, with no observable changes between its initial version and the approved reform text. Public

universities do not dominate the suggested configuration, but a movement toward a more differentiated system is supported, which should include public and non-profit organizations, and different organizational settings, such as the establishment of consortia between neighboring institutions. Thus, the reform attempts to make the Italian HE system evolving toward a diminished role of the State as funding authority. Nevertheless, two limits seem to emerge. Firstly, no differentiations, such as for the mission (teaching or research), the specialization in specific disciplinary fields, course organization and the value of the diplomas issued, are envisaged. Secondly, the possibility for academic institutions to move towards different configurations – through merging or assuming a private status – is allowed for those institutions which meet financial accountability and sustainability criteria only, and no dedicated financial incentives are foreseen to sustain the process of change. The actual configuration of the HE system would hardly be challenged, with the exception of a few universities located in a very rich local context, which might also consider it interesting to hollow out from the public status. Those universities located in less developed territories, as in Italy in the case of the south, might not have the opportunity to develop different strategies in order to cope with the budget constraints. Thus, a differentiation of the national HE system might occur at the expense of equity.

As for the second issue, the organizational patterns, it can be observed that the model of governance the reform designed was innovative, but differences emerge between the initial and the final reform. For example, the role of the Rectors is strengthened, but changes introduced with respect to the length of the Rectors' mandate – 6 years compared to the previously envisaged 8 years as in the case of the Academic Senate and the Administrative Board – seems to limit its role. The same holds true with respect to the Rectors' competences, initially more managerial than academic, and the chance to hire him/her from external universities, at no expense to universities, especially as far as the possibility of filling the vacant position of the Rector is concerned.

The traditional powers of the Academic Senate, downsized in the initial proposal, were finally recovered, softening the role attributed to the Administrative Board and curbing that of the Rector, for example as far as the nomination of the newly introduced General Director is concerned. Innovating features concerning the Administrative Board, i.e. its composition and the powers assigned, have mostly disappeared in the final reform or they have been significantly counterbalanced by the presence, through the Academic Senate, of the academic elite (i.e. the directors of the departments) in the main decision processes of the university. The General Director too, finally introduced as one of the governing bodies, shows limited discretion in the tasks assigned, activities being addressed by the Administrative Board and controlled, often, by the Academic Senate.

The balance between the main governing bodies – Rector, Academic Senate and Administrative Board – is only partially modified by the reform. Collegiality is not eliminated in principle, nor reduced, and the capability of the external members in the Administrative Board to influence significantly academic life would remain a rare case.

The same holds true for the NUVs. The composition of the units is substantially modified compared to the past regulations, although some innovative elements are not part of the reform yet. Their activities are strongly enlarged compared to the past, and some of them are compulsory fulfillments to be carried out in agreement with the ANVUR. In fact, internal evaluation is envisaged by the reform as complementary and subsidiary to activities carried out by the ANVUR and would support the Ministry evaluation of the universities' scientific results and financial resources allocation decisions. However, no additional expenses are allowed for internal evaluation activities, despite being more complex than before. It could be questioned, then, whether the NUVs would not be overwhelmed, as happened in the past, on the one hand by the universities, and on the other hand by the Ministry, falling into bureaucratic routines.

These evidences are summarized in the table below.

Reforming periods	Configuration of the HE system	Organizational patterns	Self-evaluation
Past reforms of the 1980s and 1990s	No differentiation of the HE system: public universities only.	Substantial autonomy is granted to universities, but decision and organization capacities are improved to a very limited extent.	Self-evaluation is improved and Evaluation Committees internal to the universities (NUVs) are established.
	Same mission, teaching and research, specialization and diplomas issued for all academic institutions.	Rector leadership strengthened but often limited by academic elite. Decisions jointly managed by Rectors, the Academic Senate and the Administrative Board. The decision role of external stakeholders remains limited.	NUV tasks are enlarged – information, cost-benefits analysis, assessment of the efficiency and effectiveness of university teaching and research expenditure – but they take on a double role (appointed by the university and responsible toward the Ministry).
Tools and measures in the initial reform design (November 2009)	Differentiation of the HE system: change of status – from public organizations to private not-for-profit foundations, federation and merging with other universities, or non-academic institutions (i.e. higher technical institutes).	Rector leadership strongly improved (Rectors as managers, elected for a 4+4 period, between academics, also external to the university).	The composition of the units is substantially modified (i.e. mainly external members and integration of a student delegation).

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Reforming periods	Configuration of the HE system	Organizational patterns	Self-evaluation
	Same mission, teaching and research, specialization and diplomas issued for all academic institutions.	Different composition and powers for the Academic Senate (maximum 35 members, mainly advisory tasks assigned) and the Administrative Board (maximum 11 members of which at least 40 % external, in charge of decisions related to scientific and research activities, financial matters). The internal organization of the universities is modified and simplified: departments are assigned both teaching and research activities, the number of departments strongly reduced, faculties almost disappeared.	NUVs are mainly assigned the evaluation of teaching activities (few details are provided).
Tools and measures in the final reform (December 2010)	Same regulations.	Rector leadership is improved. Rectors are elected for one period of 6 years, between academics also external to the university. Governing bodies also include the General Director, who replaces the Administrative Director.	NUVs' innovative elements concerning their composition are softened (a coordination role might be attributed to internal professors). Activities are substantially enlarged (teaching, research, human resources recruitment criteria) but they have to be carried out in agreement with the ANVUR (National Agency for Evaluation, appointed by the MIUR).

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Reforming periods	Configuration of the HE system	Organizational patterns	Self-evaluation
		Academic Senate keeps traditional powers (i.e. vote for a no-confidence motion against the Rector, binding opinions with respect to main academic decisions) with respect to the Administrative Board. Different size of the main governing bodies – AS and AB – but compositions similar to the past (maximum 35 members for the Academic Senate, elected mainly among full professors and department directors, and 11 members for the Administrative Board of which at least the two tiers must be external). he	

Three main considerations emerge from the analysis. Firstly, financial issues gain increasing importance as criteria for granting universities the opportunity to change their organization or to move towards a different configuration. Accordingly, the role of the State as funder is also slimmed down. Secondly, the reform introduces measures and instruments circumscribing the substantive autonomy of the universities, thus the possibility for universities to decide the goals and the aims as well as the instruments to achieve them. Thirdly, the link between responsibility, especially as far as financial issues are concerned, and authority clearly emerges.

In sum, the actual reform was announced as an in-depth about-turn of the academic system in Italy and governance was considered the key feature that the reform would act upon. Nevertheless, the reform rationales and design were modified and softened during the parliamentary process, pointing out a retrenchment of traditional features of the Italian academic system instead of its evolution towards different configurations, organizational settings and power distribution. The reform introduces new patterns of governance for academic institutions, beyond the main assumptions of an ideological shift to efficiency,

transparency, excellence and competitiveness, but some critical factors hinder the push towards in-depth changes within academic institutions, reinforcing their national embedding.

Concluding Remarks

Until recently, universities in Italy have been almost impervious to what was happening abroad (Woolf 2003), remaining characterized by compromised solutions, often applied with institutional rigidity, which in the end did not introduce the expected radical changes. Rather, they mainly represented an evolutionary adaptation of external pressures in line with the existing traditional administrative paradigm.

This work aims to contribute to the discussion about reforms policy design, by analyzing the recent university reform approved in Italy and focusing on modifications it introduces in the governance model of higher education institutions. Our hypothesis is that, notwithstanding the external pressures which impact on national regulations and norms, such as the increasing push towards internationalization and the Europeanization of the higher education system, the policy design behind the reform has been mostly influenced and shaped by national settings and national policy discourse letting path dependency patterns emerge.

The focus of the work is not on changes produced in the university system by the reform, this being hardly observable at this stage, but rather on the policy design of the reform. In fact, as recalled by Lenschow et al. (2005), dominant ideas at the national level shape the way reforms are introduced and enacted. Thus, the study tried to highlight the underlying motivations and rationales behind the reform, looking at changes it introduces in the national governance system of academic institutions and the main political discourse, which accompanied them. Our main questions concerned whether the reform has enough force to overcome national inertia and whether and in what respect it acts towards main features of the national paradigm. Moreover, in line with the historical institutionalism view we exploit in the study, changes in the policy design of the reform from its presentation until its final approval are taken into account.

According to Hall's (1993) arguments, ideas shaping national policies and institutions have to be modified to change the national dominant paradigm; in that respect, Law 240 turns out to be weak. Basic ideas, institution configuration and main actors' interests within the academic environment, which shape the national academic system, were not modified, or this happened only to a very limited extent and in a discontinuous way. Domestic settings and traditional centripetal forces prevailed.

The reform, in its declared aims, intended to radically change the internal governance of academic institutions, a key prerequisite in order to deeply change the Italian national configuration and to foster a movement toward

transforming universities into stronger organizations. Rather, the analysis highlights the powerful role of academic corporations in shaping the reform design, represented by the Academic Senate, and the limited space granted to the work-floor level, burdening the possibilities for a shift in the balance of powers and the set-up of new arrangements in the academic organization. Such evidences suggest the reforming capacity cannot be seen as radical, nor the persistence of national institutional features of the Italian governance system, in line with a continental governance model.

Moreover, the analysis of the political path toward the reform approval provides insights into the intentions of policy actors involved, the solutions they agreed with respect to the need to modify the university system, and the role the government wants to play. Looking at the reform as it was finally approved after the parliamentary process, important changes seem to concern the possibility of a different configuration of the HE system and the role of the State in relationships with universities. This mainly consists in reducing state expenses for higher education, ceding real and substantial autonomy to best-performing universities and preserving the academic elite's space of maneuver.

Thus, three possible trajectories of transformation, according to the frame proposed by Streeck and Thelen (2005), can be envisaged, which mostly depend on the financial capacity of academic institutions. On the one hand, a layering or a drift process may be possible for those institutions which might benefit, given their financial sustainability, from the introduction of new arrangements in their internal or local organizations (i.e. new status or the possible establishment of consortia between neighboring institutions) or changes in the existing conditions surrounding them (i.e. financial restrictions and consequent budget constraints). On the other hand, the gradual collapse of less favored universities is likely to be observed.

The actual reform might end up with the introduction of further differentiation of academic institutions mainly on the base of their ability to cope with the lack of public resources. The reform, in fact, leaves to some universities – those that will survive the cutting of the government basic funding, and whose performance was assessed as being of a high level – the possibility to experience alternative organizational and functional models of governance, thus entrusting only this restricted number of HEIs with substantial autonomy to self-determine both the objectives of their actions and the instruments to achieve them. In this respect, universities could be entrusted with different levels of autonomy, according to their performance. This is supposed to deepen differences among academic institutions, distinguishing between those that have been able to undergo changes and those that have not.

So, although the policy design and the rationale underlying the reform show a continuation in the rut of Italian tradition, the configuration of the national system as it might emerge after the reform may reveal unexpected changes, which indicate that further research into reform implementation is needed. In sum, it remains an open question as to what advantages universities will take from this reform, and how the whole system could evolve in the forthcoming years.

Appendix 1

Year	Regulation	Subject	Articles mainly considered in the discussion
1989	L. 168/1989	Institution of the MURST (Ministry for Universities and Scientific and Technological Research) and acknowledgment of autonomy to universities.	Title I art. 1 Title II artt. 6–7
1997	L. 59/1997	"Bassanini Law" Decentralization from Government to the universities of administrative and managerial tasks (subsidiarity as main principle regulating the State and academic institutions' relationships).	Title I art. 1
1997	L. 449/1997	Attribution to the universities of autonomy and responsibility over financial issues and recruitment, definition of activities and responsibilities of the universities' Internal Evaluation Units.	Title III art. 51 par. 6
1998–1999	L. 204/1998 and Decree 381/1999	MURST becomes MIUR, introduction of the National Research Plan for Universities. New regulations for the recruitment of professors and constitutions of the CIVR.	L. 204/1998 art. 1–7 Decree 381/1999 Title II art. 8, Title V art. 11
1999	L. 370/1999	Regulations concerning universities and scientific and technological research. 'Osservatorio' for evaluation changes into CNVSU, the Internal Evaluation Units are replaced by the NUVs.	Title I artt. 1,2,6
2001	Decree 165/2001	Competences of administrative and technical staff are decentralized to the universities.	Art. 41, Artt. 48
2005	L. 230/2005	Modification of the recruitment system.	
2005	L. 43/2005	Regulations concerning the 3-year strategic plan of universities.	Art. 1
2008	L. 133/2008 and Decree 112/2008	Regulations concerning the improvement of public financial resources. They establish the possibility for universities to change their status from public bodies to not-for-profit private institutions ("Fondazioni").	Artt.16
2009	L. 15/2009 and Decree 150/2009	Reform of the Public Administration enabling the Government to introduce regulations to improve production, efficiency, effectiveness and transparency of public administrations.	Title I and III, artt. 56 and 60 which modify Decree 165/2001

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Year	Regulation	Subject	Articles mainly considered in the discussion
2008–2009	L. 1/2009	Regulations concerning the right to HE study, the merit recognition and quality improvement of the HE system.	Artt. 2 , 3
2010	DPR 76/2010	Regulation concerning the ANVUR, the National Agency for the Evaluation of Research.	Title, art. 1–3

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Chapter 4
The UK Research Excellence Framework and the Transformation of Research Production

Sofia Branco Sousa and John L. Brennan

Introduction

This chapter focuses on the research function of higher education and on how current policy discourses and initiatives may be reshaping research processes and outcomes within higher education institutions. The specific focus is upon the UK where important changes are in the process of being introduced which will affect both the funding and the conduct of research. The aim of the chapter is to discuss whether research evaluation systems lead to the transformation of processes of research production within higher education institutions or whether they are more likely to reinforce existing practices and traditions. The research function of universities, along with the rest of university activities, has become subject to the imperative of the 'new managerialism' and of neo-liberal ideologies supporting growing competitiveness and consumerism. Academics are increasingly accountable for what they do. Targets are set and outputs measured against published criteria. In research, this can lead to a distinction between 'research active' and 'research inactive' staff. But it can also shape the nature of the knowledge produced – its nature and focus, the audience to which it is addressed, as well as its quantity and form of dissemination. This chapter represents an attempt to consider the potential implications of research evaluation systems for research processes within universities. We will do so with particular reference to the new Research Excellence Framework (REF) being introduced in the UK as a basis for rating and funding of research undertaken by UK academics and universities.

S.B. Sousa (✉)
CIPES (Center for Research in Higher Education Policies),
Rua 1.º de Dezembro, 399, 4450-227 Matosinhos, Portugal
e-mail: sofia@cipes.up.pt

J.L. Brennan
Open University Business School, Open University,
Walton Hall, MK7 6AA Milton Keynes, UK
e-mail: john.brennan@open.ac.uk

C. Musselin and P.N. Teixeira (eds.), *Reforming Higher Education: Public Policy Design and Implementation*, Higher Education Dynamics 41, DOI 10.1007/978-94-007-7028-7_4,

In the first part of the chapter, we will approach the construction of the REF, focusing in particular on the role assigned to bibliometrics and impact. The REF moves among several influences such as the peer review system, output measures and the wider impact of research. It is part of a discourse which emphasizes rankings of research and, as a result, may be part of a growing competitiveness between researchers and between institutions. Our empirical work will be based on a critical analysis of the REF framework. Although the REF is in the process of implementation, a pilot exercise has been undertaken and we will draw upon the progress reports made by the Higher Education Funding Council for England (HEFCE) so far, as well as the reactions from several sources such as the media, websites from unions and higher education institutions and interviews of individual academics conducted in 2008 and 2009 in the context of a research project into the transformation of modes of knowledge production in England.

In the second part of the chapter, we will adopt a theoretical perspective which draws upon theorizing on the transformation of the modes of knowledge production, approaching Mode-1 and Mode-2 typologies (Gibbons et al. 1994; Nowotny et al. 2004), the emergence of new science regimes regarding reliable and post-academic science (Ziman 1994) and the issue of epistemic cultures (Knorr-Cetina 1999). We will discuss how discourses promoted by evaluation systems such as the REF which involve a growing focus on 'assessment', 'quality' and 'impact' are transforming (or not) research production in higher education institutions and whether the REF can be seen as a truly 'new' discourse or rather as a reinforcement of certain existing ones. We will discuss the interests which such discourses represent and whether such influences can constitute a coherent framework for research or whether they rather constitute a field of tensions that will create new contradictions concerning the kinds of research which may be privileged by higher education institutions. From that perspective, it will be relevant to note and understand the effects of disciplinary influences and how far some disciplines are being 'excluded' (or not) or 'disadvantaged' by the criteria introduced by the REF. The implications for more applied, interdisciplinary research will also be explored and the effects of differences associated with the institutional settings for research will be considered.

We go on to make conclusions about the kinds of research likely to be linked and privileged by the REF and their implications for future research and knowledge production within higher education systems subject to such evaluations.

Research Assessment: The Case of the UK Research Excellence Framework

An Evolving Policy for Assessing Research

Research assessment in the UK has been associated, from 1986 until 2008, with a regular Research Assessment Exercise (RAE). The RAE was undertaken on

behalf of the four UK higher education funding councils, the Higher Education Funding Council for England (HEFCE), the Scottish Further and Higher Education Funding Council (SFC), the Higher Education Funding Council for Wales (HEFCW) and the Department for Employment and Learning in Northern Ireland (DELNI). Although we will focus only on the actions of HEFCE, our discussion can be applied to the policies of all four councils.

According to the HEFCE, the RAE consisted of an explicit and formalized assessment process of the quality of research, being the principal means by which institutions assured themselves of the quality of the research undertaken in the higher education sector. Its results were also the basis of the research funding decisions made by HEFCE as well as carrying significant reputational weight in the steeply stratified UK higher education system. The 2008 RAE, like previous RAEs, used the main principles of peer assessment. The RAE-related budget was relatively minor compared with the teaching budget of HEFCE and research funding from other sources and it is fair to say that the RAE was more about reputation than money in the eyes of most academics and institutions. It should also be mentioned that much of the public funding for research in the UK comes via subject-based research councils which operate independently of the above-mentioned higher education funding councils. The research councils mainly fund projects and studentships whereas universities have substantial discretion about how to use their RAE funding. However, one similarity between the two funding streams is the growing emphasis on research impact and how it can best be achieved. This reflects national economic strategies and the role envisaged by government for universities in achieving them. As such, it represents an important argument in making the case for substantial public funding of universities. As mentioned above, the RAE has been providing a measure of research reputation in UK higher education which has been at least as important as the funding it brings. It would not be an exaggeration to say that obtaining a high RAE score has been the major objective of research strategies in many UK universities.

There have been several criticisms of the operation of the RAE, reflecting the importance attached to it within the academic world. The criticisms take a number of forms. The lack of attention to diversity (of institutions, disciplines and what constitutes research) seems to be one of the reasons for harsh criticism of the RAE (Sharp and Coleman 2005). Elton (2006) identifies as a long-term consequence the competitive, adversarial and punitive spirit among academics evoked by the RAE. In ‘playing’ the RAE game, many institutions have been very selective about the academics they ‘entered’ for the RAE, with career, identity and reputational implications for those academics who were not ‘entered’. It may well be that these effects of the RAE were not the intentions of the policy bodies who introduced and managed it, but they do reflect the ways in which policies tend to be ‘recontextualized’ when they hit different organizational levels and contexts. Outcomes are rarely the same as intentions.

The Research Excellence Framework (REF) is replacing the RAE. The REF was proposed by the HEFCE as the new system for assessing the quality of research in UK higher education institutions. The first REF exercise is due to be completed

(with the publication of outcomes) in December 2014. While the full details of the new methodology are still not clear and are likely to differ to a degree between different subject areas, the main changes from the RAE appear to be about the greater use of various output metrics together with a lessening of the administrative load of the exercise and a greater attention to the 'impact' of research.

When we conducted interviews with some English higher education key actors in 2008, one interviewee argued that the replacement of the RAE by the REF was linked to the reduction of the burden on universities and that the 'metric' discourse that initially characterized the REF would evolve into a hybrid discourse between a metric and peer review system:

> The changing name [from Research Assessment Exercise to Research Excellence Framework] is not significant. (…) So the changing of the name is to create a sort of waterline and a break from the old system. The changing purpose is to make it, to some extent, to reduce the burden particularly the areas where there is enough numeric data available, probably reduce the amount of effort and work which goes into it. But that is the underlying logic… (…) I think what you will find is that by the time it is launched in 2011 or 2012, so we hope, you will have a mix of peer review as well as metrics and that will be true in all subjects. (Extract from an interview with an English higher education key actor)

The REF, according to HEFCE, will focus on three elements, which together reflect the key characteristics of research excellence. These are (a) outputs – the primary focus of the REF will be to identify excellent research of all kinds. This will be assessed through a process of expert review, informed by citation information in subjects where robust data are available (for example, in medicine and science), (b) impact – significant additional recognition will be given where researchers build on excellent research to deliver demonstrable benefits to the economy, society, public policy, culture and quality of life. Impacts will be assessed through a case-study approach that has been tested in a pilot exercise. Finally, (c) environment – the REF will take into account the quality of the institutional research environment in supporting a continual flow of excellent research and its effective dissemination and application.

As we have already observed, policies become recontextualized when they hit different organizational levels. Thus, the aims and dimensions of the REF from the perspectives of national policy become recontextualized into concerns about reputational rankings, income and the amount of internal institutional administrative load generated to achieve optimum outcomes. The analysis of these different aspects will produce different answers in different types of institutions as well as within different parts of the same institution. The 'game' is likely to be played according to different rules in different places, reflecting different agendas, strengths and objectives.

According to the University and College Union (UCU), the selection of particular academic staff for inclusion and non-inclusion in the research assessment represents a continuity between the RAE and the REF: "We continue to have major reservations about a research assessment process based on universities selecting particular academic staff for inclusion or non-inclusion. The 2008 RAE resulted in a significant amount of unfair and punitive treatment of academic staff and we fear that similar practices will occur in the 2013 REF" (UCU 2009).

The REF can represent, according to UCU, a research assessment through the changing policies of governments or the perceived needs of business, and not on the basis of a peer review system: "The biggest problem with the HEFCE consultation document is the proposal to base 25 % of the REF on an assessment of the 'economic and social impact' of research. (…) Academics are concerned that the proposals will: undermine support for basic research across all disciplines as well as disproportionately disadvantaging research in the arts and humanities, lead to the further commercialization, and therefore narrowing, of the research agenda" (UCU 2009).

While these comments are understandable commentary from the academics' representative body, they of course fail to reflect the arguments made within the political sphere for the funding of university research in the first place – in competition with the claims of health, transport, defence and the like. Outside the academic community, a case based on impact and public benefit is likely to carry the greatest weight.

Whereas in the RAE the peer review system per se was emphasized, this has evolved in the framework of the REF into a focus on metrics combined with a peer review system. In that sense, the focus on bibliometrics (or citation information) and impact is emphasized more strongly in the REF. While still important, peer review is complemented by methods which may be felt to be more objective, less consuming of time and resource, and taking more account of the larger public benefits of research.

A Growing Emphasis on Research Impact

While the focus on impact is understandable from a public policy viewpoint, it confronts mixed reactions when it hits the academic community. An academic from an English university emphasized, when interviewed in 2009, the fuzzyness of such a concept:

> The government turn out saying 'well we are happy that people study and research things, we want impact, we want to have impact', ok? And everybody says 'what do you mean by impact?' And of course that the game is we are trying to find out what impact means… Clearly there is gradually more pressure to work along particular lines. (Extract from an interview with an academic from an English university)

According to the HEFCE official website, the REF aims at the identification and reward of the impact that excellent research has had on society and the economy. The pilot exercise that ran during 2010 aimed to test the feasibility of assessing research impact.

The report to the UK higher education funding bodies by the chairs of the impact pilot panels sets findings and recommendations that are relevant to discuss here (we will exclude those referring exclusively to the case study methodology). The pilot, according to the report, overall showed that it is possible to assess impacts arising from research in the disciplines approached – Clinical Medicine, Physics, Earth Systems and Environmental Sciences, Social Work and Social Policy, English Language and Literature.

One key finding is related to the variety of impacts: "higher education institutions in the pilot provided evidence of a wide variety of impacts arising from their research. This provided a unique collection of evidence that made explicit the social and economic benefits of research from each of these disciplines" (HEFCE 2010: 2). A key finding related to the methodology of the study and the report argued the need for further development in the sense of achieving a greater robustness. Another key finding concerns disciplinary differences: "Although the pilot covered five disciplines with very different kinds of impacts, the broad findings in terms of the feasibility and method of assessing impact were similar. A common broad approach for all disciplines based on case studies should be possible, with generic criteria and the same weighting for impact. Within this common approach REF panels should develop guidance as appropriate to the nature of impacts arising from research in their discipline" (HEFCE 2010: 3).

A final key finding regards the weight that will be conferred to impact by the REF: "A robust assessment of impact should carry a weighting in the REF sufficient to ensure it is taken seriously by all stakeholders. A lot has been learned from the pilot exercise about how to assess impact robustly, but the assessment in the first full REF will still be developmental, and it will be important to carry the confidence of the academic community. In light of this the weighting of impact in the REF should be considered carefully. One option would be for impact to have a lower weighting than 25 % for the 2014 REF, with a clear intention to increase this for future exercises as the method beds down" (HEFCE 2010: 3).

Additionally, the reports made a number of recommendations regarding three themes: the definition of research impact – a broad definition, but excluding impact purely within academia -, the evidence of impact provided by institutions – construction of a narrative with case studies and indicators -, the assessment of impact by the REF panels – disciplinary specifics and robustness. The preference for a case study approach to the assessment of impact is indication of the perceived lack of credible hard indicators of impact and reliance on a mainly narrative style of evidence. Thus, a narrative and case study approach to the difficult question of impact assessment appears to be the compromise solution most likely to gain acceptance among the different interest groups. Whether this removes or accentuates the concerns about 'fuzziness' expressed above is a different matter.

In March 2011 the funding bodies announced their decisions on the weighting and assessment of impact within the RAE. They decided, in line with the key findings mentioned above, that: "a) In the REF there will be an explicit element to assess the 'impact' arising from excellent research, alongside the 'outputs' and 'environment' elements. b) The assessment of impact will be based on expert review of case studies submitted by higher education institutions. (…) c) A weighting of 25 per cent for impact would give recognition to the economic and social benefits of excellent research. However, given that the impact assessment in the 2014 REF will still be developmental, the weighting of impact in the first exercise will be reduced to 20 per cent, with the intention of increasing in subsequent exercises. d) The assessment of research outputs will account for 65 per cent, and environment will account for 15 per cent, of the overall assessment outcomes in the 2014 REF.

These weighting will apply to all units of assessment" (Higher Education Funding Council for England 2011).

Thus, assessments of research according to the above criteria will be the basis of both funding and reputational differentiation of UK higher education after 2014 with consequences both for individual institutions and the academics working within them. The assessments leave significant room for 'recontextualization' both within different subject peer review panels as well as within different higher education institutions. In the short term at least, this may be one of its strengths.

Using Bibliometrics to Assess Research

Regarding bibliometrics, and according to the HEFCE website, responses to the 2009 consultation on the REF exercise showed support for the use of citation information raising, though, concerns about the costs involved and the potential implications for equality.[1] According to the report on the pilot exercise to develop bibliometric indicators for the Research Excellence Framework, there are clear limits to the application of bibliometrics in the REF: "Bibliometrics are not sufficiently robust at this stage to be used formulaically or to replace expert review in the REF. However there is considerable scope for citation information to be used to inform expert review. The robustness of the bibliometrics varies across the fields of research covered by the pilot, lower levels of coverage decreasing the representativeness of the citation information. In areas where publication in journals is the main method of scholarly communication, bibliometrics are more representative of the research undertaken" (HEFCE 2009: 3).

According to the HEFCE website, each sub-panel will be invited to decide whether it wishes to use citation information to inform its review of outputs and it will reconsider whether the benefits of incorporating citation information into the REF outweigh the costs if only a small minority of panels request citation information, the costs are high, or if the equality implications cannot be effectively mitigated.

Regarding the metric discourse, an English higher education key actor has argued that such a system would be of lower cost and involving fewer people:

> I think [REF] will change [things] because the experience proves that what gets measured, gets done can drive behavior so in other funding allocations were aware that people have

[1] According to the HEFCE official website, an equality and diversity advisory group (E&DAG) has been established to advise on ways to strengthen the equalities and diversity measures in the REF. This includes advice on: the process for recruiting expert panels; definitions of staff eligibility and of individual staff circumstances; guidance to institutions on codes of practice for staff selections; the strategy for monitoring staff selection; processes for handling of individual staff circumstances: the scope for promoting equalities through the assessment of the research environment; equalities guidance to expert panels; the equalities implications of using citation information; the equalities implications of assessing the impact of research.

> incentives to record what they do in a way to deliver higher funding. It might be a more rational system and I think initially the departments, a couple of years ago, were looking to introduce some much more metric based systems (…) before they move fully towards a metricated system. Constantly universities complain about the administrative bureaucracy of having to be part of a peer review panel, read lot of papers and compare the results and if we had metrics that would perhaps simplify that but it would remove the element of a sort of human interaction and influence. Ultimately the decision being made by a group of people might have more legitimacy than a metric but that perhaps is a personal opinion. But there is a close correlation, I think, between those universities that are very successful in winning public funding and also those that have lots of business income and business research. So it would be a lower cost system involving fewer people. (Extract of an interview with an English higher education key actor)

Hence, the issue of low costs and low use of human resources can be in tension with the apparent flexibility to discuss the use of bibliometrics in the REF. Additionally, as bibliometrics tend to reinforce the dominant discourse related to the focus on publications and research (Sousa 2011) – embraced consensually by society and economy, the use of citation information to assess research has a high probability to be the dominant manner of assessing research within the REF. A related issue here may be the relationship – and possibly tension – between quality and productivity. One of the effects of the RAE has been to increase substantially the publication productivity of UK academics. The impact on quality is less clear-cut and may represent a triumph of quantity over quality as well as having long-term implications for the capacity of academics to digest the results of new research outputs entering their research environments on new and massive scales.

Transforming (or Not) Research Production

National policies on the research function of universities need to be set within an appreciation of the changing nature of that function. The book, 'The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies', of 1994, by Michael Gibbons, Camille Limoges, Helga Nowotny, Simon Schwarzman, Peter Scott and Martin Trow, is a major reference work in this field due to its impact and consequent discussions on the transformation of modes of knowledge production. The authors developed the discussion about the transformation of modes of knowledge production. According to their argument, knowledge production is changing from Mode-1 to Mode-2 (Table 4.1).

Mode-1 is defined as "A form of knowledge production – a complex of ideas, methods, values, norms – that has grown up to control the diffusion of the Newtonian model to more and more fields of enquiry and ensure its compliance with what is considered sound scientific practice. Mode 1 is meant to summarize in a single phrase the cognitive and social norms which must be followed in the production, legitimation and diffusion of knowledge of this kind" (Gibbons et al. 1994: 2). Mode-1 represents the classic perspective on production of knowledge. Mode-2 refers to an emerging form of knowledge production focused on application: "[Mode-2] operates within a

Table 4.1 Differences between the two modes of knowledge production (Magalhães 2001: 156)

Knowledge production	Context	Knowledge base	Integration	Organization	Quality control
Mode 1	Academic community	Disciplinary	Homogeneous	Hierarchical	Peer review
Mode 2	Application	Transdisciplinary	Heterogeneous	Heterarchical	Peer review + accountability

context of application in that problems are not set within a disciplinary framework. It is transdisciplinary rather than mono- or multi-disciplinary. It is carried out in non-hierarchical, heterogeneously organized forms which are essentially transient. It is not being institutionalized primarily within university structures. Mode 2 involves the close interaction of many actors throughout the process of knowledge production and this means that knowledge production is becoming more socially accountable. One consequence of these changes is that Mode 2 makes use of a wider range of criteria in judging quality control. Overall, the process of knowledge production is becoming more reflexive and affects at the deepest levels what shall count as 'good science'" (Gibbons et al. 1994: preface).

Such emergence is debatable because Mode-1 and Mode-2 have always existed. However, if we do not interpret the definition in a straightforward manner, we can see that the emergence of Mode-2 reflects a changing balance between Mode-1 and Mode-2, with new developments and forms occurring at the Mode-2 end of the spectrum.

In Mode-1, research and the quest for knowledge per se frame knowledge production. Mode-1 is contextualized by the ideal of academic knowledge as a contribution to human emancipation, of seeking after 'truth'. In Mode-2, the key word is 'application'. There is a shift from pure and fundamental research to 'strategic science'. Again, the aim may be to benefit society but the ways of so doing are pluralistic and collaborative with other social groups and interests.

Regarding the role of impact in the REF, we can discuss the hypothesis of a symmetrical coexistence of both Mode-2 (referring to "all stakeholders") and Mode-1 (referring to the "academic community"). However we argue that this seems not to be the case as the REF excludes from the impact definition the impact purely within academia. Knowledge for its own sake or pure science are, therefore, excluded, from the impact definition sustained by the REF. This, in turn, contributes to the settlement of a Mode-2 discourse as far as impact is concerned. The focus on the evidence of benefits of research is also in line with Mode-2 discourse. The need to make the impact of research visible and clear to society and/or the economy is an issue of Mode-2 related to accountability and introduces a difference in comparison to the RAE. At the same time, of course, we recognize that 'impact' only accounts for 20 % of the REF score and arguably it will be Mode-1 criteria which will tend to dominate the more 'quality' oriented criteria of the rest of the REF.

When it comes to bibliometrics, we can also identify some differences with the RAE. Although it is recognized by the REF that bibliometrics cannot replace peer

review, it is also argued that they can be used to inform peer review. At a first glance, this reinforces the Mode-1 discourse centered on academic community and the RAE. Arguably, both REF and RAE are Mode-1 focused, excluding large amounts of applied research which might never end up as journal articles. However, as we have already mentioned, it depends on each HEFCE sub-panel whether to use, or not, the citation information to inform its review of outputs and it will reconsider whether the benefits of incorporating citation information into the REF outweigh the costs if only a small minority of panels request citation information, the costs are high, or if the equality implications cannot be effectively mitigated. In this sense HEFCE introduces a potential tension between two extreme situations in REF: the use of bibliometrics by all sub-panels and the use of bibliometrics by none. This, along with the fact that bibliometrics privilege a specific kind of research production based on papers (and not books or papers at conferences) and specific databases as Web of Science and Scopus creates a gap between the RAE (more centered on traditional peer review) and the REF (more focused on peer review combined with other quality criteria).

In our view, this may strengthen the boundaries between research and teaching and we see increasingly the creation of new research centers and institutes within universities which remove responsibilities for research from traditional teaching departments. Thus, the teaching/research boundaries may actually be getting stronger. There are several reasons for this. On the one hand, playing the 'REF game' may distract attention away from teaching. And secondly, the research function of a university may need to be organized separately from the teaching function. For example, one might have a predominantly Mode-1 disciplinary focus while the other many have a more interdisciplinary Mode-2 focus. When this occurs, there may be less potential for knowledge 'transfer' between research and teaching.

Ziman (1994), in 'Prometheus Bound: Science in a dynamic steady state', published in the same year as the work of Gibbons et al. (1994), argued that "science is reaching its 'limits to growth'" (Ziman 1994: vii) and is at risk due to major changes related to the managerial discourse, such as accountability and assessment. Ziman has introduced the concept of 'academic science' (also called 'real science' or 'reliable science') as "the systematic pursuit of scientific research in institutions of higher education" (Ziman 1994: 133). The author argues that some explicit principles of a 'post-academic science' are replacing the tacit demands of CUDOS (i.e., the Mertonian norms of 'communalism', 'universalism', 'disinterestedness', 'originality' and 'skepticism)'. Ziman (1994: 178) suggested the acronym PLACE ('proprietary', 'local', 'authoritarian', 'commissioned' and 'expert') to characterize the work of the newly emerging environment. 'Post-academic science' implies a deep entanglement "in networks of practice" (Ziman 2000: 173) and an evolution to "foster (…) [the] enlarged research agenda by taking it out of the 'invisible hands' of research communities and putting it under the thumbs of policy and profit". 'Reliable science' and 'real science' are threatened by 'post-academic science' through the duality drawn between collective and individual science. Related to real science, reliable science, and to the Mertonian ethos is the concept of individualism "that is clearly inconsistent with the corporate spirit of non-academic Research & Development" (Ziman 2000: 173).

In the framework of Ziman's work, the REF is closer to a post-academic science than to an academic science. Although the peer review system is constantly mentioned in most of the documents and reports related to the REF, it can be argued that it appears much more as a legitimation of the introduction of changes rather than an unquestionable characteristic of the knowledge to be promoted by the REF. This is made clear when peer review is seen as not being enough on its own, needing other forms of accountability more focused on impact and environment. This change of focus – from the interior of the academy to the exterior of the academy – although very fashionably appealing must be interpreted with caution.

The RAE is not so much different from this. Although we can identify some aspects of continuity and change between the two research exercises, they both introduce an accountability dimension external to the academic community being much more policy and economically legitimized. Where there is arguably a difference in emphasis is that the RAE was primarily a drive to greater productivity, in terms of fairly traditional academic outputs, the REF is moving in a direction which places more emphasis on relevance and socio-economic return. However, it remains to be seen whether the implementation of the REF will fully reflect this change across different subject fields and different kinds of higher education institution.

Although there is still a lot of debates about what the REF will be in practice, it seems likely to promote greater emphasis on knowledge directed outside the academy (focusing on impact and environment) than the RAE had done. There is an argument that this will benefit the academy by strengthening its claims on the public purse. But there may also be costs. There is the current argument that for all the focus on diverse indicators – 'impact', 'environment', 'quality', 'assessment',… – they refer to "good science" and "good science" will still be defined in terms of peer reviewed publications. This argument is in line with Mode-1 and its focus on peer review which may be diluted to some extent in the proposals for the REF. This is due to the fact that peer review is no more the exclusive center stage of assessment of academic work. Academic work which is assessed on the basis of 'impact', for instance, might be 'good' according to its application or relevance but not, necessarily, according to academic and scientific patterns.

Economy and society are present in all progress reports regarding the REF. They appear as if they are the same and represent common goals and consequences towards knowledge. But the contributions of knowledge to society and to the economy are two different things that should be analyzed within different frameworks. Both society and economy comprise different interest groups and some may gain greater benefit from, as well as access to, the knowledge produced by the academy. Notions of the 'public good' have to confront the reality of different 'publics'. The contribution of knowledge to economy and society can take many and different forms. If contribution to society is likely to be more connected with emancipation and construction of citizens (though there may be other more negative outcomes related to social control and inequalities), a more economic perspective will point towards business-value oriented research. Citizens of course may still be ultimate beneficiaries though this will be depend on many factors beyond the control of academe.

The Agora[2] represents the social dimension of Mode-2. The contemporary Agora is seen as consisting "of a highly articulate, well educated population, the product of an enlightened educational system" (Nowotny et al. 2004: 204) and is "populated by a diversity of individuals who combine the roles of 'citizen' and 'consumer'" (Nowotny et al. 2004: 206). The increasing demand for participation in the Agora is the result of two processes: democratization and the success of science. The "shift towards socially robust knowledge is sometimes described as a shift from a culture of scientific autonomy to a culture of scientific accountability" (Nowotny et al. 2004: 210).

We argue that Nowotny et al.'s perspective tends to be quite optimistic when it presents the Agora as a future and probable scenario of knowledge production and accountability. In our perspective, there is another scenario that needs to be considered related to the business-value of research that to some extent can null the Agora or, at least, can reconfigure the scenario proposed by the authors. Scientific accountability seems be responding to economic values much more than to societal values, at least if current political discourses are to be believed.

Some Consequences: Winners and Losers Among Different Fields of Study?

Research assessments such as the RAE and the REF have to embrace a range of very different disciplinary areas with different characteristics and patterns in the modes of knowledge produced. Hard sciences, for instance, have a tradition of publishing papers in scientific journals whereas the humanities place more value on book publications. Although the REF argues that disciplinary specialities should be considered, it is also argued that the same weight – 20 % in the 2014 REF – of impact should be applied for all disciplines. We agree with Cronin (2003) when he argues that the competence of humanities is no less than the one we can find in 'objective' sciences, rather they are contextualized in different epistemic cultures.

Following Karin Knorr Cetina (1999), we would argue that epistemic cultures have major importance for the 'making' of knowledge. Considering that, according to the REF, impact purely within academia appears not to be as much valued as impact outside academia, this might put at risk pure and fundamental natural/social sciences and the diversity of epistemic cultures although arguably these disciplines may benefit from the other quality measures within the REF.

Knorr Cetina (1999) sustains an argument of the fragmentation of contemporary science through the diversity of epistemic cultures: "Epistemic cultures are cultures that create and warrant knowledge, and the premier knowledge institution

[2] "The new public space where science and society, the market and politics, co-mingle, because of its association with the original Agora in the city-states of ancient Greece and also because we needed a novel, and expansive, term for a space that transcends the categorisation of modernity" (Nowotny et al. 2004: 203).

throughout the world is, still, science" (Knorr Cetina 1999: 1). Replacing notions such as discipline or speciality with that of an epistemic culture, it is argued that "The differentiating terms we have used in the past were not designed to make visible the complex texture of knowledge as practiced in the deep social spaces of modern institutions. To bring out this texture, one needs to magnify the space of knowledge in action, rather than simply observe disciplines or specialities as organizing structures" (Knorr Cetina 1999: 2, 3).

The central element, when dealing with epistemic cultures, is the construction of the machineries of knowledge production and not knowledge production itself. What we intend to underline about epistemic cultures is the argument of the disunity of the sciences: "It displays different architectures of empirical approaches, specific constructions of the referent, particular ontologies of instruments, and different social machines. In other words, it brings out the diversity of epistemic cultures. This disunifies the sciences" (Knorr Cetina 1999: 3).

This disunity of science has led to the subsequent thesis that there is not just one kind of knowledge production in science. Such a thesis has been sustained in the past in the realm of social sciences, an argument that has been made by authors such as Geertz (1973) and Giddens (1974). The same claim has been made regarding natural science by authors such as Suppes (1984) and Dupré (1993). It has been argued that "The image of a unified natural science still informs the social sciences and contributes to their dominant theoretical and methodological orientation. The debates raging over realist, pragmatist, skepticist, or perspectival interpretations of science all tend to assume science is a unitary enterprise to which epistemic labels can be applied across the board. The enterprise, however, has a geography of its own. In fact, it is not one enterprise but many, a whole landscape – or market – of independent epistemic monopolies producing vastly different products" (Knorr Cetina 1999: 3, 4).

Another issue regarding disciplinary area and assessment exercises such as the REF is how to assess interdisciplinary research. Citation indicators are very appealing due to their apparent clarity and easy reading when it comes to assess what disciplinary areas are interacting with each other. However this might represent a misreading interpretation as bibliometric indicators, in some cases, tend to intersect the bibliography used in a specific area and by a specific author with the area of the paper. Taking this present chapter as an example, if it was scrutinized by bibliometrics the output could be that physics is one of our disciplinary areas, as we cite an author who is a physicist (John Zyman) who works also in the epistemology of science. With this we do not wish to oversimplify bibliometrics but to emphasize that metrics have disadvantages that might not be in favor of assessing "good science". And when we look at peer review processes independent of the use of bibliographics, we have to contend with the 'tribal' characteristics of the academic community and the knowledge and values which are dependent on one's tribal membership.

The introduction of the UK REF and similar assessment exercises almost inevitably lead to distortions to the processes that they seek to administer and support. A policy of 'anything goes' in assessing the outcomes of complex social processes such as university research is hardly likely to appeal to any of the interested

parties, within or beyond the boundaries of higher education. But a recognition that 'different things need to go', i.e. deserve encouragement and support, is needed. Higher education – its practices and the institutions which provide them – are increasingly diverse and differentiated and this presents the challenge to policy communities and the discourses that underpin policy. Different 'players' will benefit from the application of different rules in the research evaluation 'game'. Recontextualisations of policies will inevitably occur at all levels, reflecting local circumstances and contexts. We would argue that such recontextualisations are necessary and should be welcomed.

Conclusion

As with the previous UK Research Assessment Exercises, the Research Excellence Framework reinforces existing practices and tradition, such as the focus on discipline-based peer review. The transformation of research production seems to be accorded more importance in the Research Excellence Framework as it moves towards a Mode-2 and a post-academic form of knowledge. The Research Excellence Framework attempts to accord greater recognition to a notion of research characterized by having social and economic impact outside academia together with peer review informed by citation information.

The Research Excellence Framework is also a part of a discourse which emphasizes rankings of research and is part of a growing competitiveness between researchers. And this brings risks to research production:

> There are some negative impacts of [research assessments such as the RAE and the REF], the riskier research disappears in favor of research that will be very likely to lead to results in medium terms, safer research. All these exercises are artificial ways of trying to introduce competition into the academic sector because of the ideology that has come in… In management theory, recently, competition will always improve everything… Which is not true. If you make things like universities compete they will become very good at whatever you are measuring, make universities compete over money they will become very good at making or saving money, not necessarily mean that they will be good at giving a good education to students. Make universities compete in the RAE they will become very good at fulfilling the criteria of the RAE which doesn´t necessarily mean that they will do better research. (Extract from an interview with an academic from an English university)

What does this mean for future research and knowledge production within higher education systems subject to such evaluations? Can the Research Excellence Framework contribute to the construction of a new discourse around knowledge production? Although it might be too soon to answer such questions definitively, we argue that some indicators might lead us towards answering them in the affirmative.

The importance of peer review as a common element in both the Research Assessment Exercise and the Research Excellence Framework must be discussed in articulation to each one of the research evaluation systems and their characteristics. If we agree that both of them use 'peer review' as criteria, its use in the Research

Excellence Framework may prove to be more residual than in the Research Assessment Exercise. Peer review seems to be losing some weight and strength in the accountability of research in the construction of the Research Excellence Framework. Nevertheless, the Research Excellence Framework constitutes a field of tensions that will create new contradictions concerning the kinds of research which should be privileged by higher education institutions oscillating between Mode-1 (no/very long/indirect impact) – and Mode-2 – (explicit/short term impact).

As with any policy initiative, its implementation and consequences may not accord with the intentions of the policy makers. It is likely to remain the case that the financial and reputational rewards of research assessment – to both individual academics and to institutions – will shape much of the research effort of UK universities in the years to come. Whether successfully 'playing the REF game' will necessarily increase the output of high quality and socially useful research remains to be seen. And whether the 'REF game' will contribute to or distract from the provision of high quality teaching in universities is another question that only time will answer. Academics and the departments and institutions they work for will be applying their own perspectives and interests to the implementation of the REF. But few will be ignoring it. Within the complex but expanding roles of universities in 'knowledge societies', it remains the case that initiatives such as the REF may work mainly to legitimize existing hierarchies and fairly conservative practices within the academic profession. However, at least in some places, they may also work as stimulants of innovation and change.

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Part II
The Complexities of Policy Design in Higher Education – Some Lessons from Comparative Research

Chapter 5
Reforming Portuguese Public Sector: A Route from Health to Higher Education

Teresa Carvalho and Sofia Bruckmann

Introduction

In Portugal, as in many other developed countries, recent public policies have been implemented under the influence of New Public Management (NPM) or managerialism.

These concepts are usually applied in reference to a package or a menu including a diversity of elements that translate the three E's perspective: economy, efficiency and efficacy. Nevertheless NPM must be interpreted as a more general and broad movement and can not be signified as a simple and neutral management technique. Based on a technocratic and hard managerialism ideology it intends to promote the deconstruction of the welfare state (Clarke and Newman 1997; Reed 2002; Meek 2003; Santiago and Carvalho 2008) by changing state bureaucracies and professional regulation.

NPM is usually presented as a convergent and inevitable trend in public reforms intending to promote changes in the state's role. However more in deep and focused analysis reveals that in spite of its general common principles, or ideological foundations, NPM does not translate into unique, single, or common political initiatives and, as consequence, does not imply the same results. This is particularly visible in inter-country comparative analysis (Ongaro 2009; Pollitt and Bouckaert 2011) but can also be noticed in comparative analysis in the same country (Ferlie et al. 1996; Kirkpatrick et al. 2005).

T. Carvalho (✉) • S. Bruckmann
Center for Research in Higher Education Policies (CIPES), Porto, Portugal

DCSPT-CIPES, University of Aveiro, Campus Universitário de Santiago,
3810-193 Aveiro, Portugal
e-mail: teresa.carvalho@ua.pt; sofiasb@ua.pt

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In Portugal, since the end of the 1990s, attempts to introduce NPM or managerialism at the rhetorical level have been developed. The new century brings with it changes in public policies intending to impose the NPM framework in public institutions. The first and most visible attempt to introduce NPM was materialized when 31 public hospitals (half of the public health supply) were reorganized into public corporations. The idea of increased effectiveness and the promise of de-bureaucratization were the main banners used to legitimize socially and politically the new hospital management law (27/2002). Major organizational changes were only noticed in higher education 5 years later with the Law 62/2007 (RJIES).

How do these legal frameworks express or materialize NPM principles? Are there any differences in the two sectors? What are the major transformations imposed to professional bureaucracies and professional regulation?

This chapter intends to contribute to develop comparative analysis on NPM by reflecting upon its implementation in health and higher education in Portugal. It starts with a theoretical overview concerning NPM and managerialism and tries to turn more explicit the route it has been defining in Portugal. The methodology is also exposed followed by data analysis and discussion. Finally a conclusion is presented with the intent to leave new questions for further research.

New Public Management – More than a Fashion

Since the 1980s in developed countries the public sector has been submitted to what is usually labeled as a 'revolutionary reform' described under the epithet of NPM or managerialism. Even if reflections upon these terms have been produced for more than three decades consensus is still absent concerning their specific nature, meaning and practical results. It seems that NPM is still a sneaky label. Nevertheless it is usually associated with a package or menu that includes: imperatives of efficiency and efficacy; an orientation to the customer who replaces the citizen; the creation of quasi-market mechanisms based on a great diversity of institutions, which deliver the service; complex relations between public and private services providers competing for resources; decentralized control and accountability for results sustaining the idea of a cascading chain of contracts between the state, the institutions and the professionals.

This package or NPM menu has been applied in countries all over the world in part due to incentives proposed by international institutions as the World Bank or OECD. The way its principles are globally exposed induces the development of a convergence idea that presents NPM as inevitable to be adopted by governments independently of their political orientation. However comparative studies reveal that it is not possible to define a single line of action in all countries (Pollitt and Bouckaert 2011). That seems to be true even when the analysis is restricted to a group of more comparable countries like Ongaro (2009) does for the South European ones.

Analysis developed in the same country also reveals the same complexity. In analyzing NPM development in the United Kingdom, Ferlie et al. (1996) present

four different stages or moments in its evolution: (1) efficiency drive – emphasis on efficiency and value for money; (2) downsizing and decentralization – contracted out functions and autonomous business units; (3) in search of excellence – emphasis on the importance of organizational culture change by charismatic forms of top-down leadership and (4) public service orientation – integrates private management practices with a distinct public service mission and context. More recently, Ferlie and colleagues claim the existence of a new stage (Network Governance) based on an emphasis on partnerships and networks – replaces hierarchical control by network-based modes of coordination (Addicott et al. 2006). In the same national context, Homburg et al. (2007) and Deem et al. (2007) also conclude that NPM is crafted and shaped differently in various institutional contexts. A great number of these studies are developed in the Anglo-Saxon perspective. It is our conviction that knowledge on NPM could improve with analysis from other countries.

In trying to analyze NPM route in Portugal we assume the perspective that it can only be interpreted in a more broad and general context. NPM does not translate a simple management technique not even a neutral attempt to turn public sector more efficient as the political discourses try to present. It is part of a more general and broad movement that intends to promote the deconstruction of the welfare state (Clarke and Newman 1997; Reed 2002; Meek 2003; Santiago and Carvalho 2008; Deem et al. 2007).

In fact since the end of the 1970s, in line with the economic and fiscal 'crisis' and the emergence of neo-liberal ideologies, attempts to replace the dominant configuration of the state were in place.

To deinstitutionalize the welfare state idea meant also to deconstruct its main structural pillars. In this sense, the traditional Keynesian economic pillar has been dethroned by a mixed of public choice theories, based on Hayek's (2001) "philosophy of economy" and on the Schumpeter economic theories. The social pillar was replaced by the idea that civil society should be responsible for its own living conditions. Finally, NPM can be considered as the instrument used to put the weberian bureaucratic administrative pillar in question. In fact NPM assumes that private management policies and practices are more efficient than bureaucratic rules and norms for public administration. Based on this pre assumption bureaucracy's main principles[1] are substituted by the main principle of giving managers freedom to manage. In this line, NPM can be interpreted as a tool device to introduce managerialism in the public sector. Managerialism represents an ideology translating the idea that management is a dominant value in society. According to this ideology business management principles and practices can be applied to any social and political domain. Nevertheless one must emphasize that these principles and

[1]The bureaucratic main principles are: system of supervision and subordination; unity of command; extensive use of written documents; training in job requirements and skills; application of consistent and complete rules and assign work and hire personnel based on competence and experience.

practices are mainly associated with a hard and technocratic version of management distant from a soft and humanistic one (Carvalho and Santiago 2010).

The administrative pillar of the welfare state integrated both administrative bureaucracy and professionalism (Clarke and Newman 1997). The professionalization of occupational groups was, in fact, straight related/embedded in welfare (Henriksson et al. 2006; Wrede 2008; Salter 2001, 2004). Professional expertise was an essential element to define professional bureaucracy (Mintzberg 1994) – characterized by being based mainly on professional self-regulation, meaning that professional autonomy was embedded in collegiality and trust.

Since professional expertise was associated with public ethos professionals were assumed as those more able to protect and assure welfare to citizens. However, the new political and institutional framework (helped by the emergence of public denounces of professional misbehavior) announces a new professionalism.

In the welfare state occupational groups were socially accepted as professionals based on their expertise, acknowledged by a higher education credential (Freidson 1977). A fundamental step in all professionalization processes was to assure the need of this expertise to successfully accomplish the task ascribed to the group in the social division of labor (Johnson 1972).

Adding to this there was a privileged relation professional groups had with the state (Larson 1977) that assured their different status and privileges based on monopoly and control processes (Parkin 1979; Murphy 1988). These allowed professions autonomy and self-regulation (Freidson 1986, 2001). With NPM this relation has been questioned and a new professionalism is emerging.

The new professionalism assumes that professionals must be externally controlled throughout competition and market. Instead of state and public ethos principles the new professionalism is expected to assume efficiency and economic results as the main principles to take decisions in public services. Under this context, professionals are now expected to perform their work under predefined quality standards and to be accountable to consumers/clients.

The lack of consensus in NPM definition is also extended to its practical results and real implications. Empirical studies reveal positive and negative outcomes. It seems undeniable that there is now a greater consciousness of costs and choices and more public organizations working more efficiently (Freiberg 2005) but NPM objectives are far from being fully accomplished.

In imposing market and managerial values NPM is destroying traditional public values like social equality, integrity and equity, welfare and social justice (Diefenbach 2009). Concerning internal structures and processes NPM proposes more flexible structures, less hierarchy and fast decision-making processes. But, empirical studies reveal that these attempts are, on the contrary, imposing new forms of centralization and concentration of power (Pollitt 1993; Courpasson 2000; Carvalho and Santiago 2010). The new NPM structures and processes, because based on standards and procedures, are also increasing bureaucratic formalization and routines leaving less time for professionals to do the 'real work' (Hoggett 1996; Kirkpatrick et al. 2005; Carvalho 2012). This tendency, along with new systems of professional controls

based on complex processes of performance management and measurement systems, lead professionals to increasingly complain about stress, burnout and lack of motivation (Kirkpatrick et al. 2005; Barry et al. 2006).

In the same line, it is not consensual that NPM can directly transform professionalism. If some authors assume as an evidence the decline in professionals autonomy and dominance (Freidson 1988; Allsop and Mulcahy 1996; Harrison and Ahmad 2000; Reed 2002; Deem et al. 2007), power to exercise control (Freidson 1994), and in their capacity to self-regulate their work (Macdonald 1995), others defend, instead, the agency processes developed by professionals who, in group or individually, try to avoid the threats from NPM/managerialism by adopting strategies that allow them to maintain or even increase their power and status within institutions (Ferlie et al. 1996; Exworthy and Halford 1999; Kirkpatrick and Ackroyd 2003; Kirkpatrick et al. 2005; Salter 2004; Carvalho and Santiago 2009).

NPM – The Portuguese Way

There are different welfare state models. Attending to Portuguese singularities the country is usually characterized as a member of the South European Welfare Model (Ferrera 1996). The reasons for including Portugal in this group are related with such factors as the late emergence of welfare state, the lower economic development, low GDP and low wages.

Even if the emergence of the Portuguese welfare system is recent it does not mean that the welfare crisis is not present in the political and social discourse. In fact, under the influence of the economic and fiscal environment as well as of the international institutions Portugal has been, at least in the rhetoric discourse and political initiatives, assuming the NPM and managerialism discourses (Santiago and Carvalho 2008; Carvalho and Santiago 2010).

Only in the 1960s, far later than in other European countries were the first steps taken towards a modern state-run welfare system. However, the services this system provided were incomplete, irregular, and woefully underfunded. In 1973 a higher education reform was implemented (Veiga Simão reform) that, inspired by OCDE reports, created a binary system and allowed the development of the system to other geographic areas. Health and social welfare programs were established only after the April 1974 democratic revolution (known as the carnation revolution). At this time, a National Health Service (NHS) was created (the 1976 Constitution established several social rights ranging from education and health care to housing and cultural goods).

After this first period, which can be characterized as the momentum of the institutionalization of the welfare state, four other moments can be identified in public policies: The retreat in the welfare principles (1980–1995); Approaching the market ideology (1995–2002); Corporatization and approaches to liberalization (2002–2007) and Consolidating a new framework (2007–2010).

The Progressive Withdrawal of the Welfare State (1980–1995)

One key dimension of this second period was that the core principles supporting policies aiming at developing a welfare state started to be mitigated. Changes introduced in the Portuguese Constitution in 1986 and 1989 expressed a distance from the principles that framed the first democratic Constitution passed after the 1974 Revolution, based on the idea of providing care as a free, public and universal service. To some authors this early retreat in the NHS principles resulted in an absence of its complete materialization (Campos 1996; Pereira et al. 1997). In fact, the Portuguese health system has always lived together with other subsystems, namely with special health care insurance schemes for certain professions and voluntary health care insurance. However, it is only fair to recognize the undeniable advancement of the health status of the population, including the dramatic decline in infant mortality and the increase by 4.5 years in life expectancy (OPSS 2002).

In health two important political initiatives were developed during this period: The creation of five regional health administrations, the start of a decentralization effort that was never completed (due to the absence of autonomy over budgets), and the passing of the basic Law of Health (1990). The main innovative element in this law was the inclusion of private providers in the framework of the national health system.

In higher education this period is defined by the normalization of the system (Amaral et al. 2002) and by the emergence of private institutions assuming the system as integrating simultaneously public/private institutions.

It was also in this phase that the autonomy law was created (Law 108/88) that allowed HEIs freedom to establish their statutes with scientific, pedagogical, administrative, discipline and financial autonomy (Amaral and Carvalho 2004).

Approaching the Market Ideology (1995–2002)

In this period the welfare state crisis rhetoric started to be assumed (Tervonen-Gonçalves and Lehto 2004) and claims for adopting private initiatives increasingly found a favorable audience in government actors and professional groups.

The notion of health as a collective and social good was still dominant but this was mainly visible in the political concerns with public health care. In practice, attempts to provide hospitals with more autonomy and managers with more managerial freedom over budgets and staffing resulted in a first experience of private management in a public hospital in 1993. This experience was extended to other three hospitals through the end of the decade.

In Higher Education, the humboldtian philosophy, based on the academics knowledge logic, remains, until the late 1990s, the main frame of reference and the organizing principle of HEIs' power structures and academic activities and tasks (Santiago and Carvalho 2004; Santiago et al. 2006; Carvalho and Santiago 2008).

But, at the end of the 1990s market and managerial pressures over HEIs become more explicit (Santiago et al. 2006, 2008; Carvalho and Santiago 2009); and the enterprise model emerged, in the governmental discourses, as a kind of ideal-type to lead reforms in higher education institutions governance and management.

In the beginning of the new decade a new law was approved (Lei 26/2000) which decreased the HEIs autonomy to create and change their teaching programs. Since then, public HEIs were submitted to the same state control as the private ones (Amaral et al. 2002).

Corporatization and Approaches to Liberalization (2002–2007)

In different public sectors this was the period when public policies were more aligned with NPM and managerialism.

In health, the reform agenda that began in 2002 had as one of its main intents to increase the role of the private sector in the NHS. Several measures were implemented such as initiatives aimed at reducing surgical waiting lists and a few changes in primary health care centers. However, it was in the hospitals' organizational structures and management that major changes were introduced. In fact, in this period a growing wave of NPM initiatives found its way into hospitals when 31 traditional public hospitals were transformed into corporate organizations – state enterprises hospitals. The idea of increased effectiveness and the promise of de-bureaucratization were the main banners used to pass the new hospital management law (27/2002, 8th November). As a consequence of these changes annual hospital budgets became based no longer on historical spending and plans but, instead, on performance contracts negotiated with the Ministry of Health, followed by attempts to formalize an 'accountability culture'. Private human resource strategic management policies were allowed, meaning an introduction of increasing mobility among services and numeric flexibility in the recruitment procedures (individual and fixed term contracts). In 2005 when the socialist party assumed the government, these hospitals changed from previous SA (anonymous society) to EPE (public enterprises) (DL nº 93/2005). This change maintained the private management and governance model for hospitals but it turned more difficult for hospitals to become private entities.

Two other significant changes occurred in health in this period: one was the ministry restructuring with a downsizing process that eliminated 22 middle structures; the other was the primary health restructure with a great administrative or management decentralization of primary health centers.

In Higher education one of the major incentives for transformations was the Lisbon Strategy or Lisbon agenda that established the growing plan for European economy until 2010 based on knowledge economy. Under this context, the emphasis on the HE contribution to the knowledge society/economy (the importance of the vocational programs for the new 'post-fordist' market labor and of the knowledge transfer to the industrial and service actors) became a current topic in the governmental discourses and science policies.

But, more important in this phase was the emergence of a new Higher Education Act (Law, 62/2007) that imposed a new HEIs governance and management model, which represents both a rupture with the previous one, rooted in the collegial tradition, and a moving to the 'enterprise/entrepreneurial' culture. This law is known as the RJIES (Juridical Regime for Higher Education Institutions).

This set of transformations in the public institutions power architecture calls for ruptures in the traditional alliance (Musselin 2008; Bleiklie and Michelsen 2008) between the bureaucratic and the collegial regimes, in place since the 1974 Portuguese democratic revolution, and can produce important potential changes in professionals.

Consolidating a New Framework (2007/2010)

Since 2007 one can say that the previous initiatives to promote ruptures with the welfare state were deepened and consolidated. The legal framework expanded NPM to professionals. With the Law 12A-2008 the statute for all public servants changed and they started to be defined as workers in public duties. Those who were previously in a secure position maintained their status but all the newcomers established a contractual relation with public organizations based on the individual contract.

In health new national plans for ending surgery waiting lists, combining private and public hospitals, were implemented and a great emphasis was put on services quality with the creation of the Department of Quality in Health in the Ministry.

In higher education the Decree-Law 205/2009 (for universities) and Decree-Law 207/2009 (for polytechnics) changed the academic career that had been unmoved since the end of the 1970s (Decree Law 448/79 – university career; and Decree Law 185/81 – polytechnic career). Even if this new statute maintained its hierarchical nature (with more or less the same career paths) it changed the entrance that started to be based on PhD and introduced the non-tenured figure.

Methodology

Having this general context as framework this chapter intends to analyse recent changes in the legal framework of health and higher education in order to understand how NPM and managerialism have been implemented in Portugal in a comparative perspective.

The chapter intends to contribute to understand: how legal reforms intend to change the main characteristics of bureaucratic structures; how are these changes followed by transformations in professionals' regulation, and, if organizational and professional legal changes are similar in health and in higher education.

Table 5.1 Content analysis dimensions and categories

Dimensions	Categories	
Internal organization	Structures and processes	Organizational values and norms
	Changes in governance and management bodies	Norms and values elected as the main principles to sustain organizational structures
Professional framework	Professional regulation	Locus of decision making
	Changes in the relation between professionals and public institutions	Changes in professionals' participation in decision making

To accomplish these objectives a qualitative study was developed sustained in semi-structured interviews and document analysis. Interviews were developed with nurses and academics working in public institutions (even if some had a foundational statute). It is important to reveal that, in the two groups, only professionals with leadership roles were selected. In the nurses cases this included the nurses director and ward manager, in academics interviewees were deans, vice-rectors (the same as vice-chancellors) and rectors (the same as chancellor). Professionals with managerial duties are not only the first to deal with public reforms narratives as they are, usually, leaders of their professional groups and, in this sense, have a greater probability to influence their dominant norms, values and professional practices. Data scrutiny was based on content analysis of the narratives of 83 nurses in 10 hospitals and 56 academics in 4 universities and 4 polytechnics.

Data was collected in two different stages. The first, corresponding to nurses interviews in 2006 and the second, interviews with academics in 2009. Professionals agreed to do the interview in their working place with the promises of anonymity and that their identity would be protected and non-element that could identify the cases included in quotations.

Document analysis was applied to the main legal pieces intending to promote transformations in Higher Education (Law 62/2007) and Health (Law 27/2002 and Decree-Law 93/2005).

Both interviews and document analysis were submitted to content analysis 'closure process'. Four main categories, out of two dimensions, were used based on theoretical framework and, simultaneously, in data gathered from the legal documents. The two dimensions considered were internal organization and professional framework.

The first intends to capt the changes the legislator intends to promote in hospitals and higher education institutions organizational archetype and the way professionals perceive them. The second has the purpose to analyse the meaning attributed to professionals in these legal documents, as well as their own perspectives over changes in place in the organizational micro field. Each of these dimensions is subdivided in two main categories as can be seen in the previous Table 5.1:

In the next section, the selection of findings will be presented and discussed.

Comparing Changes in Internal Organization and Professional Regulation in Health and HE

As mentioned previously it was in the beginning of the new century that NPM started to be applied in the Portuguese context. First in health, and, then, in higher education, different legal initiatives have been directed by the NPM ideological context being hegemonic in the Portuguese government policy agendas for public services. To analyze how NPM and managerialism ideological principles and organizational strategies intended to change state bureaucracies and professional regulations in health and higher education it is important to start with the analysis of the new legal framework. Different legal documents (Law 27/2002; Decree-Law 93/2005 and Law 62/2007) were examined based on the two previously referred dimensions (internal organization and professional framework) and four categories of analysis: structures and processes; organizational values and norms; professional regulation and shifts in the locus of decision making. The main conclusion of this analysis is exposed in Table 5.2.

Important changes have been coercively imposed by these legal frameworks both to Hospital Institutions and Higher Education Institutions. There were some common NPM assumptions that lead the transformations imposed to these institutions, namely: changes in the legal statute translating attempts to create a market driven institutional environment; increases in financial and countable control[2] and restrictions in collective bargaining and concentration of power.

Nevertheless there are important differences in the legal pieces that must be evidenced. It was in the hospitals new management and governance law that changes were imposed in a more coercive way and the managerial rhetoric more embedded in the economic rationality. In opposition in HE changes in the locus of decision making were more evidenced putting in question the professionals' culture and traditional autonomy.

These differences seem to be also producing distinct impacts on professionals in health and higher education. Nurses perceive the hospital environment as more economically oriented:

> People with management responsibilities, anyone (being a, b or c) always think: 'I'm here to manage the hospital in an efficient way'… (Interview 74, Hospital I).
>
> For me the main differences in the hospital is that before we had already some concerns with the results but the main concern was to do the best for the patient; today the first and most important concern/value is the hospital's profit (Interview 9, Hospital A).

Academics also perceive changes in the organizational environment but tend to justify them by external pressures.

> (…) The university's strategy which is more managerial is more oriented to financial issues. The pedagogic and training issues, which should be the aim of the university, are not taken into account in the same way (…). These issues have to be more present in the university policies and strategies. (…) the management issues have been limiting our action (Interview 7, University A).

[2] Among others, through the figure of the Chief Financial Officer *Fiscal Único*.

Table 5.2 Changes in internal organization and professional framework in health and higher education

Categories		Health	Higher education
Internal organization	Structures and processes	Transformed in public enterprises (Public organizations with private management)	Academic, cultural, scientific, pedagogical, discipline, patrimonial, administrative and financial autonomy
		Governance and management bodies: Administrative Council, Chief Financial Officer (Fiscal único) and Consultative council	HEIs can opt for a public or foundational statute – public organization (with private management)
		Hospitals organised as unity cost centers	Governance and management bodies: General Council, Rector or President; Management Council; Chief Financial Officer and, for Foundation Board of trustee
	Organizational values and norms	Management rhetoric of economic efficiency	Maintenance of the traditional HEIs mission but emphasis on economic utility of knowledge
		Concern with service quality but with efficiency and an excellent use of available resources	Employability as a new concern
			Emphasis on the continuity of students' social action
Professional framework	Professional regulation	Professionals submitted to public domain statute but possibility for individual contracts	The 'public interest' is mentioned as a professional value
		Remuneration allied with performance appraisal and efficiency indicators	Emergence of the non-tenure designation and establishment of the relation or proportion between tenure and non-tenure staff. Defines the number of academics in full time for each institution
			Employment stability is defended. Stipulates the similar rules for professionals working in public and private institutions
			Institutions must report costs with human resources each 3 months
	Locus of decision making	Care services and management are concentrated in professionals with guarantee of autonomy and discipline power over their colleagues	The Rector or President is responsible for administrative and financial management and for the efficient use of resources
		Clinical directors have the power to define their services objectives, mission and performance appraisal and are accountable to the Administration Council	Their action is regulated by external audits and by the General Council
			Strategic decision-making concentrated at the top in the General council
			Intents to restrict collegial power. Reconfiguration of the traditional scientific and pedagogical bodies

In what concerns the institutional imposition on the structuring of the internal organization, in both sectors, the route was opened to a more flexible organization at the operational level and to a greater concentration of power in the top. These changes translate transformations in the institutional configuration more in line with the private law. Hospitals were coercively transformed into public enterprises with the main objective to leave health costs out of public expenditure. With this new statute hospitals still belong to the state but are ruled by private law.

On the contrary, in higher education the possibility for HEIs to be transformed in public foundations (ruled by private law) was given to their own decision. In this context, HEIs, more than hospitals, had the opportunity to decide if they wanted or not to transform their legal status and assume new governance and management models. In higher education the legislator seemed to be conscious that change could not be imposed from outside, especially because HEIs, more than hospitals, were conceived as "knowledge intensive organizations" (Deem et al. 2007); were organized around collegiality and had a high tradition on autonomy and collective decision making (Miller 1995; Kogan and Bauer 2000; Santiago and Carvalho 2004). In fact, the prototypical characteristics of HEIs as "knowledge intensive organizations" were still acknowledged in law that maintained all different types of autonomy (academic, cultural, scientific, pedagogical, disciplinary, administrative and financial). In this context HEIs had also more freedom to decide on their internal structure.

Concerning governance structures the organizational system imposed to universities included the: General Council (in charge for approving the planning, budgets, creation and extinction of basic units and for the rectors/president election), Rector (for universities) or President (for the polytechnics); Management Council (in charge for administration); Chief Financial Officer (Fiscal Único) and, in the Foundation regime the board of trustees (Conselho de Curadores). Nevertheless the law also allows for the existence of other governing consultant bodies, namely an academic senate or even others. The governance and management bodies at the middle level are defined by internal legal norms and rules meaning that each can define different structures in the basic units.

For hospital institutions the law imposes the existence of three governance and management bodies, namely: Administrative Council (in charge for administration, planning, and operations), Chief Financial Officer (Fiscal único) and Consultative council (integrates professionals designated to advice the administrative council).

The creation of the figure of Chief Financial Officer as well as the reference to external audits in both sectors is the expression of one of the main NPM principles: the accountability straight linked to the accounting and financial control and supervision.

Operational decentralization to basic units seems to be more evidenced in health since hospitals are incentivized to work as Responsibility Centers (Centros de responsabilidade integrada).

As referred in other national contexts (Kirkpatrick et al. 2005; Diefenbach 2009) in Portugal professionals (in health or in higher education) do not recognize great success in the changes in organizational structures and processes. In fact the attempts

to decentralize and turn processes of decision making more quick are perceived, on the contrary, as imposing more centralized and slow processes to take decisions.

> [There are several institutions calling hospitals to account] They call us to account, they ask for responsibility. They ask for the same things, they ask for the same maps. Presently, there are four organizations to which we continuously have to report. It is therefore a very theoretical independence. (Interview 3, Hospital C)

At the same time the increasing use of technologies and bureaucratic procedures to increase control over processes and professionals answering to accountability imperatives are creating a greater workload in both sectors.

> Now, the workload has been increasing. Everything needs to be registered, everything needs to be justified…I'm starting to do a lot of work at home (Interview 48, Hospital E).

> (…) the bureaucratic exigencies have increased dramatically. Since we started to have a quality system there are a lot of procedures to do (applications, formularies, etc.). Things are so confused. (…) it was better to have improvisation. (…). Problems were solved with the same effectiveness (Interview 23, Polytechnic XZ)

Even if in both systems there is the same tendency to turn organizational structures, rules and procedures more flexible and more in line with private management the reference to private organizational values and norms is also distinct in the two legal frameworks. The principles of economic rationality are more present in health. Along the legal text one can find several references to efficiency and efficacy in the use of resources. An example of this is Artº 5º when it refers to the management principles that must be accomplished: "b) To guarantee to users the delivery of care with quality and a rigorous control of the resources used" or "d) To finance the activities in accordance with the valorization of the acts and services that are effectively accomplished, based on a predefined price by common accord with the NHS". These management principles translate a new conceptualization and legitimation for public health services.

The reference to the traditional service public ethos or to the patients' welfare is almost absent without a clear reference to the rational use of available resources.

These changes are having some impact on professionals' subjectivity and professionalism. It was possible to find in a few nurses discourses an almost integral incorporation of management language.

> One of our main goals is to combat the waste of money, manage resources in an efficient way and, most of all, to satisfy our customer (Interview 27, Hospital C)

However, this new discourse does not seem dominant since there is also another relevant group who is denying the 'intrusion' of a managerial discourse in health.

> I think that now people are more concerned with profitability than with care and I don't agree with it. People talk a lot about resources and economy and less about caring. I think we are concentrating in efficiency, because 'it has to be'…and the other side is also made but with a minor emphasis. (Interview 82, Hospital J)

The RJIES seems to plunge in a little different ideological underpinning since there is emphasis on the traditional HEIs' mission and in public service ethos. An example is artº 106º defining independence and role conflict: "1. Members of HEIs'

governing and management bodies are exclusively in service of the public interest of their institutions and are independent in exercising their roles"

Nevertheless there are also references to the possibility for creating economic value from research knowledge materializing a tendency to approach HEIs to market oriented research that was already mentioned in other studies (Santiago et al. 2008).

Interviews with academics seem also to reveal the same denial of extreme positions. The interviewed tend to recognize the need to create mechanisms to turn HEIs more efficient but maintaining their traditional values.

> An enterprise is an enterprise, a university is a university and a rock is a rock, they are distinctive things. And the fact that we should do our best to manage efficiently a university does not mean that a university is an enterprise (Interview 12, University X).

The same ambiguity is also visible for students. On one hand HE is defined as an important instrument for equal opportunities affirming public support to students' social action. In this context it is possible to read in the artº 20º: "In its relation with students, the state assures the existence of a social action system that favors the access to higher education, and a well succeeded frequency to students in an economic disadvantaged position by positive discrimination".

On the other hand, enhancing students' employability is identified as HEIs responsibility inducing the idea that students should be trained for the labor market or for a specific profession assuming their role simultaneously as 'heirs' and 'consumers'. In fact, even if there are no explicit references to students as consumers or clients there is an idea that the trust relation between students and teachers is broken since the figure of students' provider (Provedor do Estudante) was created for the first time.

Somehow the maintenance of legal support to students' welfare can be justified by the strong power students always had in Portuguese HE system. In fact, there is a great tradition of social movements from students (Estanque 2008, 2010) and in recent history higher education ministers were removed from post due to students' contestation. This may also be the justification for the support to students union (artº 21).

The changes in internal organization (both in structures and processes and in norms and values) have the ultimate intent to change professionals, their position in institutions, their professional culture and ethos, the way they behave, in a word their professionalism.

Professionals have been usually referred as one of NPM preferred targets (Dent et al. 2004; Exworthy 1998; Ferlie et al. 1996; Fitzgerald 1994; Pettigrew 1992; Slater 2004; Wrede 2008; Carvalho and Santiago 2010). In both sectors there is a great change in professionals' regulation. For the first time, changes in health and HE legal framework allow institutions to employ their staff directly and to determine terms and conditions of employment. In this sense the standardized employment practices that traditionally dominated in these areas, as in all the public sector (Farnham and Horton 1996) come to an end. Along the legal documents analyzed there are always references to at least two different groups: public employers with a

collective contract and public employers with an individual contract. Only the first group was able to obtain full time employment, job security and conditions of standard salary bands (Farnham and Horton 1996). The others, even if performing the same tasks, do not have a perspective of a job-for-life having, instead, a salary and career prospects linked to line managers' perceptions of their performance. The changes in professional regulation are in line with Baileys' perspective that "(…) the most dramatic change in public sector (…) has been the redefinition of the concept of equity from one based on notions of the "going rate" and a "rate for the job" to one based on labor market and individual performance criteria" (Bailey 1994: 133).

Nevertheless there is a tendency in higher education to externally regulate the deregulated professionals. Meaning that law 62/2007 presents explicit norms for the equilibrium that all institutions must have between the tenure[3] and non-tenure staff, makes the apology of employment stability and stipulates the existence of similar working conditions for those in public and private institutions.

More than the employment conditions a particular point in professional bureaucracy was professionals' participation in decision-making that assumed a collective character. In both sectors there is a deconstruction of this principle; however it is much more evidenced in higher education. In health, at the top level, professionals see their role limited to a consultant position, but, at the middle, there is a strong concentration of power in the clinical directors that start to be accountable for the management and organization of their service. Clinical directors must now define the objectives of their services, the resources they need and the criteria they defined for performance appraisal. The delivery of care and the resources management is concentrated in professionals being legally assured their autonomy in the accomplishment of their work and in discipline issues. The increasing power of doctors in management duties is particularly felt by nurses.

> We have lost the team spirit. Our director is no more seen as a leader (…) now he is manly seen as the one in power (Interview 57, Hospital G).

In higher education, with the creation of the new organization and management bodies, namely the General Council new actors are included in the decision-making process that withdraw some of the power professionals had. The general council has between 15 and 35 members, from these 15 % are elected students, at least 30 % are invited external members – stakeholders (public figures from cultural, professional, economic and social life) and the others are representatives of teachers or researchers and also one from the administrative staff. Diverse competencies are assigned to the council – approval of HEI budget, long-term programming and annual accounts; supervision of financial activities and performance of its services; promotion of cooperation of society in HEIs financing, but, one of the most important, is the rectors' election that previously was made by universal suffrage among all university members.

[3]The Law distinguishes, also for the first time, between tenure and full time professors.

The decision making based on collegiality is also deconstructed at the middle level. For basic units the law defines a one nominal (uninominal) body with executive power – the director or unit president. A collegial body can be created by the institution but it can only have 15 members being the majority (60 %) teachers, researchers and students. The director has symbolic competencies (representing the unit), academic (responsible for the academic and pedagogical issues), professional (discipline duties) and management (to do the budget and financial report).

Even if the discourses of academics interviewed are not homogeneous, there are some cases (even if a minority) that tend to accept changes in collegiality.

> This is the moment for big changes and we need them. They are inevitable. There was something in collegiality that was linked to corporatism (…). We must be more efficient (…) universities have a tradition of slowness (…). The rectors decisions were a complex 'business' because a lot of academics were consulted before its definition and implementation (…) Now it must be different (…). It is not possible to implement changes in another way (…). However, they have to respect people (Interview 21, University Z).

Others reinforce its importance seeing it as a way to control the centralization of power in deans.

> I think [collegiality] is not a bad thing because a Director can do whatever he wants. This body is needed in order to impose some limits. (Interview 20, Polytechnic Z)

Based on the analysis of legal documents one can say that even if in higher education there seems to be a concern with professionals regulation allowing for some security in employment relations there is a clear tendency to transform HEIs from 'academic communities' to 'management organizations' (Harley et al. 2003). In trying to restrict the collegial decision making and concentrating the power in one person (who can be appointed by the rector) – the unit director or president – there is a tendency to organize and manage HEIs like private organizations as if they could be classified as integrated organization (Carvalho and Santiago 2010), or as 'complete organization' (Enders et al. 2008). The analysis reveals that NPM is distinct in different public sectors. In the Portuguese case in health there is a great emphasis on changing organizational norms and values turning these institutions more managerial while in higher education the emphasis is great on changing the locus of decision making with professionals decreasing their participation in strategic decisions for the institutions. Changes in professional regulation seem to be those more common to both sectors. In this context Freidson (2001) asserts that professions have been weakened while others sustain that we may be assisting to a deprofessionalization process (Oppenheimer 1973; Derber 1982; Hall 1975). However as there is no linear way for NPM and managerialism to be introduced in public sector one can not expect that the effects would be the same in all different professional groups.

Even if NPM has been introduced in Portuguese public sector under the same ideological and social context, its approach is not unique. While in health there is a more technocratic approach emphasizing efficiency and value for money, translating a neo-taylorism perspective (Ferlie et al. 1996) in line with a hard version which is imposing changes coercively to institutions and actors; Higher education intends to

promote a shift away from the traditional bureau-professional way of management maintaining some core values of professional regulation and HEIs traditional mission. In this sense it is more aligned with a soft NPM version near the fourth Ferlie et al. (1996) model: Public service orientation.

These results are somehow surprising. The strong emphasis of law in health in economic and managerial language is justified because this is one of the sectors that represent a high percentage of expenses in the public budget. These differences in law seem to have some echo in professionals. Health professionals interviewed seem to be integrating the new language more uncritically than academics. One of the reasons for this difference may be related with the presence of distinct professions in hospital institutions that may tend to focus more on inter-professional power relations than in the organization.

Conclusions

NPM and managerialism have been a popular object of study for the last decades in social science. However, important doubts still remain concerning the specific use of the two concepts. This chapter reveals that comparative analysis is particularly valuable to enrich the discussion and provide insights valuable to understand NPM.

In describing the specific route NPM has been developing in Portugal it is almost evident that there are differences between distinct public sectors. These differences are evidenced when one looks at the legal documents promoting major reforms in health and higher education.

From the content analysis of the legal documents it is possible to sustain that the traditional bureaucratic way of organizing public institutions has given way to a more rational one. However analysis of interviews discourses does not allow the same conclusions. Interviewees refer to increased workload, centralization of power and increasing bureaucracy.

There are also important differences between sectors concerning organizational values and norms. Law in health put a strong emphasis on substituting the traditional public ethos by the private management values and norms and, at the same time, interviewees' discourses also confirm a tendency for health professionals to assume more these new values in their discourses.

Concerning the professional framework there are also important differences. Professionals in higher education have softer changes in law and there is not a total deregulation of professionals' labor market. In both sectors there is an increasing concentration of power in professionals with managerial duties but this is particularly evidenced in higher education where collegiality seems to be coming to an end.

To conclude one can say that the way NPM has been introduced in health and higher education is not similar in Portugal and the same is also true of its impact or practical consequences. These differences are justified by the particular characteristics of the two sectors but also by the distinct weight they have in the national public budget.

Changes in structures and processes as well as in organizational values and norms are aligned with the efficiency purpose. In this sense using Ferlie et al. (1996) models one can say that this is an efficiency driven model. In higher education NPM a soft dimension is revealed. The traditional HEIs mission is generally maintained, there are important changes in professional regulation (namely with the emergence of the tenure figure) but, at the same time, a concern in regulating the unsecure positions; the major changes are developed in internal structures and processes and in the locus of decision making with clear attempts to restrict collegial bodies and decision-making processes. In this sense one can say that the HE model is near the Ferlie et al. (1996) orientation to public service model since there are important concerns with efficiency and rationality but public ethos is also referred as an important device.

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Chapter 6
The Development of PSE Systems in Canada: A Comparison Between British Columbia, Ontario and Québec (1980–2011)

Donald Fisher and Kjell Rubenson

Introduction and Purpose

The purpose of this chapter is to present the findings from three case studies of the evolution over the last 20 years of post-secondary education (PSE) systems in British Columbia, Ontario and Québec. The policies and selected outcomes of PSE policies is analyzed and compared between the three provinces. The research design aims at constructing provincial profiles of the relationship between policy environments, policies and the performance of PSE systems. To this end we employed a comparative, multiple, nested case study research design (Yin 2003; Gerring 2007). Beyond the use of indicators and other secondary statistical data we rely upon documentary analysis of policy documents.

This analysis comes at a time when governments across the political and ideological spectrum have subscribed to the belief that investments in PSE will translate into economic security and economic development at the individual, provincial and national levels. Subsequently the PSE systems can be seen to play a central role in the state's legitimation function and an increasingly important role in the state's accumulation function under the emergent knowledge economy.

Our work is located within the sociological tradition and we label our approach as policy sociology. This means we start from the position that to understand and explain the role of PSE in Canadian society, we must locate systemic change in the broader structural context.

The study is part of a larger comparative project funded by the Ford Foundation through the Alliance for International Higher Education Policy Studies (MUMPS) that focuses on the impact of educational policy on the performance of PSE (PSE) systems in Canada, USA and Mexico.

D. Fisher (✉) • K. Rubenson
EDST, The University of British Columbia, 2125 Main Mall,
Vancouver, BC V6T1Z4, Canada
e-mail: Donald.Fisher@ubc.ca

C. Musselin and P.N. Teixeira (eds.), *Reforming Higher Education: Public Policy Design and Implementation*, Higher Education Dynamics 41, DOI 10.1007/978-94-007-7028-7_6,

The aim is to try to document the extent to which the global movement of neoliberalism and academic capitalism has affected Canadian policies on higher education. By comparing three provinces in Canada, with different political, economic and cultural histories we hope to contribute to the debate on whether prevailing global political economic forces induces more convergence or not. Finally, the work will add to our understanding of how the interplay between fiscal reality and political ideology affects PSE.

This chapter has three parts. First as we have already done in this introduction is to set the stage for our findings by describing the study. Here we include a description of our methodology and our theoretical approach as well as a substantive account of the federal provincial relationship. Second is a section on the findings from our cross-provincial analysis through time of the five themes that are highlighted in the literature on higher education and also dominated the PSE policy-making process. The five themes in their order of presentation are 'Accessibility', 'Accountability', 'Marketization', 'Labor Force Development' and 'Research and Development'. In discussing these themes, we will illustrate their impact on and within the three provincial PSE systems: British Columbia, Ontario and Québec. Finally, we use our sociological lens brings together the political economy of PSE with the five major policy themes and explore how central PSE has become to the legitimation and accumulation functions served by the state with a focus on the relationships between PSE policy and economic and social development.

As a context for this study it is important to point to a major paradox of Canadian federalism. Even before the Canadian state was officially born, PSE was an area of contention. When the final version of the British North America Act was signed in 1867, the entire educational sphere had been relegated to provincial jurisdiction. The provinces therefore have the central role in providing direct operating support to institutions and for developing legislation, regulation and coordination of those institutions. The federal government does not have a direct role in coordinating PSE institutions in Canada. Thus, different arrangements exist in each province with regard to education. Historically the federal government has a history of involvement in vocational and technical training but recent agreements with the provinces have largely placed also this activity in the hands of the provinces. The federal government's responsibility for economic development has led them to support university-based research. Through national research councils and institutes the federal government has become the largest source of support for university-based research. Consequently, the federal government wields considerable influence over this aspect of PSE. Similarly the federal government has a role in financing student enrolled in PSE.

The financial relationship between the provinces and the federal government are complex and controversial. In the Canadian federal system the federal government enjoys the largest share of revenues from taxation. Currently, provincial governments provide almost all the funding for education; exceptions have been noted above particularly in the federal government's support of university research. Provincial funds for post secondary education are drawn from the general revenue of the province (which includes any federal government transfers and provincial tax

revenue). For the time period covered in this study it should be noted that during the 1990s the federal government limited or reduced this financial support to the provinces as part of an overall spending reduction effort. In turn the provinces have had to make up the shortfall in various ways including reducing provincial grants to post secondary institutions setting the stage for the search for alternative sources of revenue for the post secondary system.

Theoretical Sensitizers

This study is set within three overlapping scholarly fields: policy sociology; sociology of PSE; and theories of the state. The cross-disciplinary nature of research in the field of PSE means that by definition our work will draw on other social science disciplines and fields like political science and historical sociology.

In our work policies are treated as operational statements of values, 'statements of prescriptive intent' (Kogan 1975). Defining policy and policies in this way draws our attention to the importance of power, control and conflict in the policy-making process. In doing policy sociology we are aware that we must try to explicate the intellectual climate and the wider debates that characterize the policy context (see e.g. Ritzvi and Lingard 2010). Policy sociology makes use of historical methods in drawing attention to the historical context of the policy process and how the combined influences of the history, demographics, politics and economics that produce the policies have, shaped the education system and the priorities assigned to it. In this sense one needs to take into account the unique properties of systems. The aim is to try to link these unique properties to the broader structural trends (Rothstein 1999). Building on Bourdieu's (1988) concept of a 'critical moment' we are trying to determine key moments when governments change policy direction. At these moments the structural forces present before and after the event are more visible and hence more amenable to analysis.

When we turn to the sociology of PSE the focus is upon the general literature in PSE and the accumulating literature on academic capitalism, marketization and commercialization. Yet our emphasis is different as we draw attention to the relation between State PSE policy and performance outcomes. Simon Marginson and Sheila Slaughter are two authors who have led the way in helping us to understand and explain the impact of capital and market ideology on our PSE systems. For Marginson (1997), all markets in education are "quasi-markets" involving a mix of use and exchange values and a mix of both public and private interests. Slaughter and Leslie (1997) build on the earlier work done by Slaughter and Rhoades (1996, 2004) to map the rise of what they call "academic capitalism." This concept is useful because it captures how commercialization and marketization overlap to change the power relations within universities and changes in the territory that connects the public and the private sectors in PSE, between the state, PSE, and the market. As the configuration of state resources changes and public universities and colleges are pushed to seek alternative sources of funding, our conception of "public" is blurred and altered.

The literature suggests how a neo-liberal framework promoting public choice, marketization, and privatization of education has fostered links between industry training needs and the postsecondary sector. These changes manifest themselves in education and other public services in two major ways. First, there is reluctance to use public funds to fund public services; second, public institutions are to engage in market behavior in order to fund more of their services. This shift creates changes to organizational forms, managerial practices, and institutional cultures (Deem 2001). Policy changes are accompanied by downloading more financial responsibility onto postsecondary institutions and are characterized by less state funding and an increased emphasis on business practices (Currie 1998). Slaughter and Rhoades (2004) state that themes of efficiency, effectiveness, excellence, and continuous quality improvement are examples of thinking that prevail within the entrepreneurial university. Governments strategically promote increased efficiency and innovation using education markets (Dill 1997; Slaughter and Leslie 1997).

The work on academic capitalism, marketization and accountability leads into a discussion of the re-structuring of the state. If we accept the general proposition that we are living in a globalised knowledge society and that PSE has as a result become an important legitimating institution in capitalist states. General agreement exists on the proposition that the rise of the modern interventionist state and the expansion and development of social scientific knowledge are interdependent (Poggi 1990). Social empiricism goes hand in hand with the growth of government. Further, most authors accept to some degree that states perform a legitimation function under conditions of relative autonomy. What is contested is the relation between capital, power and the state. On one side is the "bringing the state back in" school that posits a diffuse relation between state officials and elites with the state at times acting in an independent manner. On the other hand is the more traditional perspective that posits a close relation between state officials and capital with the state acting in the interests of the ruling class. Somewhere between these two positions are the "public sphere" (Habermas 1989) theorists. The state and the public sphere are synonymous. This sphere is open, democratic and egalitarian. Social policy is formulated through a rational communication process where the power of elites is held in check.

A central concern over the last two decades has been the relation between globalization theory and state theory. Globalization, characterized by economic and cultural convergence towards a model, which valorizes free-market ideology and cultural homogenization, is helping to determine policy decisions in post-secondary instruction in countries from Australia to Argentina (Wagner 2004). A major line of debate is whether globalization leads to convergence or divergence when it comes to the formulation of internal policies. Those critical of globalization tend to look at how certain tenets of neo-liberalism have come to underpin policies in countries with different political systems: policies which de-emphasize the role of the state in certain areas (e.g. financial support and funding), but over-emphasize other areas (such as institutional accountability). The interconnectedness between states, some argue, is not so much based on symbiotic relationships but rather characterized by a convergence in culture, economies and, consequently, national policies towards a

free-market, neo-liberal and, arguably, American model (see Dale and Robertson, Mundy and Iga 2003). These academics are not naive to the ways in which the nation-state is changing, yet, at the same time, they do not espouse the "globalization is nothing new" mantra championed by some political scientists or sociologists. According to this body of literature, there is both convergence and divergence in national policy due to a variety of factors. A number of studies illustrate the divergence in national policies on PSE, suggesting that there are different levels of autonomy and agency in different states. Furthermore, policies are often particular to the individual country's circumstance and political situation. These studies indicate that the 'golden straitjacket' is not a one-size fits all, and that perhaps there is space to move within it. Indeed, states are not always victims of globalization. Carnoy has claimed that states decide how globalization will affect their national policy, and that sometimes the reason governments do not fund or support public education is at least partially a result of "ideological preference rather than helplessness" (Carnoy 2000: 58).

In the last decade much attention has been given to the idea of a Third Way (Giddens 2003) that sits somewhere between the 'welfare liberalism' (see Keynes 2007) and 'neo-liberalism' (see Friedman 1991). Since the turn of the century, however, some have claimed a new form of liberalism has emerged (see, Saul 2005; Craig and Porter 2004)—what Craig and Porter have termed 'inclusive liberalism'. As the term suggests, the notion of 'inclusion' is at the heart of this 'new' form of liberalism which seeks to carve out a path between Keynesian welfarism and Friedmanesque neo-liberalism. The critics of the Third Way and inclusive liberalism charge either that it is not particularly different from neo-liberalism or that it is a return to classical liberalism (see Bastow and Martin 2003).

Part of the current debate focuses attention on the way states use PSE policy to promote economic security. The idea is that states re-structure PSE systems primarily as a means of increasing access in order to foster active, entrepreneurial, independent and employable citizens who organize their practice around commercial norms. These policies define university campuses as sites for capital accumulation (Chan and Fisher 2008). These policies identify "the campus as a site creating or enhancing the profit-making capacity of individuals, business or the country itself" (Carroll and Beaton 2000: 72).

An Overview of Provincial Policies 1985–2011

Our policy sociology orientation inevitably directed our gaze to the structural context and the play of social forces in both the creation of the policy environment and the re-structuring of the state formation. Our assumption was that we could use an analysis of State PSE policy as a point of entry in order to locate these policies within what emerged as the key structural trends. We accepted that as in the rest of the Anglo-Saxon world, neo-liberalism has come to comprise the *raison d'être* of Canadian politics over the last two decades (Clement and Vosko 2003). It followed that we

were particularly interested in examining the connections between neo-liberalism, PSE provincial policy and the impact of those policies. As a background for the finding we shall therefore briefly describe the political changes and main policy directions during the period 1985–2011 in the three provinces as well as briefly look at dominant characteristic of the policy-making process in the three provinces.

Policy-Making Process

The one characteristic of the policy-making process that stands out as we consider the similarities and differences between the three provinces is the degree to which the process has been consultative. Of the three provinces only Québec can claim to have been consistent in adopting a consultative model. Here governments across the political spectrum have created a wide range of venues for collaboration that have brought in all the stakeholders. In part, this is due to the presence of very powerful faculty and student unions and is housed in the rational, incremental approach to policy-making. In British Columbia and Ontario, the level of consultation has varied quite drastically. The 1980s saw broad consultation taking place in both provinces. The early 1990s saw a major divergence between the two provinces. On the one hand, the New Democratic Party (NDP) in British Columbia carried on the tradition of consultation through the 1990s but brought a stronger ideological commitment to these practices. On the other hand, the NDP in Ontario drastically reduced the level of consultation as they responded to severe fiscal restraint. The trend was reinforced with the election of the neo-liberal Progressive Conservative government. Public input was reduced at every turn. Since 2000 we have seen reversals of the above trends in both provinces. The election of the neo-liberal government in British Columbia caused a radical rupture in the policy-making process. In contrast, the Liberals in Ontario went back to the historic traditions of transparent decision-making and consultation through advisory bodies.

PSE System, Provincial Politics and Policy Directions

British Columbia is Canada's most western province with a population representing 13.2 % of the total population of Canada. As in the rest of Canada the structure of British Columbia's public PSE system had remained basically unchanged from the middle 1960s to the middle 1990s. However, the many changes in the system since the middle 1990s have substantially altered the structure of British Columbia's public PSE system, particularly the university sector, which has become highly diversified and increasingly stratified.

In the first part of the 1980s the province was governed by the Social Credit, a populist right wing party whose restraint policies forced the PSE sector into survival mode. As the economy began to improve the British Columbia PSE system entered a period of sustained expansion and transformation which came to have a

profound impact on the structure of the PSE system. The Social Credit era in British Columbia politics came to an end in 1991 as the New Democrats, a social democratic oriented party, won power in a time of deep economic recession. While accessibility continued to be a major policy priority the NDP, more than any previous government, was determined to link PSE and work in the most transparent manner. The main policy thrusts can be placed under three headings: institutional expansion and diversification; low tuition fees and system-wide integration. The period of NDP government from 1991 to 2001 saw the energetic and sustained expansion of the PSE system including new institutions which added numerical capacity but also hastened qualitative stratification of the system.

The Liberals came to power in 2001 with an initial agenda that marked the most radical shift in both substance and philosophical orientation in 40 years. The fiscal policy during the first Liberal mandate was based upon the government's commitment to New Right philosophy. The government announced an end to the 6-year tuition fee freeze, and the total deregulation of fees for public postsecondary institutions. Targeted and matching funding schemes were emphasized and in trades training policy the government acted quickly to strengthen the influence of business. Further, new legislation set out criteria under which new private and public PSE institutions, including institutions from outside the province, would be authorized to offer degree programs and grant degrees in British Columbia. It is difficult to avoid the conclusion that the Liberals' sharp turn does not reflect any particular change in the 'external' environment so much as the government's own neo-liberal ideology. With a rising economy over the course of their 4-year term, the Liberals began to increase funding for PSE. After winning a second mandate in the 2005 provincial election, the Liberal government made a series of shifts that are somewhat divergent from the neo-liberal philosophy that defined their first period in power.

Ontario is Canada's most populous province with 39 % of the total population of Canada. Its PSE system has traditionally been a binary system but has recently seen major changes and is no longer a strictly binary system. During the Liberals era (1985–1990) accessibility and reducing/stabilizing the level of government funding for PSE were the two important government goals during this period. Although the Liberals did not attempt any major structural changes to the overall PSE sectors, they did attempt to link PSE policy to the province's economic agenda. The NDP entered office in 1990 during the worst recession in Ontario since the 1930s. Three issues dominated postsecondary policy decisions during this era: accessibility in light of restrictive funding levels, improving university accountability and how to link PSE to economic growth. The Progressive Conservatives swept to power in 1993 on a platform called "The Common Sense Revolution" and the primacy of the market infused their political agenda. The postsecondary agenda for the Progressive Conservatives included cuts in postsecondary operating grants, calls for restructuring, rationalizing, introduction of a new accountability system and increased partnership with the private sector. During the Progressive Conservative administration tuition fees were deregulated for graduate and certain professional undergraduate programs. After initial funding cuts to universities, the Progressive Conservative government slowly began to reinvest as the economy improved and a cap on tuition fees was introduced.

The Liberals came back to power in 2003 with a plan called Strong People, Strong Economy that emphasized both social and economic priorities. Education, health, and the economy were the three key priorities. Despite experiencing a period of slower economic growth the Liberals invested significantly in PSE and embarked on the largest multi-year investment in PSE that the province had seen in 40 years. The Liberals clearly viewed a strong postsecondary system as an instrument of the economy and targeted labor market training and integration as a priority throughout their administration.

Québec accounts for 23.2 % of Canada's population with French being the mother tongue for 80 % of the Québécois. PSE in Québec is divided into two stages, college and university education, which are not parallel but structurally complementary which makes Québec's PSE system different from those of the other provinces. In contrast to what has happened in other provinces the PSE system in Québec has not undergone major changes since the 1960s.

The Liberals' first term in power, which began in 1985, was notable for the economic recovery that occurred while the second was mirrored in recession. The government proposed a neo-liberal policy realignment promoting privatization, reform of government agencies and deregulation. Despite far reaching declarations the government remained politically cautious and did not venture very far along the road of neo-liberalism. What one retains from this period first and foremost is that the taste for neo-liberalism was not as pronounced in PSE as anticipated. At the very most, the increase in tuition fees and abolition of a coordinating council for the universities might be linked to it. The Parti Québécois were returned to power in 1994 during a period of economic recovery and sustained growth. From the start, the period 1994–2003 was characterized by the call for greater accountability. Access linked to success was another goal at the top of the government's list priorities. Even though strengthening links between programs and the labor market was expressed less frequently than the first two, the government was unequivocal in its commitment. In 2003 the Liberals were re-elected on a neo-liberal platform which laid out how the government's role could be altered by limiting state intervention and cutting income tax. The beginning of this period was marked by sustained economic growth. Tuition fees were increased and student financing made less generous with the result that students would accumulate more debt. All through the Liberals term in power accountability was stressed and government demanded stricter monitoring and new reporting measures were introduced. The second and third mandates of the Liberal government were notable for the softening of its neo-liberal orientation.

Looking across the period 1985–2011, and following Bourdieu (1988), we have been able to document a number of 'key moments' in PSE policy-making when governments changed direction. Four of these moments stand out and each are housed in the larger structural force of globalization and the force of political ideology. The first two happen in Ontario in 1995 and in British Columbia in 2001 with the election of governments with clear commitments to neo-liberal ideology. The third moment in the mid-1990s had an impact on all three provincial governments as the federal government dramatically reduced their indirect, unconditional general funding of PSE and simultaneously began a dramatic increase in their direct,

conditional funding of R&D. Finally, the fourth moment in the mid-2000s had an impact on all three provincial governments as healthy economies and the global importance attached to PSE translated into rapid increases in provincial funding for PSE for the rest of the decade.

Policy: Between Political Ideology, Fiscal Reality and Practical Politics

In line with what was noticed in the literature a closer reading of the Canadian policy documents reveals that there are five themes that have dominated the policy debate on PSE in the three provinces: accessibility, marketization, accountability, labor force development and research and development. In the next section we will analyze how these priorities have been translated into actual policies focusing particularly on the interplay between fiscal realities and the ideological direction of government in power.

Accessibility

By far the most important priority in the development of PSE policy since the mid-1980s is the desire to create more access into the system. While the emphasis has varied between different governing parties, successive governments in all three provinces have developed a clear consensus on this issue. In this context it is of interest to examine the extent to which provincial funding allocation reflects the accessibility ambition and particularly how the sharp decline over the last two decades (40 % between 1989 and 2006) in federal transfers to PSE affected the provincial funding for PSE. Thus, despite similarity in cuts to federal transfers the patterns of decline and expansion are surprisingly different between the provinces (see Fig. 6.1).

In Ontario the precipitous decline (about 20 %) in the grant between 1995 and 1997 was the result of the federal policy but also of explicit neo-liberal policies adopted under the Harris ‘Common Sense Revolution’. Only with the election of the Liberals in 2003 do we see major increases in the total operating grant which continuous right up to 2010 when it was 20 % higher than in 1986/1987. In contrast, during the 1990s Québec maintained the total PSE operating grant at a relatively high level. While the total PSE operating grant in Québec did decline substantially during the mid-1990s, it did not drop below the 1986/1987 level. The declining trend was broken in the late 1990s and the grants rose rapidly through to 2003 when the Liberals took over from the Parti Québecois. The record in British Columbia is dramatically different and at no time does the total PSE operating grant drop below the 1986/1987 level. With the exception of one budget year, which saw a small decline, the grant level was continuously more than 30 % above

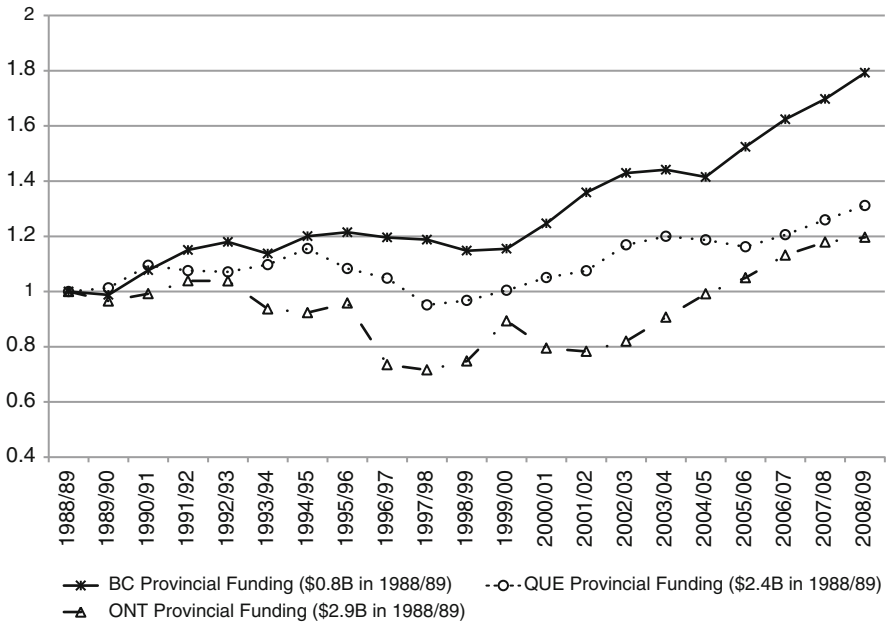

Fig. 6.1 Change in provincial grants for postsecondary education in BC, Ontario and Quebec, 1988/1989–2008/2009 in constant dollar (2002 dollar) 1988/1989 = 100 (Sources: Statistics Canada, Table 385-007)

the reference level during the years of declining transfers. This speaks to the commitment of the British Columbia NDP government. The grant rises rapidly in latter years of the NDP. The increases came to a temporary halt with the election of the Liberal government is 2002 but after an initial slight decline the grants have increased sharply during the Liberal era. In the last budget year it was 80 % higher than in the reference year.

Student fees, an important aspect of accessibility, are more affordable in Québec than in Ontario or British Columbia. Québec's students have access to tuition-free college education. In addition, university tuition fees in Québec have consistently been the lowest in Canada. This conclusion is abundantly clear when we compare 'Average Tuition Fees by Programs' between 1993/1994 and 2009/2010 (see Fig. 6.2). Comparing Ontario and British Columbia we can see somewhat different developments. In both Ontario and British Columbia Ontario the fees increased dramatically under neo-liberal oriented governments, the Progressive Conservative in Ontario and the first Liberal government in British Columbia. However while the fees continued to increase in Ontario after the election of a Liberal government they declined slightly in British Columbia during the second Liberal government. When we compare tuition fees for Graduate programs and in Dentistry, Law and Medicine, the differences between Québec and

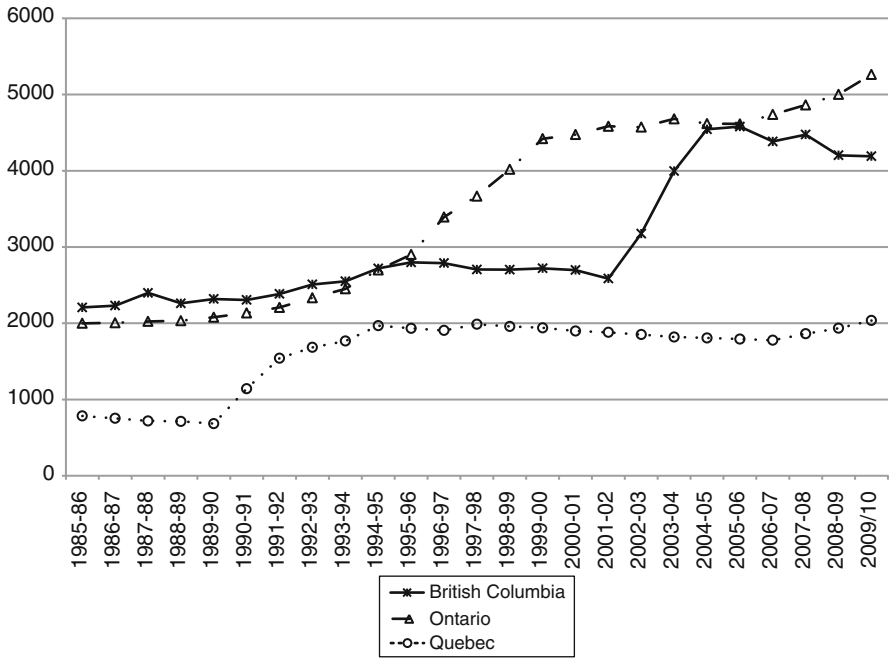

Fig. 6.2 Average undergraduate full-time fees in 2002 dollars (Sources: Statistics Canada, annual tuition survey number 3123, weighted average domestic arts tuition fees by province)

the other two provinces are equally stark. As with undergraduate fees, the change in government policy in the mid-1990s in Ontario and then in 2001 in British Columbia, lay behind these dramatic changes.

Governments' emphasis on accessibility and growing family aspiration are reflected in sharply increasing participation rates in PSE. In all three provincial PSE systems moved from being 'elite' through a 'mass' phase to finally hover slightly above the magical threshold of 40 % which marks the movement to a 'universal' PSE system (Trow 1973; Scott 1995). This is a doubling of the rate since the middle 1970s. A comparison of the development in the three provinces points to the impact of public policy. While the rates increased rapidly in all of the provinces, particularly in British Columbia up until the middle 1990s, the rates dipped slightly during the last part of this decade while they continued to go up in British Columbia and Québec. From having had the highest participation rates in the 1980s Ontario's participation rates by the end of the 1990s had fallen well below Québec's and was about at par with British Columbia's.

This pattern corresponds to a period of cuts to PSE funding to universities and colleges, tuition increases and restructuring of student assistance programs in Ontario and a concerted effort in British Columbia to increase a previously low participation rate in PSE. After the election of the Liberal government the rates started to go up again in Ontario and has once again surpassed those in British Columbia, 46 versus 42 % among those18–24 years of age.

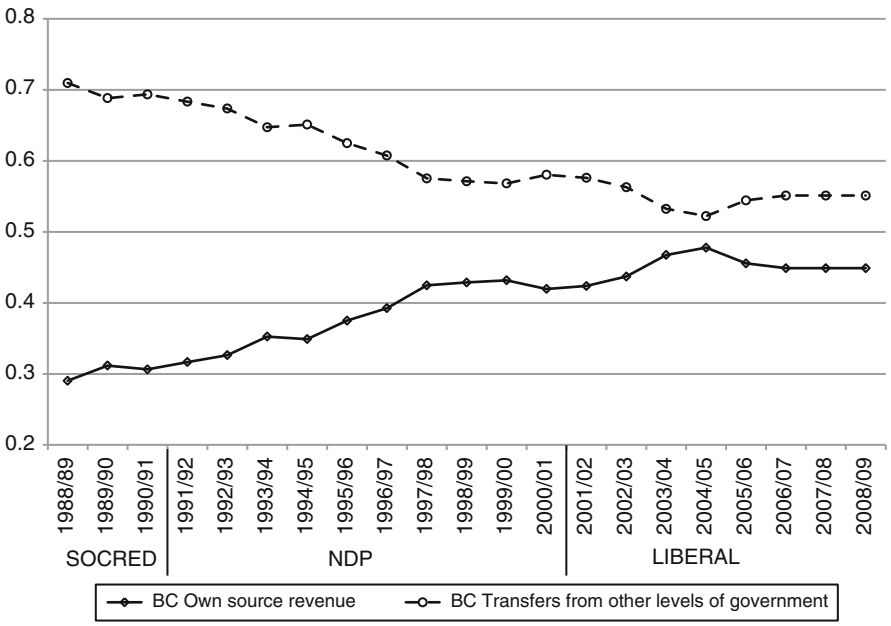

Fig. 6.3 Proportion of revenue from own source revenue and government funding, British Columbia, 1988/1989–2008/2009 (Source: Statistics Canada. CANSIM Table 387-007)

Marketization

The three case studies reveal how, at times, Canadian higher education has come to embrace market philosophy. As noted earlier, this is particularly true of Ontario where the Harris government initiated a major retreat in public spending on PSE and is also a distinct policy strategy of the British Columbia Liberal government. Marketization has not been as noticeable in Québec PSE. Our work has documented the role of four policy developments in pushing these systems towards the market: shift in funding sources with greater reliance on student fees, growth of international students, increase in the number and range of private institutions and matching fund schemes.

As noted in the literature, when faced with insufficient government funding to meet major enrolment increases postsecondary institutions in deregulated systems tend to adapt a market approach and focused on increasing revenue from other sources than government. As evident in Figs. 6.3, 6.4 and 6.5 this is what occurred in British Columbia and Ontario during the neo-liberal governments. However, we can only notice a minor development in this direction in du Québec where this ideology never got fully accepted. The major move towards a market approach seems to have concurred with the cuts in transfer payments during the late 1980s and first part of the 1990s. It's worth noting that in Ontario there has not been any substantial

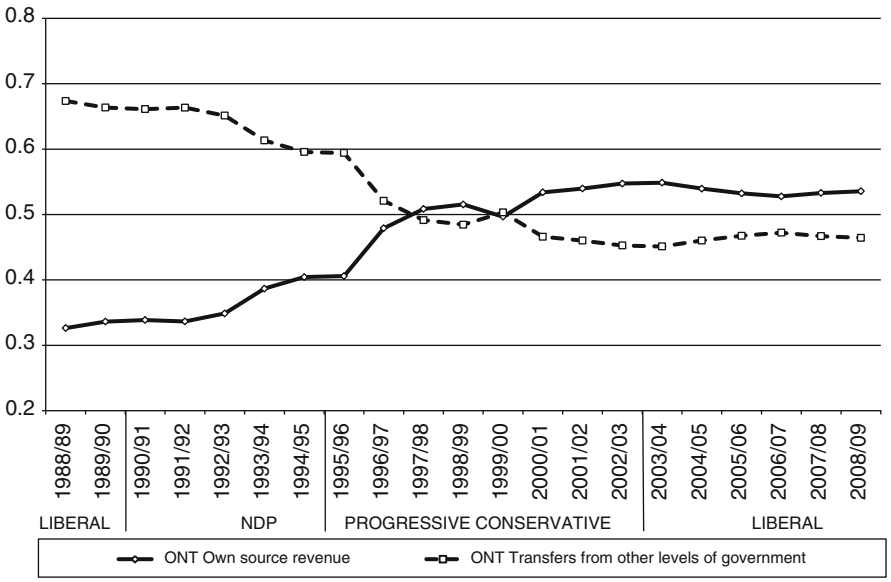

Fig. 6.4 Proportion of revenue from own source revenue and government funding, Ontario, 1988/1989–2008/2009 (Source: Statistics Canada. CANSIM Table 385-0007)

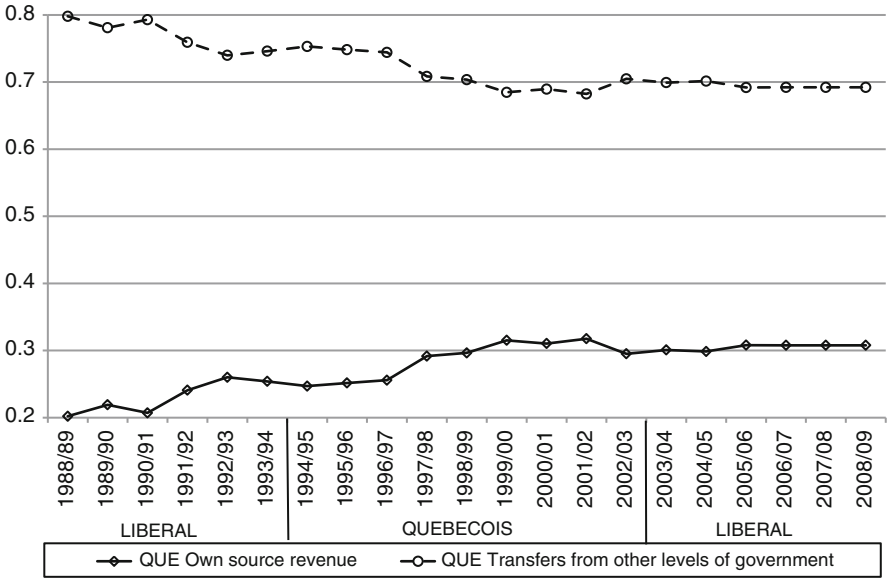

Fig. 6.5 Proportion of revenue from own source revenue and government funding, Ontario, 1988/1989–2008/2009 (Source: Statistics Canada, CANSIM Table 385-0007)

decrease in the proportion that comes from government funding since late 1990s. There is a sharp rise in the reliance on own funding following the first budget of the Progressive Conservatives but thereafter the proportion remained quite stable. The situation is somewhat different in British Columbia where the reliance on own sources continued to increase up to 2004/2005, be it at a slower pace since the late 1990s. Since 2004/2005 the trend seems to be somewhat reverse with a slight increase in the proportion coming from government funding.

When we breakdown the two funding source categories (government and 'own source') into their component parts we can see more clearly how the funding burden has been shifted from the State to individual students, as could be predicted from the literature. Thus tuition fees as a percent of total funding have increased the most. In British Columbia, Ontario and Québec the increases went from 13, 12.2 and 6.2 % in 1988/1989 to 22, 26.5 and 8.8 % respectively in 2003/2004. Tuition fee as a percent of total funding has remained relative stable since 2003/2004. As noted above while Québec has maintained very low fees, the change in government policy in the mid-1990s in Ontario and then in 2001 in British Columbia, lead to dramatic increases in the fees charged. Through deregulation of some graduate and professional programs, and steep increases in the still regulated fees for general arts and science programs, the Ontario government's tuition policy has been to balance funding for colleges and universities by bringing tuition fees to 35 % of the cost of providing university and college courses. In British Columbia, the liberal government deregulated the fees in 2001. The changes in tuition policy suggest that the governments in Ontario and British Columbia are moving away from supporting students and shifting that responsibility to students and their families, universities and the private sector. By downloading the costs of the post-secondary system to the 'consumer' student, the government is adopting a market paradigm. However, it is worth noting that during the second half of the last decade there was a re-regulation of the fees. This did not make studies less expansive but it slowed the development of further marketization of the PSE system.

Expanding the proportion of full paying international students is, as discussed above, linked to globalization and marketization. It is therefore of interest to note that for revenue generation reasons it has become increasingly important for Canadian postsecondary institutions to compete around the globe for international students. Foreign undergraduate students pay, on average, just under three times the price that Canadian students pay. During the first part of the last decade the number of full-Time Equivalent international students enrolled in Canadian universities doubled from 35,205 to 71,232 (See Table 3.8, CAUT Almanac, 2009/2010-Source Statistics Canada). Ontario and British Columbia have been particularly active in the international student market and managed to increase the number of international students dramatically over the last decade. The trend is explicitly encouraged by government policies that create a way for institutions to make up some of the revenue lost through decreases in government funding. The language situation has made it more difficult for Québec institutions to compete for international students. However, it may also be the case that the marketization forces generally have been less strong in this province, as there is not the same push to compete in the international student market.

The Progressive Conservative government in Ontario and the liberal government in British Columbia introduced legislation aimed at encouraging more competition, another neo-liberal strategy, in their PSE systems through the growth of private degree-granting institutions. In both provinces, the government claimed that private universities would expand choice for students, enhance competition between publicly funded universities and improve accessibility. Ontario passed new legislation for degree granting and operating a university permitting organizations to offer programs leading to a degree, or to operate a university. Similarly, in British Columbia set out criteria under which new institutions, including private and public institutions from outside the province, would be authorized to offer degree programs and grant degrees in British Columbia. In addition, the bill allows public colleges and institutes to offer 'applied baccalaureate degrees' and university colleges to offer 'applied master's degrees' (Hansard April 11, 2002). In contrast the situation in Québec appears to be relatively stable. Québec has no private universities and only a small private sector at the college level. Thus, while changes in higher education policy in Ontario and British Columbia in recent years have moved the system closer to the market, the private sector and privatization role of government remains, until now, fundamentally unchanged in Québec. The strength of the public sector unions combined with the opinion polls probably accounts as much as anything for the lack of change in Québec.

The introduction by provincial governments of various matching grants schemes, whereby funds from the private sector can contribute to the financing of different parts of the system, is another mechanism to foster marketization. This strategy was prevalent under the Progressive Conservative government in Ontario that introduced matching funds for student aid aimed at increasing student enrolment in engineering and computing. They also introduced a matching fund program for research where the government contributes one-third of the total funds required to support research initiatives that have secured private sector financing. The Ontario government has placed a greater emphasis on matched private sector funding, increased university spending on student assistance and discipline specific scholarships, as opposed to enhancing the Ontario Student Assistance Program (OSAP).

Matching fund schemes are less developed in British Columbia but the Liberal government has shown increased interest to move in a similar direction. Tendencies to increase marketization through private sector influence on research is also evident in Québec where government introduced a university research tax credit program to encourage business to invest in applied research, a topic we will return to in the section on research and development.

The three Canadian case studies show that while the neo-liberal influences on higher education in Canada may be less pronounced than in other Anglo-Saxon countries, the push towards marketization is clearly visible. This is particularly the case in Ontario and British Columbia where the Harris and Campbell governments under an umbrella of neo-liberalism have engaged in policy agendas aimed at fostering an ethos of privatization, competitiveness and entrepreneurship within the postsecondary sector.

Accountability

An underlying but consistent theme across all three provinces and across party political lines has been the commitment by governments to make the connections between educational spending and useful outcomes more transparent and understandable by the general public. This policy priority has taken on different forms in the three provinces. Both Québec and Ontario have made this a major policy priority. While in British Columbia the emphasis has been on the general public interest aspect rather than institutions. In 2000, the Québec government first stated its accountability priority clearly: universities kept their autonomy and their power to organize their activities as they saw fit, and were answerable to society and public authorities for their management of public funds (Ministère de l'éducation 2000). In Ontario, institutional accountability has been the major priority. Institutions are required to account for public funds and to demonstrate achievements on government prescribed benchmarks or indicators. A system-wide accountability perspective has been more problematic in Ontario because of the lack of system level planning. Moreover, the form of accountability has proven more controversial in the post-secondary system and has been the area most subject to change.

While accountability first became a priority in the early 1990s, as the NDP government began an auditing system for universities the Progressive Conservatives were far more aggressive in their approach. Accountability and quality were identified as major thrusts of their PSE platform. For the present liberal government in Ontario accountability has come to mean both quality assurance in the most general sense as well as a blurring of the boundary between the public and the private sectors. In the latter case, this is direct political accountability to the capital interests that are the main backers of the Liberal party. As they put in place a Quality Assurance Board in 2003 and dismantled much of the infrastructure created by the NDP to guarantee accountability they put their faith in the market as the best means of making institutions accountability. In other words, accountability to the marketplace was the best means of making the system accountable to the public. In the university sector, the government has provided targeted funding for particular occupations and simply decreed that more students will be educated without an increase in funding.

In British Columbia, the NDP commitments to accessibility and to vocationalism are good examples of the ways they have attempted to make the PSE system more accountable to the public interest. Through a series of skill and training initiatives, as well as the use of intermediary bodies the government tried to make institutions in both the public and the private parts of the college sector more directly accountable in their planning and the student outcomes. At the university level, the NDP created the New Programs Committee to monitor and approve all new degree programs. The creation of new vocational niche universities and the emergence of applied degrees increased the vocational orientation of the PSE system and were aimed at making the system more accountable to the economy.

More than any other province, Québec has been concerned with efficiency. In 2000, the government introduced a new management framework focusing on outcomes, respect for the principle of transparency, and increased accountability. Likewise, according to the Québec Policy on Universities, it is one of the principles on which government and university initiatives are based: the policy says that universities are supported financially by the state and that they must run their institutions efficiently by using the resources at their disposal optimally. The policy's second priority is described in the following terms: the universities' performance in terms of education quality, research excellence and the system's overall efficiency (Ministère de l'Éducation 2000, p.17). These themes were taken up in 2008, 2009 and 2011 when government passed bills on governance of the PSE sector.

Labor Force Development

While provincial policies are similar there are differences in emphasis. A defining characteristic of the NDP administrations during the period 1991–2001 in British Columbia was their commitment to vocationalism and skill training. The underlying theme was that academic education had received most of the attention in previous decades and now it was time to rectify this unevenness and to better serve the interests of labor. What followed was a massive expansion in the number of vocational spaces as the new funding mechanisms took effect. The British Columbia Liberal government took a different approach. The "New Model for Industry Training" removed the government from its direct involvement with apprentices, gave business a dominant role in the governance of the training system, and introduced a system of 'flexible', modular training courses that could be adapted to suit the needs of specific employers and delivered by private trainers (British Columbia Ministry of Advanced Education 2002).

We can observe a distinct shift in emphasis in Ontario's PSE system away from liberal education towards a vocational, technical education. The change in funding mechanisms toward tied and matched private sector funding has moved the system towards the market and has placed a greater emphasis on vocational training as a means of meeting labor market demands. The Progressive Conservatives (1995–2003) favored market principles in achieving these objectives. This government's post-secondary policy emphasized serving labor market needs – that is educational training was linked to the labor market to build industry infrastructure and to sustain industrial competitiveness. This was accomplished through vocationally oriented programs and through market-oriented research. Since 2000, the government has used targeted funding mechanisms and matching funding programs to emphasize its vocationalism and skill development, and thereby induce the post secondary institutions to embrace its priorities.

In Québec the commitment to this policy theme, while unequivocal, has been much more sporadic than in the other two provinces. Successive governments have re-affirmed the foundational role of Cégeps in career training. Further,

while pushing educational institutions toward industry and to the needs of the marketplace, governments have also been clear about the need for institutions not to be diverted from their primary education missions and for them to protect their institutional autonomy.

Given the varying policy orientations in the three provinces with regard to the appropriate emphasis on academic and vocational programs one would expect to find some key differences in the outcomes between provinces and within each province depending on the party in power. Yet in British Columbia the evidence suggests that all governments during the period from 1985/1986 through to 2004/2005 were strongly committed to increasing access across the system. While on the surface the PSE policies of the three parties were different, particularly with respect to vocationalism, the outcomes were very similar with the academic/graduate part of the offerings continued to account for about two-thirds of the total FTE allocation. If anything, the vocational commitment was slightly higher in 1985/1986 than any later year. Just as colleges wished to be more academic so successive governments were committed to increasing access to programs leading to degrees in the interior.

For Ontario the absolute number of spaces in the vocational/skills training increased but relatively speaking the sector declined when set against the academic sector.

The pattern in Québec has been somewhat different given the role of the Cégeps. Over the period 1990/1991–2004/2005, participation in college programs has remained relatively constant around 60 %, although the internal distribution rates between career and pre-university programs have gone in opposite directions, the former increasing the latter decreasing. The degree granting programs have all increased over the same period with the Bachelor's program overtaking the 40 % threshold in 2003/2004.

Research and Development

As mentioned before research policy has primarily been a federal matter. At the provincial level, a wide variation exists between the three provinces in the extent to which they have created their own research and development infrastructure. British Columbia has introduced a few programs, most recently its Chairs of Excellence program, but has tended to rely on federal provision. All three provinces have faced similar increases in the allocation of funds for research because of the matching requirements imposed through the federal programs. Ontario has in some ways lead this policy initiative with for example a 'centers of excellence' program. Québec has over the last two decades developed a parallel system of research and development funding agencies that covers all disciplines and is by far the most extensive structure of any Canadian province. Its focus on research and development can be seen to be part of nation-building. This priority was based on the principle that research must contribute more closely than before to the state's economic and social goals. While the original focus for Québec was upon the human sciences, over time, the Québec policy agenda on research has come to take on an increasingly utilitarian agenda driven by economics

As transfer payments have decreased, Canada has strengthened its commitment to funding research and development (R and D) in PSE institutions. This has occurred primarily through three mechanisms: grants directly to faculty members for research projects; grants directly to universities for 'indirect costs'; and, capital funding on a shared-cost basis for infrastructure projects. This funding are disbursed by federal granting agencies on a competitive basis and awarded in accordance with federal criteria, which includes merit and national interests.

In summary, at the provincial level it appears that while governments across the political spectrum have clearly prioritized R&D in their policies, they have retreated from actual expenditures and have instead created the conditions that allow for investment from non-government funders, in particular business and in the case of British Columbia foreign sources.

Conclusion

In this chapter we have presented profiles of the relationship between policy environments, policies and the performance of PSE systems in three provinces. Our aim has been to: explore the extent to which the global movement of neoliberalism and academic capitalism has affected Canadian policies on higher education in the perspective of state's legitimation and accumulation functions; contribute to the debate on whether prevailing global political economic forces induces more convergence or not; and finally add to our understanding of how the interplay between fiscal reality and political ideology affects PSE.

Three findings stand out in the study. First, our findings suggest that as part of the emerging discourse on knowledge economy and knowledge society PSE has become more central to the legitimation and accumulation functions served by the State. This is reflected in PSE policy becoming more closely tied to economic and social development. If R&D and labor force development primarily serves the accumulation function of the state then accessibility and accountability serve the legitimation function both directly and indirectly by guaranteeing individual economic security (see e.g. Sears 2003). In these ways, provincial administrations use PSE polices on accessibility to legitimate their governments while at the same time appearing to be accountable for individual economic security. Nowhere is this clearer than in the period 2005–2010 when the policy environment drove Liberal governments in each of three provinces to increase their funding commitment to PSE in major ways despite increasing fiscal restraint.

The connection between educational opportunity, the accumulation of what Bourdieu would call 'cultural capital' and getting a job has become part of our taken for granted assumptions about modern society. In this way we argue that all three provincial governments have made PSE more central to the way they fulfill the legitimation and accumulation functions at this State level. In Bourdieu's terms, the connection between PSE and economic sustainability at both levels has become part of the Canadian 'habitus' (see Harvey 2005). This connection has become a common orientation across the three provinces and by extension nationally as they

account for approximately 75 % of the total Canadian population. This mindset becomes a taken for granted assumption about the way things work.

Second, the comparison between the three provinces provides some insight into the debate among globalization theorists with regard to convergence and divergence (Dale 2005; Wagner 2004; Mok 2003). The data reveal that there have been many points of convergence especially with regard to policies on accessibility and accountability. Yet with regard to neo-liberal ideology, which we regard as a defining characteristic of globalization, we found Québec to be exceptional and therefore divergent. Even with the election of the recent right-wing Liberal government the province has not moved the PSE system in any significant way toward the market. The connection between nationalism and strong public sector unions is the most likely explanation for this resistance. Similarly, the refusal of the NDP government in British Columbia during the 1990s of pass on the burden of reduced transfers from the federal government onto students by de-regulating tuition fees is another example of divergence. Both examples provide strong evidence against the inevitability of globalization. Indeed our study confirms the work done by others (e.g. McBride 2001) showing that governments help construct globalization at times buying into neo-liberalism while they at other times find it ideologically and or politically more advantages to rejecting that pressure.

Third, looking across how various governments in the three provinces have addressed accessibility, accountability, labor force development, marketization and research and development, the complex interplay between political, economic and social forces stands out. We have become increasingly aware of the difficulties that all policy researchers face when they attempt to explain the links between intent and outcome. The review of the policies reveals numerous internal contradictions that have emerged in each province. For example, the strong commitment to vocational education on the part of NDP governments in British Columbia through the 1990s did not translate into differential allocation of FTE between the vocational programs and the academic graduate programs. Similarly, during these years in contrast to Ontario and Québec, British Columbia maintained the total operating grant for PSE at a high level yet when we look at the provincial funding per FTE enrollments, British Columbia recorded a substantial decrease while Ontario and Québec remain stable. When we turn to accessibility and the overwhelming commitment by governments across the political spectrum to furthering this goal it comes as a surprise to find out a lower proportion of young people obtain PSE credentials from a college diploma to a doctorate than in the other two provinces.

The tension between political ideology, practical politics and outcomes is particular noticeable in regard to the theme marketization. Certainly, the link between political ideology and the implementation of marketization policies is clear in Ontario and British Columbia where the line of causation seems direct. Yet it is important to highlight some of the tensions between political ideologies, the theme marketization and practical politics when it comes to outcomes. First, while the NDP government in British Columbia in the 1990s did not follow the lead of the Ontario government and de-regulate tuition fees, they did approve the creation of two public niche universities with close ties to the market as well as a private

non-profit university. Further, while the regulation of fees did fit well with this government's ideological stance it was also recognized as good electoral politics. Second, while the Liberal government in British Columbia was ideologically committed to de-regulate tuition fees they were also under tremendous pressure from the university Presidents to change this policy so they could fill the gap left by lower government transfers and increasing expenditures. Third, in Ontario the de-regulation of fees was intertwined with the decline in federal funding, the ideological predisposition of the Progressive Conservatives to spend less on the public sector as well as the funding gap that faced universities. Similarly, when the Progressive Conservatives employed fiscal strategies that include market mechanisms and market principles to assist in resource allocation and revenue generation approach was not one of outright privatization that would have seen the government cede control of the PSE system to market forces. Rather the approach appears to represent a compromise whereby the universities maintain a degree of autonomy and the state maintains some degree of control over the postsecondary system. Fourth, for all of Liberal rhetoric in Québec on raising tuition fess the government simply faced too much opposition from all sides but particularly from the students to implement its neo-liberal agenda. Thus, the overall impression is that while the state has increasingly embedded PSE institutions in the market it has at the same time hung onto the long-term attachment to 'welfare liberalism'.

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Chapter 7
Patterns of University Governance: Insights Based on an Analysis of Doctoral Education's Management Reform

Lukas Baschung

Introduction

For a long time, studies on public management have underlined the central role of new public management (NPM) and the field of higher education is no exception. Its scholars have also noticed NPM's appearance in various Western countries, albeit to varying extents (Amaral et al. 2003; Braun 1999; Deem et al. 2007; Schimank 2005). Simultaneously, many public management and higher education scholars became aware that NPM alone would not be sufficient to frame theoretically what they observed in empirical data. Indeed, an alternative public narrative has been suggested. Building partly on a criticism of NPM and partly on the basis of empirical observations in Western European democracies, public management scholars like Kickert (1997) developed the framework of the network governance (NG) narrative.

Besides lacking theoretical alternatives, studies on university governance are often characterized by another feature, namely their preference for national case studies. As a consequence, nationality is often the only variable which is considered in comparative studies seeking explanations for differences within empirical observations. It is argued, however, that the comparative study of university governance could be considerably enriched if other variables are added to that of nationality. For instance, one can hypothesize that variables like the size and disciplinary profile of higher education institutions (HEIs) as well as the scientific disciplines' nature also have an impact on the type of university governance applied.

On the basis of these developments and arguments, and in order to detect further insights into university governance, this chapter suggests the use of an analytical framework which is constituted, on the one hand, by a number of central NPM and

L. Baschung (✉)
Direction générale de l'enseignement supérieur, Etat de Vaud,
Av. de l'Elysée 4, Lausanne, Switzerland
e-mail: Lukas.Baschung@vd.ch

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NG elements (Hood 1991; Ferlie et al. 2009) and, on the other, by four variables, namely the national variable, consisting of the opposition between federal and centralized political systems, the disciplinary profile of HEIs (specialist vs. generalist), the size of HEIs (large vs. small) and the type of scientific discipline (soft vs. hard and pure vs. applied). Thus, it examines the extent to which elements of one or the other public management narratives—NPM and NG—appear according to the four variables.

Such an ambitious research design can only be applied with difficulty to entire national higher education systems. Therefore, two limitations are imposed: first, it concentrates on a precise issue in higher education, namely the reform of doctoral education; second, case studies of doctoral schools—taking into account the four variables—are used for the analysis. For two reasons doctoral education reform is particularly appropriate as an empirical field for the study of university governance. First, considerable changes in the governance of (European) doctoral education can be expected. Until recently, European doctoral education has been mainly shaped by the so called "apprentice-ship model", that is, the principle according to which a professor recruits and trains his[1] doctoral students within a binary relationship without any interference by other actors. Thus, with respect to the governance issue, existing literature generally underlines the prevalent role and power of the academic profession. Since forms and contents of doctoral training have mainly been determined in the framework of the "apprentice-ship model", professors have largely controlled them, but for between 10 and 30 years—varying according to the national, institutional and disciplinary context—doctoral education has occupied an increasingly important place on the reform agendas at European, national and institutional levels. Among others, it has become a hot topic in the framework of the Lisbon agenda and the declaration of Bologna (Kehm 2006). Thus, a larger number of actors seem to be interested in intervening in doctoral education. Second, new forms of doctoral education have been emerging: one central component of such reform in Europe consists of the establishment and running of "structured doctoral programs" or "doctoral schools".[2] Inspired by American "Graduate Schools", various forms of doctoral schools have been increasingly emerging in many European HEIs. Consequently, some authors (e.g. Gingras and Gemme 2006) question the influence of the academic profession on doctoral education. Hence, some changes in the governance of doctoral education could well have been occurring, particularly through doctoral schools. Therefore, the chosen case studies consist of a number of doctoral schools.

This chapter is structured in four parts. The first part is dedicated to a synthetic presentation of the main elements of the NPM and NG narratives. In a second part,

[1] Only the male gender is used in the interests of brevity.

[2] Varying denominations appear in higher education studies and political documents. Besides the mentioned terms, "research school"— especially in Nordic countries—or "graduate school" are also in use. The term "graduate school" may be particularly misleading because in its country of origin, the USA, it includes both the master and doctoral levels, whereas in many European HEIs it is limited to the doctoral level.

the variables and the rationales for their choice are developed and the chosen case studies are briefly portrayed. The third part presents the results and discusses the obtained patterns of university governance. The chapter then concludes. Empirical data used for this chapter originate from a study dedicated to doctoral education reform in Switzerland and Norway (Baschung 2013). They principally consist of about 90 interviews carried out with academics and administrative staff of all levels of governance within a number of Swiss and Norwegian HEIs.

Central Elements of New Public Management and Network Governance

This section presents the two chosen public management narratives[3] and their main characteristics. The principal objective does not consist in providing an exhaustive overview and profound critical discussion of existing scientific literature about those narratives. This exceeds the purpose and relevance of this chapter. Instead, the narratives' presentation is limited to their essential components. Therefore, they can be used—similarly to the "Governance Equalizer"[4] of de Boer et al. (2008)—as a normative benchmark in order to characterize and compare the university governance of the different case studies. In other words, depending on the presence or absence of those main characteristics, each case study can be classified and compared.

Since the end of the 1970s, NPM reforms have spread to many Westernized countries worldwide (Kickert 1997). Not only have the reforms varied, however, but the opinions held by public management scholars about the central elements of NPM have also differed. The following classical definition is Christopher Hood's (1991: 4–5), who talks about doctrines when he summarizes the narrative's main elements and their meanings:

– Hands-on professional management in the public sector: active, visible, discretionary control of organizations from named persons at the top, who are "free to manage."
– Explicit standards and measures of performance: definition of goals, targets, indicators of success, preferably expressed in quantitative terms, especially for professional services.

[3] According to Ferlie et al. (2009), new public management and network governance are not purely analytical and theoretical frameworks aiming at comprehension (in the Weberian sense), yet they both mix technical, political and normative elements. They are therefore called *narratives*.

[4] The idea of the "Governance Equalizer" consists in the consideration that a change in one governance dimension does not necessarily directly influence a change in another governance dimension. For instance, less state regulation does not necessarily imply more market orientation. Hence, rather than suggesting a governance model which puts different dimensions in direct relation, de Boer et al. (2008) suggest an equalizer containing several dimensions, each of which can increase or decrease more or less independently of the others.

- Greater emphasis on output controls: resource allocation and rewards linked to measured performance; break-up of centralized bureaucracy-wide personnel management.
- Shift to disaggregation of units in the public sector: break-up of formerly "monolithic" units, unbundling of U-form management systems into corporatized units around products, operating on decentralized "one-line" budgets and dealing with one another on an "arm's-length" basis.
- Shift to greater competition in public sector: move to term contracts and public tendering procedures.
- Stress on private sector styles of management practice: move away from military-style "public service ethic", greater flexibility in hiring and rewards; greater use of PR techniques.
- Stress on greater discipline and parsimony in resource use: cutting direct costs, raising labor discipline, resisting union demands, limiting "compliance costs" to business.

More explicitly, concerning "control of organizations from named persons at the top", Christensen and Lægreid underline that "NPM is thus a doubled-edged sword which prescribes both more autonomy and more central control at the same time" (2007: 8). There is a desire for a stronger hierarchy where management is entrepreneurial rather than collegial. The center defines the strategic framework and governance instruments. Instead of tacit or self-regulation, strong performance measurement, monitoring and management systems with increased audit systems are established. The periphery has operational freedom but only within the given strategic framework. The goals of NPM consist in efficiency, value for money and performance, rather than democracy or legitimacy (Ferlie et al. 2009).

As mentioned earlier, building partly on a criticism of NPM and partly on empirical observations in Western European democracies, several scholars developed the elements that constituted the framework of the NG narrative. The central argument put forward by these scholars is that a broader analytical framework is needed to understand public management. Thus, Kickert (1997) argues that public management cannot be isolated from its societal and political context, that it corresponds to governance in complex networks composed of a wide range of actors outside public administration and that it works according to other forms of governance such as negotiation—rather than, for instance, hierarchical top-down control—without any dominant actor. Similar or even identical ideas to the NG narrative—which partly built the basis for the narrative's development—can be found in concepts such as the "hollowing out" of the traditional nation-state (Rhodes 1997), "multi-level governance" (Bache and Flinders 2005; Hooghe and Marks 2003) or "whole-of-government" approach (Christensen and Lægreid 2007). According to Ferlie et al. (2009), the following elements form the network governance narrative:

- A greater range of actors and interactions.
- The central state plays more of an influencing and less of a directing role. It works as a relationship facilitator.
- There is a shift from vertical to lateral forms of management.

- There is devolution of power downwards from the center of the nation-state to lower tiers and also upwards to higher tiers, including European ones.
- Coordinating power is shared among social actors, possibly operating at multiple levels of analysis.
- Knowledge and "best practices" spread across the network.
- The network develops a self-organizing and self-steering capacity.
- Accountability relationships are a way of accounting to local publics and not an ex post state-driven system of checking.

Variables and Case Studies

As mentioned in the introduction, I hypothesize that the study of university governance can be enriched if additional variables are examined. This section presents the four variables which are part of the study's analytical framework and develops the rationales for their choice. In addition, it comprises a presentation of the chosen case studies and their characteristics with regard to the four variables.

The first chosen variable consists in the type of scientific discipline or field. In "Academic tribes and territories: Intellectual enquiry and the culture of disciplines" Becher and Trowler (2001) convincingly describe specific characteristics of 12 different scientific disciplines and their respective communities. Differences related to these disciplines and their communities are demonstrated by a range of categories: they run from the validation process of results, deviations in language and style, nature and incidence of collaboration, recruitment and initiation to forms of doctoral supervision. On this basis, the hypothesis that these differences among disciplines and their communities also create differences in the concrete design and management of doctoral schools can be made. Differences resulting from factors related directly to disciplines, like varying disciplinary needs and cultures in terms of supervision, training and underlying governance patterns, can be assumed. Becher and Trowler (2001) demonstrate one way of categorizing disciplines. They distinguish between hard pure (e.g. physics), hard applied (e.g. mechanical engineering), soft pure (e.g. history) and soft applied disciplines (e.g. law). Although these distinctions are not absolutely clear for all disciplines, they do establish "landmarks" allowing a choice of doctoral schools in each of these four categories. On the basis of practical considerations, i.e. existence and access to cases, the concrete cases of this study are situated in the fields of molecular biology (hard pure), material sciences (hard applied), humanities (soft pure) and finance (soft applied).

A second variable consists of the size of HEIs, for instance, in terms of numbers of doctoral students and supervisors per discipline. Regarding the political and economic oft-cited criterion of critical mass, not all HEIs are likely to have "enough" doctoral students and teaching and supervisory staff in each domain in order to offer a specialized doctoral school. Therefore, solutions like interdisciplinary or inter-institutional doctoral programs are available and it can be assumed that they are not without consequences for the content or steering aspects of doctoral programs.

Arguably, the total number of students of an HEI is still a good indicator of its size, so a simple distinction between large HEIs—defined as having a total student number of 10,000 and more—and small HEIs—defined as having a total student number of fewer than 10,000 – is applied.

HEIs can be distinguished not only regarding size but also in terms of types. This third variable refers to the distinction elaborated by Lepori et al. (2010) between specialist and generalist HEIs. In this typology, which is based on a large empirical analysis of European HEIs, specialist HEIs mainly concentrate their staff and students within one of four large scientific fields (engineering and technical sciences, medical sciences, natural sciences, human and social sciences). In contrast, generalist HEIs' staff and students are mostly distributed across all of the four distinguished scientific fields. Hypothesizing that management cultures are more or less dominant according to the type of HEI, the study takes this variable into consideration. In both countries considered in this study, two types of HEIs are present within the chosen case studies. In Switzerland, cantonal universities and federal institutes of technology are represented, whereas universities and one specialized university institution in Norway are taken into consideration. Cantonal universities and Norwegian universities usually amalgamate a broad range of disciplinary fields. In contrast, federal institutes of technology as well as specialized university institutions concentrate on a more limited spectrum of scientific disciplines. According to the typology of Lepori et al. (2010), the first group of HEIs belongs to generalist institutions whereas the second group belongs to specialist institutions.

The fourth variable is related to the type of national political system and its implications for the higher education system. Distribution of responsibilities in higher education between national and regional governments, funding agencies and other intermediary bodies and actors varies from state to state, especially between centralized and federal states. Consequently, policies in higher education and their implementation through respective reforms can vary, too. Hence, this variable could also have an impact on concrete doctoral schools. Therefore, Norway is chosen as representing a centralized country, whereas Switzerland is typical of a federal state. Here, it is important to underline that what are compared are not higher education systems as such but doctoral schools within different higher education systems. The following eight case studies, described in Tables 7.1 and 7.2, have been examined.

Empirical Results and Emerging Patterns

This section has two objectives. First, it shortly presents the issues which are affected by the reforms in doctoral education management and the extent to which elements of New Public Management and Network Governance, as presented in the first section of this chapter, could be noticed. Second, it points to the differences between case studies and presents and discusses the resulting patterns of governance on the basis of the four selected variables.

Table 7.1 Description of chosen case studies

	Switzerland	Norway
Scientific discipline	Doctoral school and size (number of students) of HEIs considered (in 2009)	Doctoral school and size (number of students) of HEIs considered (in 2009)
Hard pure	"PhD program in Biomolecular Structure and Mechanisms" (1) Federal Institute of Technology Zurich: 15,071 University of Zurich: 25,815	"Molecular and Computational Biology Research School" (2) University of Bergen: 13,042
Hard applied	"PhD program in Materials Science and Engineering" (3) Federal Institute of Technology Lausanne: 7,383	"FUNMAT Research School" (4) University of Oslo: 25,917
Soft pure	"Graduiertenprogramm Intermediale Ästhetik, Spiel – Ritual – Performanz" (5) University of Basel: 12,088 University of Bern: 13,912	"National Research Training Program – Text, Image, Sound and Space" (6) University of Bergen: 13,042
Soft applied	"SFI PhD program in Finance" (7) University of Lausanne: 11,581 University of Geneva: 15,014 University of Zurich: 25,815 University of Lugano: 2,704	"PhD program in Finance" (8) Norwegian School of Business and Economics: 2,824

Sources: www.bfs.admin.ch; dbh.nsd.uib.no; accessed on January 2011

Table 7.2 Description of chosen case studies

Case study	Type of discipline (Variable 1)	Size of HEI(s) (Variable 2)	Type of HEI(s) (Variable 3)	Type of political system (Variable 4)
1	Hard pure	Large	Specialist/generalist	Federal
2	Hard pure	Large	Generalist	Centralized
3	Hard applied	Small	Specialist	Federal
4	Hard applied	Large	Generalist	Centralized
5	Soft pure	Large	Generalist	Federal
6	Soft pure	Large	Generalist	Centralized
7	Soft applied	Large	Generalist	Federal
8	Soft applied	Small	Specialist	Centralized

The analysis of the examined case studies reveals that five main issues related to doctoral education are affected by changes in management: recruitment, curricular training, scientific exchange, supervision and follow-up of doctoral students.

Regarding recruitment, a large number of NPM elements were evidenced. Private sector styles of management, greater competition and explicit standards and measures of performance could be noticed in the efforts made to attract the best doctoral students. Such efforts range from broad advertisement at international level in the name of a PhD program label, standardized requirements in terms of

completed tests and obtained grades, intensified selection procedures including interviews in situ, to selection by committees composed of a group of professors. The organization of such selection sessions in the name of doctoral schools also expresses disaggregation (or rather reorganization) of units in the public sector—namely the individual chairs as previous recruiters—and stress on discipline, since invited candidates could be of interest to several professors. Thus, if a candidate turns out not to match a particular supervisor, he might be more suited to another. Therefore, money spent on inviting the given candidate (flight, hotel, etc.) is not lost. Finally, hands-on professional management is visible in the existence of heads of doctoral schools, who, in the case of disagreement, take the final decisions. Yet, in some cases, changes in the recruitment of doctoral students rather correspond to some NG elements. Selection committees are sometimes composed of actors from varying institutions and scientific disciplines, which express the NG element of a greater range of actors and interactions. Furthermore, those actors apply lateral rather than vertical forms of management when deciding on the selection of candidates.

The category curricular training stands for courses specifically conceptualized for and attended by doctoral students. In some cases it clearly reflects the NPM element "explicit standards and measures of performance". This applies if doctoral students are obliged to complete a certain number of credits within the given doctoral school or even a clearly defined course program and related exams. The selective institutional funding of certain course programs can be seen as a private sector style of management to the extent that only institutional priority areas are financially promoted. Besides these two NPM elements, a series of NG elements can be identified. In quite a few cases, courses are suggested within inter-institutional and/or inter-disciplinary networks, situated at local and/or national levels, organized and steered by voluntary academics, independently of any constraint and, sometimes, funded by the state (the only condition being inter-institutional or interdisciplinary cooperation). Those characteristics illustrate the NG elements comprising "a greater range of actors and interactions", "coordination power shared by actors operating at multiple levels", "lateral forms of management", "self-organizing and self-steering capacities" and "the state as relationship facilitator".

The category scientific exchange includes new practices of interaction focusing on doctoral students' research and training which go beyond the usual exchange between the doctoral student and his supervisor(s) or, in the case of laboratory-based sciences, the research group. In the case of the examined case studies, this includes interactions within a group of doctoral students, mostly enlarged by local and invited external scholars. Such interactions might take place in the framework of seminars, conferences and retreats specifically organized for doctoral students. They are essentially organized in the same manner as the curricular training, except that they have a less constraining character. As a consequence, they essentially reflect the same NG elements as the curricular training, whereas NPM elements are absent.

Thesis committees composed of at least two supervisors from inside and sometimes outside the doctoral students' laboratory or HEI constitute the reform element

of the category supervision. Thus, instead of just one supervisor, doctoral students get more or less regular feedbacks from several supervisors. In terms of NG, this change reflects the idea according to which a greater range of actors and interactions can be noticed. If thesis committees are compulsory, this can be interpreted as the NPM element of an explicit standard of performance.

Finally, follow-up mechanisms are largely dominated by NPM elements. Those mechanisms often take the form of regular reports about doctoral students' progress in research and training. The underlying idea consists of an initial definition of a research and training project, sometimes containing deadlines, and its regular examination. Doctoral students and/or their supervisor(s) write reports, usually annually, about the former's progress. Delays have to be justified. In the case of repeated negative developments, doctoral students can be excluded from the doctoral program. The quality of doctoral students' supervision might also be a topic which is dealt with in such reports. Those changes clearly reflect the NPM elements "explicit standards and measures of performance", "greater emphasis on output control" and "stress on discipline in resource use". Recipients and control instances of those reports vary between doctoral schools and faculties. If the control instance consists in a new unit, i.e. a doctoral school which goes beyond previous institutional structures, this can be interpreted as the application of another NPM element, namely "the disaggregation of units in the public sector".

After this general presentation, Table 7.3 shows the NPM and NG elements within the individual case studies. On the basis of this table, trends towards more or fewer NPM and NG elements can be identified. I limit this analysis to the identification of trends and resist the temptation to quantify too precisely the number of elements because it is difficult to say whether the weight in terms of the impact of each element is the same or different.

What do those results mean in terms of the observed variables? With respect to the fourth variable—the national one—the following observations can be made. Table 7.3 shows that Norwegian case studies tend more towards new public management elements, whereas most Swiss cases rather tend towards NG elements. All Norwegian cases, except for humanities (6), have at least as many NPM elements as NG elements, whereas all Swiss cases, except the one in material sciences (3), have more NG elements than NPM elements. Thus, managerial reforms applied to the whole higher education system seem to be accepted more in the centralized state of Norway than in the federal state of Switzerland. Yet is it really the variable "centralized vs. federal state" which makes the difference regarding the stronger acceptance of one or the other public management narrative? Comparative studies have been carried out on the appearance of new public management. Hood (1995) rejects the hypothesis of the "English disease", arguing that NPM also shows up in non-English speaking countries. Pollitt and Bouckaert (2004) consider that countries can be classified according to certain patterns. They distinguish between conservative reformers—like federal Germany—, modernizers—like northern and central European countries—and marketizers or minimal states essentially consisting of Anglo-Saxon countries. Hence, at least in this study, the "centralized vs. federal state" variable does not stand out as a generally determining variable.

Table 7.3 NPM and NG elements within the individual case studies

Doctoral school	Issue	NPM elements	NG elements
Biology CH (1)	Recruitment	Private sector styles of management	A greater range of actors and interactions
		Greater competition	
		Stress on discipline in resource use	
	Curricular training	Explicit standards and measures of performance	A greater range of actors and interactions
			Coordinating power shared by actors operating at multiple levels
			Lateral forms of management
			State as relationship facilitator
	Supervision		A greater range of actors and interactions
	Scientific exchanges		A greater range of actors and interactions
			Self-organizing and self-steering capacity
Biology NO (2)	Curricular training	Disaggregation of units in the public sector	State as relationship facilitator
		Explicit standards and measures of performance	A greater range of actors and interactions
			Lateral forms of management
	Supervision	Explicit standards and measures of performance	A greater range of actors and interactions
	Scientific exchanges		Lateral forms of management
	Follow-up	Explicit standards and measures of performance	
		Greater emphasis on output control	

Materials science CH (3)	Recruitment	Hands-on professional management	
		Disaggregation of units in the public sector	
		Explicit standards and measures of performance	
		Greater competition	
		Private sector styles of management	
	Curricular training	Explicit standards and measures of performance	Lateral forms of management
	Follow-up	Disaggregation of units in the public sector	
		Explicit standards and measures of performance	
		Stress on discipline in resource use	
		Greater emphasis on output control	
Materials science NO (4)	Curricular training	Explicit standards and measures of performance	
		Private sector styles of management	
	Scientific exchanges		A greater range of interactions
			Self-organizing and self-steering capacity
			Lateral forms of management
	Follow-up	Explicit standards and measures of performance	Giving an account rather than ex post state-driven system of checking
		Greater emphasis on output control	
Humanities CH (5)	Recruitment		Lateral forms of management
			A greater range of actors and interactions
	Curricular training		Lateral forms of management
	Supervision		A greater range of actors and interactions
	Follow-up	Explicit standards and measures of performance	
		Greater emphasis on output control	

(continued)

Table 7.3 (continued)

Doctoral school	Issue	NPM elements	NG elements
Humanities NO (6)	Curricular training		A greater range of actors and interactions
			Self-organizing and self-steering capacity
			Lateral forms of management
			Coordinating power shared by actors operating at multiple levels
	Scientific exchanges		A greater range of actors and interactions
			Self-organizing and self-steering capacity
			Lateral forms of management
			Coordinating power shared by actors operating at multiple levels
	Follow-up	Explicit standards and measures of performance	
		Greater emphasis on output control	
Finance CH (7)	Recruitment	Greater competition	Self-organizing and self-steering capacity
	Curricular training	Explicit standards and measures of performance	A greater range of actors and interactions
			Self-organizing and self-steering capacity
			Lateral forms of management
			State as relationship facilitator
Finance NO (8)	Recruitment	Private sector styles of management	
		Greater competition	
		Explicit standards and measures of performance	
	Curricular training	Explicit standards and measures of performance	
	Follow-up	Explicit standards and measures of performance	
		Stress on discipline in resource use	
		Greater emphasis on output control	

In the present analysis, one can argue that this variable nevertheless matters to the extent that a system-wide introduction of NPM elements—like standards and measures of performance regarding curricular training and follow-up of doctoral students—has a better chance of being realized in centralized Norway than in federal Switzerland.

The next variable which can be examined regarding its effect on identified management stories is type of HEI. The two case studies which are close or almost identical to a NPM ideal-type are situated within specialist HEIs. One of those HEIs is specialized in economics, the other in engineering and natural sciences. Contextual elements of our case studies showed that resistance to broad, standardized reforms was particularly apparent in case studies situated within generalist institutions. Thus, one can hypothesize that the NPM narrative—one central element of which consists of standards and measures of performance—meets fewer difficulties in specialist institutions than in generalist HEIs. This hypothesis is supported by Mora (2001: 107):

Academics tend to identify more strongly with their discipline, than with their university. As a result, fragmentation within universities is inevitable, thus making it difficult to implement actions that are used in business.

In other words, the bigger the disciplinary fragmentation of a HEI is, the more difficult it is to impose NPM elements like equal standards and measures of performance on an institution-wide basis.

Considering that the variable "type of HEI" seems to apply, one might ask why another also rather specialist HEI, namely the Federal Institute of Technology of Zurich (which is part of case study 1), is not dominated by NPM features with respect to doctoral education reform. Possible explanations come from interviewees of other HEIs. An interviewee of the University of Zurich judged it impossible to impose a standardized reform of doctoral education in a top-down manner within his HEI, because the faculties would be too powerful. Meek (2003) noticed a positive relationship between the size of higher education systems and institutions and the complexity of the management task. The bigger a higher education system or institution, the more difficult it is to manage. Thus, if faculties of the University of Zurich are considered powerful and doctoral education reform is not steered in a straight NPM mode but in a less formalized NG mode this might also be related to the HEI's size. After the University of Zurich, which enrolled more than 25,000 students in 2010, the Federal Institute of Technology of Zurich is the second largest Swiss HEI and, with 15,000 students, has twice as many as the Federal Institute of Technology of Lausanne (3). With its 2,824 students, the second HEI which is close to the NPM ideal-type, NHH (8), is even smaller than EPFL. Thus, if, in addition, one considers that all case studies situated in rather large HEIs (cases 1, 2, 4, 5, 6 and 7) are at least equally determined by NPM and NG or even dominated by the NG narrative, one can assume that the variable size also applies with respect to the NPM narratives. Hence, the smaller a HEI is, the higher the probability that NPM mechanisms may be imposed on an institution-wide basis. In contrast, the larger a HEI is, the higher the probability of NG mechanisms.

The disciplinary variable also seems to play a certain role with respect to the type of public management narrative observed. It is striking that NPM elements like competition, explicit standards and measures of performance as well as private sector styles of management are especially evident in the finance case studies (7 and 8), whereas such elements are largely absent in the case studies of humanities (5 and 6). In contrast, the latter are strongly shaped by the NG narrative. Norwegian case studies in biology and materials science are situated in between NPM and NG narratives and thereby take an intermediary position. Thus, it seems that the four disciplines can be placed on a continuum between NPM and NG narratives. Soft pure sciences tend to be close to the NG narrative. The more disciplines become hard or applied, the closer they are to the NPM narrative.

On the basis of the presence of the two narratives' features within the eight case studies some general patterns in terms of relations between combinations of variables and management stories stand out. The following formulations reflect them in an ideal-type manner:

Ideal-type one: elements of NPM have the best chance to dominate on a broad basis in the case of hard and applied sciences situated in small, specialist HEIs within centralized countries.

Ideal-type two: in soft pure sciences, situated in larger, generalist HEIs of federal countries, it is the NG narrative which is likely to dominate.

Correspondingly, mixed forms of those two combinations of variables lead to situations in between NPM and NG. The following Simplified Governance Patterns Scheme illustrates those patterns. The closer a combination of variables is to one of the ideal-type combinations, the closer a case is situated to one of the two poles.

This scheme is called "simplified" because it does not necessarily adequately take into account the degree of potential influence of each of the four variables. For instance, the country variable appears as the most influential variable in the scheme, whereas the disciplinary variable seems to have the weakest impact. This does not necessarily apply in these proportions, however. Although the illustration is somewhat static, this scheme should indicate the general idea developed above. In order to illustrate the scheme, the examined case studies also figure within the scheme (Fig. 7.1).

Conclusion

This chapter has elaborated a new analytical framework for university governance and applied it to the example of doctoral education reform in Switzerland and Norway. The framework is constituted, on the one hand, by a number of central new public management and network governance elements and, on the other, by four variables, namely the national variable (federal vs. centralized political systems), the type of higher education institution (specialist vs. generalist HEIs), the size of HEIs (large vs. small) and the type of scientific discipline (soft vs. hard and pure vs. applied).

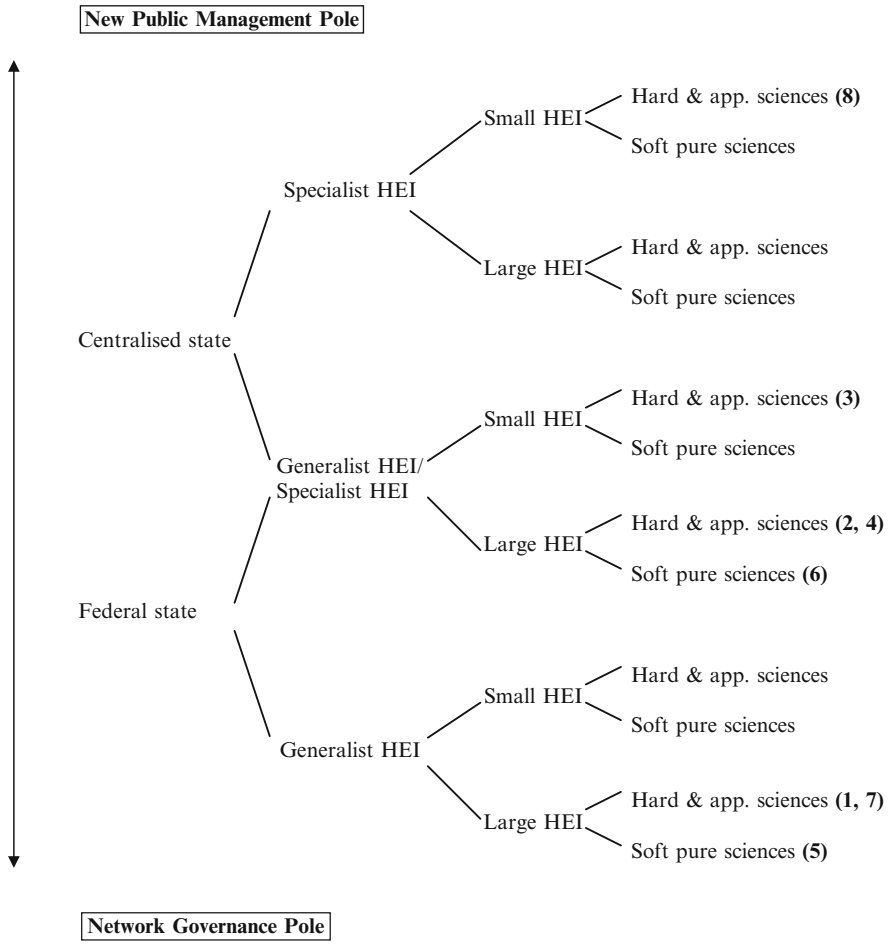

Fig. 7.1 Simplified governance patterns scheme

By applying this framework, this chapter examined to what extent elements of one or the other public management narrative—NPM and NG—appear according to the four variables. On the basis of this analysis, the following patterns could be identified: on the one hand, elements of NPM have the best chance to dominate on a broad basis in the case of hard and applied sciences situated in small, specialist HEIs within centralized countries. On the other hand, it is the NG narrative which is likely to dominate in soft pure sciences situated in large, generalist HEIs within federal countries. Correspondingly, mixed forms of those two combinations of characteristics lead to situations in between NPM and NG. The closer a combination of variables is to one of the ideal-type combinations, the closer a case can be situated to one of the two poles.

It is important to underline that the patterns presented in this scheme have been built on the basis of a rather limited sample. Hence, they have to be tested by further empirical data. They find some support, however, in existing literature. Becher and Trowler (2001) identified important differences between scientific disciplines in terms of culture and practices. Thus, it seems plausible that such differences are also reflected in management practices. For instance, the culture of hard and applied sciences—which, as is widely acknowledged, are strongly operating with numbers—may be closer to a management style which is based on quantitative measurement of performance than soft pure sciences. Regarding size, Meek (2003) noticed that the bigger a higher education system or institution, the more difficult it is to manage. Thus, NG elements like lateral and decentralized forms of management might be more operational in large institutions than vertical, top-down management à la NPM. Mora (2001) makes a similar observation which might provide support for the hypothesis according to which the type of HEI plays a role in terms of management style. He argues that academics tend to identify more strongly with their discipline than with their university. As a result, fragmentation within universities is inevitable and makes it difficult to implement actions that are used in business. Thus, one can hypothesize that the greater the disciplinary fragmentation of a HEI, the more difficult it is to impose NPM elements. NG as less constraining might be preferred if the cultural differences between the disciplines, represented within one HEI, are too big. Since it is probable that cultural differences are bigger in generalist than in specialist HEIs, a tendency towards NG seems to be feasible for generalist HEIs. Finally, regarding the national variable, the distinction between federal and centralized states might constitute an alternative variable to others developed in the existing literature, like the variable used by Pollitt and Bouckaert (2004) which distinguishes between countries in terms of conservative reformers, modernizers and marketizers or minimal states.

Ultimately, this analysis has clearly shown two things. First, if NPM plays an important role within managerial reforms of higher education, alternative theoretical frameworks are needed to describe empirical observations. Network governance seems to be a valuable complementary framework. Second, the national variable often has an impact on management practices but it cannot explain everything. Other variables like the type and size of HEI as well as the type of scientific discipline seem to be promising entry points for better understanding of university governance.

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Part III
Policy Effects at the Meso Level

Chapter 8
Governance of Universities and Scientific Innovation

Dietmar Braun

Introduction

A new scientific idea is born, a new method invented, a new technology discovered, a new empirical field scrutinized and bursting with theoretical expectations: all this is scientific innovation. The initial question in this chapter is: what happens to these kinds of innovations once they appear on the radar screen of science?

Any new scientific idea is worthless if it does not find followers. Science is no different from religion or politics in this respect. A new answer to an old question is an isolated event if one cannot convince other scientists of the value of this answer. In other words, scientific innovation is not only the discovery but also the diffusion of ideas among the scientific community. Only if a group of scientists, preferably many groups, adhere to the original idea and accept it as being novel and express their willingness to follow the lines of the new idea, does a new finding become visible and tested by researchers to corroborate or refute it. New ideas can also be ignored and fail to find support, not only from scientists but also from scientific institutions such as, for example, scientific editors, scientific associations, funding agencies or universities. New ideas will disappear, if they cannot be institutionalized in one way or other.

Institutionalization is the best way to stabilize new ideas, to give them continuity, to make them part of the daily scientific struggle for reputation. The institutionalization of scientific innovation is, however, not something that just happens or takes place. It needs not only convincing arguments to find followers but above all resources, and resources are scarce. If one accepts a "competition view" of scientific

D. Braun (✉)
Institut d'Etudes Politiques et Internationales, Université de Lausanne,
Géopolis – 4349, Lausanne, Switzerland
e-mail: Dietmar.Braun@unil.ch

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development, one cannot expect that new ideas that need resources and often contest existing ideas, will be accepted with open arms by the scientific community. This tension between scientific advancement on the one hand and possible social and economic conflicts during the process of institutionalization on the other is the subject of this chapter.

Though there are various steps to be taken in the process of diffusion in order to arrive at a fully developed scientific field—the decision of individual scientists to engage and invest in a new field of science, the creation of research communities in order to gain a hold in the academic community, the acquisition of continuous research funds— this chapter will focus on the last stage of institutional anchorage of new ideas, i.e. the implantation of new ideas into universities.

Universities can be regarded as the center of disciplinary reproduction. They confer academic titles necessary for the pursuit of a scientific career; they deliver the infrastructure for disciplinary reproduction (e.g. the organization of conferences; the education of students and doctoral fellows who are future recruits to the scientific field; office space, laboratories); they put certain resources at the disposition of scientists that are needed for their academic careers (some research money; logistical help with funding applications, etc.); and most important of all, they give jobs to scientists that form the point of departure for academic creativity. This is why each new scientific field must, once a certain critical mass and intensity of communication is reached, settle down in universities. Only then, does continuous financing (above all in the form of salaries) of the new field become possible. Last but not least, universities have authority to set up the main institutional embodiment of disciplines, i.e. departments, as well as faculties. This is the strongest sign of recognition for a new scientific field. On the scale of specialties and subspecialties, they can also install other forms of institutionalization; for example, "schools" (for public health) or research centers and at the level of the "research community" they can support research groups.

New scientific fields can probably grow for a certain time outside universities, for example in research networks or in extra-university research institutes, but for consolidation they need recognition by universities expressed in the employment of scientists as professors. The title of professor not only guarantees resources for the foreseeable future but is also a symbol of the recognition of a scientific field by the academic community. This is possible because universities are, even today, still considered to be the representative of the academic community. The conferral of a professorial title in a university is equivalent to an "accolade" from the academic community.

Study of the institutional conditions of scientific innovation is not a new phenomenon in the sociology of science. There was extensive discussion in the 1960s and the 1970s on *scientific growth* (Collins 1983; Crane 1972; Hagstrom 1965; Mullins 1972) which treated various aspects of the diffusion of scientific fields. Most prominent is without doubt the work of Ben-David (1971, 1991), who looked from a historical perspective into the relationship between higher education systems and conditions of scientific growth. Since then, interest in the sociology of science has mostly been diverted to other areas. There have been, however, a number of

substantial contributions by authors who deal with scientific growth in terms of the development of academic disciplines in general. This literature is often closely linked to higher education studies (Akerlind 2005; Becher and Kogan 1992; Becher and Trowler 2001; Blume 1985; Clark 1983, 2008; Whitley 1974, 1977, 2000).

There are two reasons why it is worth asking these questions again today.

One is the obvious acceleration in the growth of knowledge (e.g. the growth in publications) and the concomitant tendency towards differentiation of knowledge fields, i.e. the increasing number of research communities, subspecialties, specialties and disciplines (Clark 1996). Bonaccorsi has recently pointed to both aspects in his observation of the "new and young sciences" (information sciences, materials sciences, life sciences) with high growth rates of production and an obvious tendency to "diversify," i.e. to create more and more subdivisions of existing knowledge fields (Bonaccorsi 2008, 2010). On the other hand, these new and proliferating tendencies to diversify demand institutional opportunities that, for example, universities built on the "Humboldtian model" may no longer be able to deliver (Bonaccorsi 2007: 309). Existing scientific institutions, especially universities, may fail to furnish a "locus," a "home," for these new scientific fields and thereby hamper "scientific innovation."

University governance regimes play an essential role in the link between university institutions and the spread of scientific fields, above all because governance determines competences and authority within universities and hence the dynamics of cognitive structure in universities. The existence of the hierarchical "chair system" in the Humboldt university, Bonaccorsi explains (2008), is an advantage if a scientific field converges but a disadvantage when it diverges. He does not explain the mechanisms but it is clear that hierarchy situated in chairs makes differentiation into various disciplines difficult whereas other types of internal governance might have a productive influence. As during the last 20 years most universities have experienced the reform of their constitutions and, hence, of their governance regimes (usually the implementation of new public management regimes), it would be interesting to see whether the introduction of such regimes contributes to a growing ability of science to spread scientific innovation by the institutionalization of new scientific fields.

The tension between universities as host institutions of scientific fields and the dynamics of scientific expansion are the subject of this chapter. Governance structures of universities influence this relationship and different governance structures do this in different ways. In this chapter, the new public management governance structure will be the focus of investigation and the research question is: *to what extent is scientific innovation fostered or constrained by the introduction of the new public management model in comparison with the older bureaucratic-oligarchic model*?

We will proceed in the following way. First, the concept of scientific innovation will be elaborated. Second, an attempt will be made to demonstrate the "logic of integration" inherent in the older bureaucratic-oligarchic model. Third, the new public management model and its effects on the governing of scientific diffusion in universities will be discussed.

Conceptualizing Scientific Innovation

In order to spread, a new scientific idea must gain hold in the scientific community and this usually means within the confines of a general discipline. Diffusion of scientific ideas is a continuing process of institutionalizing the original idea on an increasing scale of recognition within the academic community.

Steps of Institutionalization in the Diffusion of Scientific Ideas

One can imagine that the first level of institutional recognition is the status of a *research community* united by a common interest in a research theme, the use of a common method or technology or the application of a certain theoretical approach. Such a community could begin as small research groups and expand later on to form clusters and networks (Chubin 1976). Institutionalization at this stage means the acquisition of continuing funding resources, the conquering of "time slots" in conferences of the mother discipline, the creation of a scientific journal, the setting-up of a working group in the disciplinary association, etc.

The next step—although there is no consensus on how to subdivide the different institutional levels of scientific knowledge domains—would be the ascent to a *subspecialty* which can consist in the foundation of a scientific association (though this is not necessary), the organization of own conferences and, above all, the development of a first teaching canon indicating that a certain unity in the use of theories and methods has been achieved. This is also the time that universities might offer employment to scientists in the form of professorships, usually announced in the form of a discipline-bound professorship with particular emphasis on the subspecialty area. For instance, in the discipline of political science and the specialty of comparative political science, "area studies" would be such a subspecialty.

The next step towards institutionalization is the creation of a *specialty* or, better, the institutional recognition of a specialty. The new field is now considered as being an essential and acknowledged subarea of the mother discipline. Within disciplinary departments, specialties are the main components and they are embodied in the professorships in almost all universities. The teaching canon is now clearly standardized and a substantial number of students are following courses. A specialty has its own associations, has its own conferences and journals, and starts to be differentiated again into different subdomains or subspecialties. The status of a specialty guarantees long-term survival of the subarea.

Finally, *disciplines* are such a wide subject area that a differentiation into specialties is a necessity for presenting the discipline to a wider audience. A professorship of "political science" might occasionally exist today but certainly not without more detailed emphasis on the specialty that should be represented. For example, in political science this might be "comparative political science" or "international relations" though the latter has in the meantime almost reached the status of an own

discipline, visible in the creation of own departments. Departments are, as Evans (1995: 253–254) states, the "most concrete and permanent enactment" of a discipline. "This is where a discipline becomes an institutional subject."

Cognitive differentiation, which happens all the time in the scientific enterprise, is therefore a process that needs time, an increasing number of followers and institutionalization strategies of different orders.

In the "*competition view of science*",[1] institutionalization does not just take place. It does not just happen because it is essential for the development of science. There are a lot of investments to be made and a lot of obstacles to overcome. In order to estimate the kind of obstacles that might exist, we start from Bourdieu's vision of a scientific community (the "champs scientifique") which on different levels ("sciences" like natural, life, and social sciences; disciplines; specialties, and so forth) generates constant competition for recognition ("symbolic capital") and resources ("economic capital"). A "newcomer" cannot hope to find immediate praise among those who work in established "cognitive institutional units of science" such as research institutes, departments, faculties, etc. As Becher and Trowler contend, referring to Crane and Spiegel-Rösing (2001: 172): "Whatever their origins may be, emergent disciplines must face the competitive demands of those which are already established (…) If the newcomer is seen as a threat to established interests, or as a rival claimant for the available resources, its development is likely to be inhibited". Disciplines or specialties are "constantly developing strategies of status maintenance" (173).[2]

On the other hand, there is a widespread consensus among sociologists of science that cognitive differentiation is not only a natural feature of scientific development but also a functional must of scientific development. There are two reasons cited for this (Ruscio 1986). One is a cognitive one stressing that the constant search for new knowledge leads to an ever-stronger elaboration of different aspects

[1] A "competition view of science" is not considered to be a distinctive approach in the sociology of science. Rather, various authors who would not consider them as belonging to one school refer to similar dynamics of scientific production and reproduction, though the use of concepts and their interpretation may still differ. Bourdieu (1975, 2001), Whitley (2000, 2003, 2008), Ziman (2000), and authors arguing from the perspective of "economics of science" (Brock and Durlauf 1999; Kitcher 1995; Mirowski and Sent 2002) belong to this group as does the early work of Latour and Woolgar (1979) and Hagstrom (1965). Recently, Van Rijnsoever et al. (2008) pointed to similar views in the "resource-based view" in organizational sociology. Basic elements in this approach are presumably that science is considered to be a field of cognitive development and also a social field in which actors interact as if in a scientific market. Scientists are driven by curiosity but more importantly by social recognition (reputation) and material advancement of their status in the scientific community. Scientists have individual career interests. As in all markets, the producers of the scientific good are in competition with each other and the use of scientific power and authority in order to gain competitive advantage are important elements in this competition. The dynamics of science, including scientific innovation, are therefore profoundly influenced by competition and social conflicts in the scientific community.

[2] Or in the words of Bourdieu (1975: 28): "The dominant are committed to conservation strategies aimed at ensuring the perpetuation of the established scientific order to which their interests are linked."

of the complex world around us. The second reason refers again to the social world: cognitive fields are also domains of recognition for scientists, the base from which to search for the "scientific capital" scientists need in order to acquire positions within the scientific *champs*. New scientific fields often increase the chances of scientists acquiring such capital because competitive pressure is usually lower than in existing and older scientific fields.

So, although attempts at cognitive differentiation will invariably occur, any new field will have to confront the interests, authority, and power of the existing order of cognitive division. In order to estimate the chances of success of becoming part of this division, it is important to understand the level of conflict integration can cause. In order to do so we need a concept that can spell out such conflict levels.

There are many different ways to systematize the reduction of complexity by disciplinary differentiation and de-differentiation (Becher and Kogan 1992; Blume 1974; Clark 1995; Elzinga 1987; Metzger 1978; Spiegel-Rösing 1974). Adopting a "conflict view of science", one can distinguish four possible ways to institutionalize new cognitive fields in the scientific *champs*: multiplication of currencies; currency devaluation; currency competition; and currency dualism.

We use the term "*currency*" as a synonym for Bourdieu's "scientific capital" as a particular form of "symbolic capital." The term currency, however, indicates in addition that there is not one scientific capital but a number of different types of scientific capital, i.e. currencies that are valid in different cognitive fields of science. Scientists are therefore not striving for the same scientific capital but for a specific type.

Types of Cognitive Differentiation

Multiplication of Currencies

This is the main way in which science deals with complexity, i.e. by differentiation of the existing disciplinary field in two or more subfields or specialties or, on the level of specialties, by the creation of a new subspecialty. If the new specialty (or subspecialty) is cognitively sufficiently distinct from existing specialties, this process of differentiation comes down to the creation of a new "currency" which is distributed only within the new specialty whereas the currencies in existing specialties maintain their value. In other words, scientists within the existing specialty maintain their "exchange value" for the "products" they deliver. This kind of complexity reduction is called "*fission*" in the literature (Becher and Kogan 1992) or "*subject parturition*" (Metzger 1987) and usually does not lead to conflict among the "Haves," those working in existing and recognized scientific fields, and the "Have-Nots," those investing in a new cognitive field of science, as long as there is no condition of a zero-sum game when for example material resources shrink and redistribution has to take place.

Currency Devaluation

A second case is the rise of competing paradigms within an existing scientific field. This might happen through "*subject dispersion*" (Metzger 1987). For example, one might have a paradigm in one discipline that spreads over into other disciplines (or into other specialties). An obvious example would be rational choice theory, which was "invented" in economic sciences but has spread into most other social science fields. Another example is the rise of a new paradigm within a discipline or specialty on the base of the use of a different theory, method or technology contesting the "authority of interpretation" of existing theories, methods and technologies. In this case the existing currency remains valid but the exchange value of scientists adhering to older paradigms is questioned and might devaluate if the new paradigm gains ground. Such a development creates strong conflicts and comes down to the "scientific revolution" Kuhn has described (1968).

Competition of Currencies

A somewhat similar conflictive development can arise if two cognitive fields deal with the same subject area but on the basis of different paradigms or if "internally" generated paradigms are confronted with "external" paradigms, external here meaning cognitive fields that come into being through the "interaction between academia and the world that lies beyond its confines" (Becher and Trowler 2001: 171). Such paradigms are often a response to demands from stakeholders in other functional systems (Blume 1985; Elzinga 1987). In the literature on "Mode 2" (Gibbons et al. 1994) it is even contended that this type of differentiation is where most new scientific fields today find their origins.

Competition arises when the new "external" field attempts to create an own currency and become an immediate competitor to the existing scientific field dealing with the same subject area from an "internal" point of view. In this case, both currencies may claim validity and there is a clear competition for dominance both in terms of "status" within the academic community and in terms of "economic capital." There is therefore an imminent danger of devaluation of the existing "internalist" scientific domain once the new "externalist" field is installed. An example of this is the ongoing search of "public health" for academic recognition in health matters, a field in which the medical academic community tries to maintain its authority of interpretation.

Currency Dualism

The final type of differentiation is what is called in the literature the "*fusion*" of cognitive areas or the creation of *interdisciplinary* fields (Becher and Kogan 1992). In this case scientists are working in a new cognitive domain in which in

Table 8.1 Conflict dimensions

	Material resources not affected	Material resources endangered
Cognitive authority not affected	I (no conflicts)	II (resource conflicts)
Cognitive authority affected	III (cognitive conflicts)	IV (strong conflicts)

the beginning no currency exists. There is, of course, a strong interest in creating such a currency to validate the investments scientists have made. If this succeeds, it will be just another case of currency multiplication, meaning that a new and sufficiently distinguished area has come into being. Yet as long as there is no new currency, all scientists working within this field remain anchored within their old disciplines or specialties and depend on their exchange value for these currencies. This gives the existing two (or more) mother disciplines/specialties the possibility of "claiming" the new field and integrating it as a subordinate part. Currency dualism characterizes this process: within the new interdisciplinary field two (or more) kinds of currencies still hold their value as long as no new "third" currency is created. This can lead to jockeying for position by "mother disciplines," which try to get a grip on the new field.

The different types of cognitive differentiation have been built so far on the argument that conflict between "Haves" and "Have-Nots" arises whether the "scientific authority of interpretation" of the "Haves" is contested or not and whether this happens inside scientific disciplines or specialties (currency multiplication (not contested) and devaluation (contested)) or outside, either as fusion with other disciplines or specialties or in contact "with the outer world" (currency dualism and competition). Scientific authority of interpretation is pertinent for the social status of scientists and their scientific capital.

There is, however, a second conflict dimension which plays a role in the calculation of scientists and institutionally established cognitive units like departments considering the integration of new scientific fields in universities. This other dimension is the "material resources" or the "economic capital" scientists need to continue their "reputation cycle" (Latour and Woolgar 1979). Also, the cognitive units in which scientists are working inside universities depend on the constant generation of material resources for their reproduction. The arrival of "Have-Nots" can have different effects on the material possessions of the "Haves": it can mean additional resources, if the new scientific field manages to bring in money from outside (for example, with the help of funding agencies or stakeholders), but it can also mean resource competition, if the available money for a department does not rise commensurately with the integration of new disciplines. In this respect, "affluence" (more resources) and "scarcity" (stagnant resources) play a role in the individual and corporate evaluation of advantages and disadvantages of the integration of new scientific fields.

Expectations about the consequences of the integration of new fields for the social status and material resources of scientists and their cognitive units determine the way they will react to the rise of a new scientific field. Table 8.1

cross-tabulates these two conflict dimensions by, one, assuming that the material position of scientists and their cognitive units will either not be affected or that they will be affected if the new field is integrated; and, two, that social status can either be endangered or not by the integration.

The "Haves" can strategically react in different ways to deal with these types of cognitive differentiation.

First, they can accept the new field by granting the status of a subspecialty or specialty with equal rights, a strategy one could designate as "*peaceful co-existence.*" This is a likely strategy when the "Haves" expect "Sector I" as an outcome of integration, i.e. the sector with no major conflicts. We will often find this strategy when currency multiplication takes place and affluence is the resource condition.

The second strategy would be "*subordination.*" This seems likely when a conflict in cognitive authority appears (as in the case of currency devaluation or dualism). Subordination means integrating the new field into the department but granting it a lower social status than that of the "Haves." Different institutional strategies are possible here. Ben-David (1971) has explained how subordination took place in Germany at the end of the nineteenth century, when chair-holders claimed general authority over disciplinary developments within universities and specialties or subspecialties could only find a place in the research laboratory of the professor without obtaining the status of a professor. A second institutional strategy was to demote scientists with a "habilitation" to *Privatdozenten* who had no paid position in the faculty and, hence, no claim on material resources. Again, the title of professor was lacking. Often, these *Privatdozenten* were harbingers of new scientific fields, so the refusal to grant the title of professor and the positioning of scientists in research centers that depended on a chair were opportunities to exercise subordination of new scientific fields.

Contesting paradigms (currency devaluation) could however also face "*exclusion*," a strategy the "Haves" might try to use when they are seriously challenged by a loss in both social status and material resources. If a contesting paradigm means at the same time a loss in material resources because subordination is not possible or too costly, then exclusion is the most reasonable strategy for maintaining the dominance of the "Haves." Exclusion means keeping the new scientific field outside the faculty or even the university and offering it no institutional position. This could also be a strategy to avoid "currency competition" from outside.

Yet another different strategy to combat currency competition or devaluation could be "*marginalization*," meaning that new scientific fields are accepted within the faculty or department but, in order to avoid material losses or competition, they receive an inferior organizational status with, for example, few resources and a diminished guarantee of organizational survival, etc.

These considerations demonstrate that there are different individual and institutional strategies for the integration of new scientific fields and the perception of "threat" by the "Haves" is an essential element in determining which one of these solutions will be chosen (see Table 8.2).

Table 8.2 Likely strategies in cognitive differentiation

	Material resources not affected	Material resources endangered
Cognitive authority not affected	I (no conflicts) Peaceful co-existence	II (resource conflicts) Marginalization
Cognitive authority affected	III (cognitive conflicts) Subordination	IV (strong conflicts) Exclusion

University Governance and Cognitive Structures

Universities, it is argued, are the main place for disciplinary reproduction. It is within their confines that scientists develop institutional strategies of acceptance or rejection of new scientific fields. The conditions, however, vary—and this is our hypothesis for the remainder of the chapter—according to the *governance structures* of universities.

Governance is a very broad notion indicating how rights and obligations are distributed, how the different parts of universities interact, and also how relations with other universities as well as stakeholders are organized. Governance structures determine therefore "who gets what, when, and how" in universities and determines to a certain extent the strategies which individual and corporate actors inside universities have at their disposal.

The main aim of the following argument is to explain whether the change from one governance model (that is, the "bureaucratic-oligarchic model"; Braun and Merrien 1999a, b) to another ("new public management") affects the cognitive dynamics within universities and, if so, how.[3] The bureaucratic-oligarchic model (Clark speaks of the "academic oligarchy" in his well-known triangle of university types) has been dominant in most European countries since the nineteenth century, France and the United Kingdom being notable exceptions. The new public management model, with all its variations, has started to substitute for this model since the 1990s (see Paradeise et al. 2009). Each model follows a different governance logic. We will first discuss the relationship of the bureaucratic-oligarchic model (BOM) and scientific innovation and then the likely implications of the new public management model (NPMM).

The description we offer is ideal-typical. It accentuates those elements that seem to be the most distinguishing traits vis-à-vis other types.

The Bureaucratic-Oligarchic Model

In order to describe the relationship between governance structures of BOM and scientific innovation we will refer to a number of variables that we consider as important

[3] The bureaucratic-oligarchic model is one model of many, though it is probably the best diffused in Europe. France and the UK differed from this model (Ben-David 1971) as did the East European countries. We will only focus here on the transition from the bureaucratic-oligarchic to the new public management model, as space and time in this chapter are restricted.

for the working of governance models[4]: the mode of coordination in the university systems; the ideational frame of reference of universities; the role of the management/administrative layer; the significance of "university capital"; the organization of the "activity structure"; the interaction or games played between scientists.

Mode of Coordination in University Systems

It was Ben-David who pointed to the importance of modes of coordination in university systems. He found that there is a beneficial role of decentralized and competitive modes of coordination with regard to scientific innovation (Ben-David 1971). Ben-David's argument was that universities will be more willing to adapt their structures and learn from "best practices" if they are in a competitive fight for recognition in the academic community and for material resources among stakeholders and if there is no centralized state organization that has an interest in steering the university system. Decentralization in the form of federalism or in the form of an important private university sector helps to develop competition among universities. The USA is the main example in this respect.

Competitive systems create an entrepreneurial spirit in universities and force them to develop a tighter coupling of the cognitive units and individual scientists than is the case in universities that work like "organised anarchies" (Cohen et al. 1972) which is the case with the BOM. There is a strong functional pressure to develop a capacity of flexible reorganization of internal structures able to adapt to external challenges. This has negative effects on the capacity of scientists to veto structural change within the organization.

Universities in the BOM by contrast are usually state-subsidized and lack the competition of private universities. They are not equipped with steering capacities to adapt the organization on their own account because important "power means" remain in the hands of state governments. The pressure to adapt must come from the political side (hierarchy as mode of coordination). As a result the capacity for change is generally low.

Ideational Frame of Reference

The general "ideational" orientation of universities is a corollary to the structure mentioned above. Braun and Merrien demonstrated with reference to Ben-David that university systems are subject to different ideational "frames of reference" that are deeply anchored within politics and society. Although the "market systems" still honor the "service orientation" of universities, the BOM propagates a "cultural vision" of science (Ben-David 1991; Braun and Merrien 1999a). What does this actually mean?

[4]Such variables have been subject to frequent discussion in the rich literature on university and governance types (see Braun and Merrien 1999a; Clark 1983; De Boer et al. 2007; Vught 1989; Whitley 2008).

Ben-David demonstrates for example how German universities in the nineteenth century acquired "academic freedom" in exchange for not meddling in societal affairs, which led to an even stronger encapsulation of those universities with a strong emphasis on the value of theory and scientific progress detached from societal influences (Ben-David 1971). This orientation of universities was accompanied by the support of the uprising bourgeoisie, which saw higher education as the main instrument for enlightenment, a means of liberation of the individual. These factors contributed to the stylization of science as a "cultural value". Other European countries followed this orientation.

Institutional encapsulation and detachment are therefore typical characteristics of such an ideational orientation. They create conditions of academic enclosure and conservatism and prevent easy integration of new elements like new scientific fields.

These tendencies made universities and university development part of the internal dynamics of the scientific *champs* that were played out within universities. The opening up of new scientific fields depended on the willingness of the "Haves" to accept them and this again depended on the "types of cognitive differentiation" sketched above.

The Management Layer

In the BOM, the role of the administrative or management layer in universities is typically weak as procedural autonomy is very small. The state has a marked influence on procedural development through the distribution and control of financial flows. To these are often added "substantial rights" of the state like the nomination of personnel including professors and decisions on the organizational structure and infrastructure of universities. Only the contents of teaching and research are free (usually) from state interference. The effects on the internal organization in the BOM are such that, given that the management layer as an intermediary level lacks power and competence, "self-organization" of the academic community in universities and internal dynamics can take place. The power of policy-makers to reorganize university structures in this context is usually limited: it exists in the approbation of propositions coming out of universities and not as a proactive right to change universities on its own account. Again, this favors organizational dynamics in universities based on the competitive "logic of academia" sketched above. The most likely type of scientific innovation under such conditions seems to be "currency multiplication" as it avoids conflicts with the "Haves" within universities.

University Capital

University capital is the symbolic recognition conferred by the university for various performances by scientists and their departments (teaching; research productivity; stakeholder contracts; communication with the public; participation in decision-making bodies of the university). Which of the performance indicators matters and

in what order of priority depends on the historical context and the type of university. University capital is of interest to scientists for two reasons: one is that it could allow access to important administrative positions within the university[5] and, second, it could entitle them to obtain in exchange for this recognition a certain amount of economic capital from the university.

University capital is of small interest to scientists in the BOM and can therefore not be used in any strategic way by the management layer for two reasons: university management does not have sufficient economic means to confer economic capital to scientists independently. Spending is constrained by rules, regulations and approval by the state, and if there is little economic capital participation in decision-making boards is less attractive though there may still be some room for maneuver in terms of the nomination of professors and the agenda-setting of structural questions. University capital is, one can contend, a form of capital little sought in contrast to other forms of capital like scientific capital or economic capital granted by funding agencies. The important point in the context of this chapter concerning university capital is that it cannot be used as a steering resource in the BOM or, in other words, as an incentive for scientists. This diminishes the possibilities of the management intervening in the "self-government" of academics in universities.

The "Activity Level"

The activity level refers to the organization of those who perform in the university. An activity structure means those structures in universities that organize the main functional activities like teaching and research. The institutional division into faculties, departments or institutes, for example, is part of the activity structure, as is the existence of teaching boards or committees. The interaction between scientists, structured by these institutions, is another part of the activity level.

A main difference between the European BOM and the American market model, highlighted in the literature, is the organization by "chairs" in the BOM and by departments in the market model. We will only discuss the former here.

The typical organization of scientific fields in the chair system is a strongly hierarchical and centralized one. It is the "full professor" who is responsible for a wider cognitive area of knowledge, usually a discipline, whereas specialties and subspecialties have to be put, as mentioned above, into a subordinate position in relation to this chair or be excluded altogether from positions at the faculty. The chair system confers substantial powers on the "Haves," who can almost monopolize large cognitive fields and determine the entry conditions for "newcomers."

[5] In fact, Bourdieu uses the notion of "capital universitaire" in exactly this sense of having administrative power in the various decision-making boards within universities (Bourdieu 2001). Participation in such boards is itself a kind of capital that can be used to advance own interests (by distributing money, employing people, etc.). We prefer to speak of administrative capital if it concerns the capital based on participation in decision-making boards and reserve the notion of university capital for the symbolic recognition of the university in a more general sense.

This alone suggests a conservative bias: in the chair system cognitive differentiation, which raises conflicts with the social and economic status of the "Haves," stands no chance of being accepted.

The chair system, however, has another conservative effect which Schimank described after looking at German universities in the 1990s (Schimank 1994). This effect, in fact an interaction effect, is based on the large degree of "academic freedom" the chair system grants to professors and their almost independent position within the department and the faculty. This means that conflicts in the department or the faculty affect actors who have completely equal rights and degrees of freedom. Hierarchy as a principle is of course excluded as a resource in the self-organization of the university. The only actor who can use this mode of coordination is the state itself which can, for example, contest the nomination of professors.

Academic freedom and independence of professors lend themselves to a game of "*standstill*." What are the attributes of such a game?

Schimank discussed the case of resource distribution in university departments and faculties. The point of departure of the game that unfolds in BOM is that professors as actors all have equal power resources and rights. In order to gain resource advantages by redistribution, a professor would need the support of a majority of other professors in the department and/or in the faculty as decisions in the self-organization of BOM are based on majority decisions.

Schimank demonstrates that finding majorities is extremely difficult under the conditions sketched so far:

- Redistribution is unlikely because scientists act risk-averse: they must think about the consequences of their action and what this might mean in the future. As redistribution results in winners and losers, it can be expected that those who bear the costs of the redistribution will, given another feature of BOM, i.e. the low outward mobility of professors and, hence, the relative certainty that one will confront colleague professors for a long time in the same department, seek to retaliate in the future. Also as they are losing, they will use all available means to avoid loss in the present. Resistance will be strong.
- At the same time the professor who has taken the initiative cannot be at all sure that, even if he or she succeeded in building a majority coalition among colleagues, this majority coalition would hold in the future. Academic coalitions are typically ad hoc and therefore unstable. In addition, it needs considerable transaction costs to organize such coalitions.
- Though deans might have some powers in this game, though they will be limited, it is unlikely that they will use them as deans, too, must avoid becoming the object of retaliation in the future. Their tenure is time-limited and within the rank-and-file they might suffer the consequences of their decisions. Rather, deans will, especially if they aspire to a renewal of their tenure, prefer a policy of "blame avoidance" that makes it unlikely that redistribution is taking place.

With these structural characteristics (all actors have comparable power positions and relative independence; the lack of hierarchical authority and the absence of incentive systems; the low mobility of actors petrifying established actor relations

for a long time and leading to a weak discounting of the future) the most prudent strategy is indeed to avoid confrontation and accept the status quo. No overriding general objectives of universities exist that could change the logic of this game. The result is "*informal negative coordination*," an implicit contract to avoid the negative consequences of own action, which leads to extreme difficulties in redistributing resources and, hence, in changing the institutional cognitive structure. Inclusion of new fields under these circumstances can only take place if inclusion is "Pareto-optimal," i.e. has no negative consequences for any professor in the department or faculty. These conditions in our typology of "currencies" are once again only fulfilled in the case of "currency multiplication" under conditions of affluence. In all other cases the "non-aggression pact" would be the outcome of the game and hence new scientific fields could not be included.

In sum, BOM demonstrates governance features that structure opportunities for scientific innovation in a very constrained way: it constitutes currency multiplication, which can find acceptance within universities as the cognitive and social status of the "Haves" is not jeopardized. Yet this only holds if the inclusion of new scientific fields does not generate resource conflict. Only then will we have "peaceful co-existence." In the case of resource conflicts, for example, because universities are confronted with severe austerity measures, the situation changes and even currency multiplication can be denied or at least result in marginalization strategies to avoid any material conflicts.

Did new public management change opportunity structures?

Governance in the "New Public Management Model"

The main question in this part is whether the reforms of governance that have taken place in most countries and particularly in Europe have changed the institutional conditions and "games" that are played within universities in such a way that the capacities of universities to respond to the increasing "diversity" of science have improved. We will discuss the changes in two parts: the first part discusses the structural changes in the governance mode that have taken place and assesses their possible effects on scientific innovation. The second part looks into the kind of games that unfold under the New Public Management Model (NPMM).

Structural Changes

Our analysis discusses the NPMM in ideal-typical terms, i.e. we do not refer to one particular subtype or variation in the numerous ways that NPMM can be institutionalized (Agasisti and Catalono 2006; Amaral et al. 2003; Deem et al. 2007; Dewatripont et al. 2002; Paradeise et al. 2009). There are for example different ways to organize the authority structures, i.e. the competences of university direction, political stakeholders, university boards and academic representation boards.

Departments might have a global budget of their own or get their budget from the faculty. Deans might be chosen from within the academic university community or come from another faculty or even from outside the university. They could be nominated by the leadership in the university or be elected, etc. These are all possible variations, and there are others, that change aspects within the general framework of NPMM without touching on the main characteristics like the delegation of operational management from political actors to the university, the strengthening of the role of leadership within the university, the transfer of global budgets to universities and the conclusion of "contracts" which are built on strategic discussions between policy-makers and the university and, often, also stakeholders, as well as the creation of a more competitive environment and performance-oriented payment. When we discuss the relationship of NPMM and scientific innovation we often push conjectures to the extreme, i.e. an ideal-typical case which gives leadership vast powers within the university, a competitive environment is at work, departments have their own budgets etc., though often the university will have experienced more moderate changes in different structural variables. The rationale of this procedure is to demonstrate the logic of development of the NPMM in contrast to the bureaucratic-oligarchic model. This is what the university should look like if the new public management model were at liberty to realize its ideas.

Mode of Coordination

Universities in NPMM have experienced a transition from an almost competition-free environment to a more competitive environment created by the introduction of stronger performance-based funding by the state and concomitant processes of evaluation and accreditation that reveal individual performance by universities (for a good summary of this transition see Larsen 2003). Though "intensity" of the political pressure varies between countries in this respect, almost no universities can escape the need to develop strategies to improve self-image and performance in comparison with other universities in the system and even on the international scale. The changes force universities to strengthen corporate identity and create a competitive profile with a strong impetus to become a "corporate actor" (Coleman 1986) in their own right. As a corollary, this leads to the need for a stronger management layer.

Ideational Frame of Reference

The ideational frame of reference is changing. Next to "academic freedom" as the main and only orientation of universities in the bureaucratic-oligarchic model and "services to society" as the main orientation in market systems, is "*efficiency*" as an additional and often predominant criterion (Christensen and Laegreid 2001).

The organizational philosophy that lies behind this frame of reference has the same effect as the competitive environment: it pushes universities to consider and assess their organizational performance in terms of effort and cost-effectiveness. This strengthens their transition to being a corporate actor and abandons the loosely-coupled form of internal coordination valid in "organised anarchies" (Cohen et al. 1972). Efficiency can only be achieved if certain changes take place within universities: strategies must become an integral part of organizational action; the powers of "leadership" within the institution must be strengthened (Taylor et al. 2008); the basic institutional units of universities need to be bound by these strategies, meaning that they comply with overall objectives and make them an integral part of their own logic of action (Felt 2004). They become more tightly coupled.

The Management Layer

Competition and efficiency as an additional and dominant frame of reference allegedly push for the transformation of governance relationships. The former governance dyad—the academic faculty on the one hand and the state on the other—now gives way to a governance triad because of the strengthening of the intermediary administrative level with broader resources to steer and guide the university. How exactly the relations within the triad are settled depends on the country. As noted earlier, there is a lot of governance variety here but whatever the exact distribution of authority, the management layer and the university leadership respectively have an important part to play as it is the task of this layer to present the university as a corporate actor and to negotiate strategies and structures with policy-makers. The obvious difference of the NPMM from the market model is that the NPMM is built on a triad including the state whereas the market model is very often, and this also applies to public universities, a dyad built on private stakeholders and the university management layer.

University Capital

Decentralized global budgets for universities and the power to develop and implement strategies now render "university capital" a more attractive type of capital for scientists. In the BOM, with centralized politically administrated budgets and lack of procedural freedom, the university itself had little room for maneuver to distribute its own resources. With decentralized budgets and procedural freedom this changed and it has become worthwhile for scientists to obtain such capital in order for example to obtain institutional resources for teaching and research or increasing their own standing and position in the resource struggle within departments and faculties. University capital, on the other hand, can now be used by the university leadership as an incentive system to influence scientists' decisions.

The "Activity Level"

At the activity level various changes take place.

(a) First of all, as in the market model, the status of a scientist in the university becomes more dependent on continuous scientific accomplishments and less on career positions as in the BOM. In the latter model the performance of scientists is measured each time a new career step is taken until full professorship is reached. Any evaluation of performance from this step onwards is unusual, at least within the same university. In the market model evaluation of performance continues after tenure and competitive pressure among scientists is upheld. The NPMM introduces a similar competitive orientation, as the measurement of performances of professors becomes more frequent and transparent, facilitating comparison of scientists' performance. This seldom leads to strong negative sanctions such as loss of the job but strong competitive performance becomes a prerequisite for the acquisition of university capital and therefore for the individual material advantages of scientists. It has an effect on the relative position of the power of scientists within the faculty and departments. Whereas professors were formerly equal, their individual weight or influence could now differ according to the value of university capital, thereby contributing to new "games".

(b) At the same time, it seems that the corporate identity of the academic university community, which manifested itself in the "self-government" of universities, is drawing to an end. The increasing differentiation of the academic workforce (Musselin 2007, 2008; Slaughter and Leslie 1997; Slaughter and Rhoades 2004) destroys the "common interests" of the academic community vis-à-vis university leadership and stakeholders. The more flexible work contracts, the possibility of performance-based payment schemes, the tendency to grant younger scientists early positions of independence within the academic corps (e.g. by the introduction of tenure track positions), and the proliferation of unstable positions within universities all contribute to a fragmentation of interests of scientists as a "labor force," also reducing their powers of veto within the university (Tapper and Salter 1995). This gives the "executive leadership" a stronger weight in decisions, even on the faculty and department level, and hence introduces a more strategic-based reasoning in decisions on the institutional structuring of the cognitive space in universities.

(c) The more flexible ways of employment become resources of the leadership, which employs new scientists more and more in accordance with general university development strategies. This can create opportunities for young scientists and new scientific fields to become more quickly incorporated into universities if the leadership has priorities in such areas. The dominance of the chair and its hierarchical position in the cognitive domain increasingly gives way to a more flexible and changing academic workforce in universities. Again, this increases the flexibility in the creation of professorships and hence the opportunity to give new scientific fields a chance.

(d) On the institutional level we find a similar differentiation: strategies of universities to distinguish themselves from other universities in a more competitive environment as well as the rise of university capital lead to the buildup of more research centers and research groups, of, as Burton Clark indicated in his analysis of European entrepreneurial universities (Clark 1998), "semi-peripheral" and "peripheral institutions" more directly linked to the wider public and stakeholders. Together with the increasing number of resources stemming from third-party funding, this leads to a fragmentation of the former relatively coherent organization of the cognitive "space" in universities and offers opportunities for new scientific fields to gain ground in universities through this indirect method of inclusion. The rise of semi-peripheral and peripheral institutions contributes moreover to an opening up of universities to the "applied context," thereby increasing the possibility of "currency competition" and "currency co-existence."
(e) Decentralized budgeting, though there is still wide variety among the NPM universities in different countries, can lead to the strengthening of departments as relatively independent units of universities, thereby weakening the faculty's position as the main arena of deliberation. Departments become "own enterprises" with stronger "corporate identities" of their own, in addition to their distinctive cognitive identity vis-à-vis other departments. This strengthens the affiliation of individual scientists to departments as well as the importance of departments in the university capital distribution game. Again, this helps to strengthen strategic orientation, this time on the department level. Individual scientists are now obliged not only to defend their own interests in the struggle for dominance but also the "common interest" embodied in the fate of the department. Games become more "mixed-motive games" than before and positive coordination instead of negative coordination becomes a realistic option.

Games and Dynamics in Universities Under the NPMM

We will highlight games and dynamics on two analytical levels: first, the level of individual scientists in the same department who have to decide whether they will give their consent to the integration of a new scientific field in their department; second, the level of decision-making bodies in the university, including the leadership, faculty, departments and deans.

One can assume that on the basis of the structural changes sketched above four components in the struggle for the cognitive composition of universities change with NPMM:

The "*size*" of the department or faculty becomes a relevant element in the preference formation of individual actors. As the university changes to a more competitive environment itself and university capital turns into a relevant form of capital for both individual scientists and organizational units, size, i.e. the number of scientists, above all professors, is a relevant variable for the determination of relative power in

the university. The larger the size of a department, the more votes in decision-making bodies it has and the more claims for resources it can legitimately express. Size is, however, not only a blessing but must be weighted against the additional costs that are incurred with the integration of new fields. As long as the sum of costs and benefits is positive, there is an incentive for inclusion.

The possession or gaining of material resources becomes more important than before. This can not only lead to a higher intensity of conflicts between scientists and between cognitive units but also draws attention to the material contribution a new field can bring in.

Material gains also positively influence the readiness to accept semi-peripheral and peripheral institutions, thereby opening new paths of inclusion even in the case of currency competition, though this might still occur under strategies of marginalization and subordination;

Finally, the role of leadership influences the outcomes of games on the faculty and department level.

If we take this as a starting-point for understanding the stakes in competitions for the cognitive composition of universities one can conjecture the following about individual games:

Individual Games

What matters to scientists, as stipulated above, is cognitive authority which grants social status and material rewards or, in other words, economic capital. Now imagine Professor X, who is more concerned by the integration of a new field because it is cognitively proximate to his or her own field. Next to him or her are all other professors who are less concerned because their specialty is sufficiently distant to the new field. What game will be played?

Currency Multiplication

NPMM does not change the relative openness of professors towards inclusion of new scientific fields in the case of currency multiplication where the new field is sufficiently distinct in cognitive terms so that even Professor X will not be concerned about his or her authority of interpretation. What changes, however, is the rationale for the selection of new fields. Although recognition by the scientific community has been the main driving factor for the inclusion of new scientific fields in the case of BOM, it now becomes important what the new field might "bring in" in terms of material resources and in terms of reputation and social status for the department. A renowned scholar working in a new field will be more welcome than a young scientist, brilliant but not yet famous enough to add to the scientific status of the department, and a scholar who brings in a new field with additional resources from third-party funding not only circumvents possible redistribution problems but

might even add to department resources by overhead etc. Though pressure from the wider academic community for the integration of new fields will still count, material resources give an advantage to new fields in terms of becoming incorporated.

Currency multiplication finds no obstacles only in times of affluence, though. If integration, by contrast, means immediate or future loss of resources for professors, and if this concerns a majority of professors in the department, the chances to become integrated decrease considerably.

Currency Devaluation

The game is a different one if currency devaluation is at stake. In this case the authority of Professor X is contested. His or her position will be ambivalent. On the one hand, he or she knows that monopolization strategies will be the best strategy to avoid future loss in scientific recognition and he or she might try to convince colleagues either to exclude or subordinate the new field (e.g. by not granting a professorship). On the other hand he or she should now be concerned about the size effects of the decision as the employment of a new professor can add to the status of the department and, hence, to future university capital of the department with positive side-effects for members of the department. If the new field can be subordinated, Professor X might in this case opt for inclusion, balancing the advantages of inclusion against the possible threat to his or her own status. Subordination is a strategy that diminishes the risks in this case. If the professor is risk-averse he or she will, however, opt for monopolization and discard the size effects. In this case exclusion might be the best strategy.

This is different for the other professors, who are not directly challenged by currency competition. They are above all sensible to size effects. They would welcome the addition of a new scientific field in the department as long as this means no resource competition (condition of scarcity). Therefore, under conditions of affluence, currency devaluation can take place because Professor X will find no majorities to exclude the new scientific field. If, however, there is a lack of resources and imminent threat of redistribution and loss of resources, the other professors will join Professor X as they are now negatively affected by the new field.

Currency Competition

In the case of currency competition all professors feel cognitively threatened and monopolization strategies leading to exclusion or marginalization will be the answer, as in the case of the BOM. As indicated, however, material aspects are now starting to matter more under the new regime. Either as a consequence of a period of scarcity or because they are linked to general university strategies promoting stronger links with stakeholders, the inclusion of new fields that bring in additional resources (research institutes that have direct contacts with stakeholders or which are able to generate funding resources from funding agencies) becomes more

appealing. It will not change the fact, though, that monopolization remains the first priority of the "Haves" and that subordination (not granting professorships) and institutional marginalization (in the department) will be the dominant strategies. This is why Clark (1996) speaks of semi-peripheries and peripheries: semi-peripheral and peripheral institutions are associated with departments and faculties but they do not have the same status as the existing institutionalized fields.

Currency Dualism

Finally, with regard to currency dualism, we might find relative cognitive indifference concerning the development of interdisciplinary fields as long as no new currency is unfolding. With regard to material aspects, however, professors and departments will try to maintain a grip on the resources (manpower, research money) linked to the development of the new field and integrate the field into their own cognitive domain (size effect). Subordination strategies remain again the most likely strategies. The game changes, however, if the leadership interferes and expresses an interest in the promotion of such interdisciplinary fields. This brings us to the level of decision-making bodies.

The Corporate Level of Decision-Making

Inclusion of Leadership in the Game

The most obvious change in the governance structure is the differentiation of a more powerful and professional intermediary bureaucratic or professional layer within the university. Whatever the precise distribution of powers between university councils, university leadership, senates, faculties and departments, the priorities of the leadership will play a role in the structuring of universities including the cognitive composition of faculties and consequently nomination procedures. In the logic of the leadership, other organizational "rationales" enter into the faculty or department game (Felt 2004).[6]

These rationales can interfere with the interests of social status and material resources of scientists and departments. They will certainly not always become the dominant objectives in strategic decisions but, as the "shadow of hierarchy" is now looming in all discussions of university decision-making bodies, they are at least always present in the discussion and cannot therefore be ignored. Several of them can also have positive effects on the integration of new scientific fields: e.g. a policy

[6]Organizational goals may be the answer to "societal demands" as expressed by the potential number of students in a cognitive domain: to invest in "creative research" with possible breakthroughs in scientific knowledge; to develop the potential of younger scientists ; to establish links with stakeholders; to develop and support regional development; to support promising areas of research, etc..

to foster younger scientists, the support of promising areas of research or the concern for better links with stakeholders and hence overcoming conservative tendencies in the faculty.

Implications on the Departmental Level

The prevalence of the leadership logic is more likely the more autonomous departments become with their own lump-sum budgets and accountabilities. This is certainly still rather the exception than the rule in the world of NPMM but if it is the case it strengthens the power of leadership rationales within the university. The department must now pay more attention to its position within the university, to university capital and, in order to acquire such a capital, must be concerned with the acquisition of social status by means of academic reputation and economic capital. Both can raise the status of the department in the faculty. The integration of fields that seem to "pay off" in the future in this respect becomes more attractive and the buildup of semi-peripheral and peripheral institutions can become pertinent in this respect.

The department becomes a different organizational unit compared with the BOM. The more it receives responsibility to handle its own affairs, the more a "corporate logic" is installed within the department linked to the mentioned social status and acquisition of economic capital as a collective attribute of the department and not of the individual scientist. This is the reason why "size" may be a more important argument than the preoccupation of an individual scientist with his or her own social status, jeopardized by the inclusion of a new scientific field. The department creates a collective logic that no longer allows "standstill policies" in favor of individual interests. The impetus of the collective interests of survival of the department usually overcomes individual concerns. New scientific fields can still be rejected if the costs of inclusion are higher than the benefits for the department. It is therefore the cost-benefit calculus of the department and not of individual scientists that matters.

Side-Effects on Strategies of Scientists

There are other implications of the shift to NPMM.

The first one is that there are now new venues open for scientists in new scientific fields to be incorporated into departments, namely by lobbying on the level of university leadership. With NPMM it becomes attractive for the leadership to demonstrate the competitive strength of the university by raising its social status among the scientific community and by increasing its economic capital. A scientist in a new scientific field with a high reputation stemming from his or her previous research or equipped with substantial resources by funding agencies (e.g. a center grant) or by stakeholders (e.g. an endowment chair or a chair financed by industry) will attract interest among leaders. They can then use their influence to convince the department

of the advantages of the inclusion of the new scientific field. As said, the interests of the department in terms of social status and economic capital are now in many ways equivalent to the university so that it will not be too difficult to convince the department, provided that the majority of scientists within the department do not feel threatened by the new area or costs outweigh benefits.

The second implication is linked to the increasing differentiation within the academic workforce. Differentiation means a continuing fragmentation of interests, sometimes linked to the different means of power the scientists hold within departments or in semi-peripheries and peripheries of the department. Scientists endowed for example with a major interdisciplinary research center will probably have an interest in the inclusion of a new scientific field investigated by a highly-rated scientist and often have the means either to finance, at least temporarily, the inclusion of this field or seek arrangements with department heads, deans or university leaders to incorporate it. Scientists in close contact with industry could have their cooperative research lab with industry as a semi-peripheral institution and get sufficient resources to include new scientific areas within their own confines, lobbying in the same way for full inclusion later on among departments, faculty and university leaders. In short, there are more and more ways, because of the variety of means to acquire economic capital and the immanent interest of cognitive units in universities to acquire such capital, to confront the "academic university community" with the inclusion of new scientific fields that would probably have had no chance in the BOM era.

The Role of the Dean

Finally, it might be of interest to discuss the role of the dean as one of the key positions in the governance structure of universities. The dean has to represent the faculty, i.e. the collective interest of a group of disciplines or "sciences" (natural, life, social). Under the NPMM he or she will usually be more strongly attached to the intermediary administrative level than has been the case under BOM.

Under BOM, Schimank contends, no-one wants a strong dean. Everyone is satisfied with "standstill" policies and a strong dean would undermine the "non-aggression pacts" of professors. Under NPMM, however, interest in the power position of the dean changes. Even if the faculty elects the dean, it is in the interest of this body, and of the individual departments as parts of the faculty, to employ a stronger personality able to defend his or her own interests in an increasingly competitive and hostile environment. This would mean endowing the dean with stronger powers that can to some extent override individual departmental interests. His or her interests would be similar to those of university leaders and heads of departments. They are all alike in attempting to strengthen their "cognitive unit" within the university, albeit on different aggregation levels. If decisions must be taken, the dean will decide in terms of the "profit" of a decision for the whole faculty. This means, if resources have to be redistributed, that such resources will be spent on those

scientific fields that are the most promising in terms of returns (reputation among the leadership; amount of resources; output in terms of scientific productivity or teaching, or links to industry, depending on the type of university). If a new field "pays out" in these terms then the dean will not hesitate to decide in favor of such a field – as long as, and here the logic is the same as that of the department, there is not a majority of departments that feel threatened by the inclusion of the new field in terms of social or economic status. It is still questionable whether the dean does indeed have the means of power to realize the "logic of leadership" as Deem et al. (2007) note but if he or she has, the decision will be in favor of the principle of "most return" of a new scientific field.

In sum, it does not matter on which aggregate level one stands in the university; consideration of costs and benefits (social and economic) determine decisions instead of individual interests of scientists or the "academic university community." The "stop sign" is there where a majority of interests of constituent units of the cognitive unit is negatively affected by the decision, and as long as the new scientific fields are seen as currency competition strategies of subordination or marginalization will remain dominant within the decision-making unit. These strategies can be compatible with the general interests of the decision-making unit but if, for example, the attribution of an academic title contributes visibly to the status of the unit, such strategies might be contested.

Conclusions

The new public management governance regime radically changes the "games" that are played by actors in universities in comparison with the former bureaucratic-oligarchic model. Whereas in the latter regime academic self-government and lack of procedural autonomy of universities contribute to a game of informal negative coordination, which leaves room for cognitive differentiation only in the case of currency multiplication in times of affluence, NPMM tightens the coupling between the diverse cognitive units within the university and makes its strategic priorities a strong factor in the discussions on cognitive structuring of universities. The development of a corporate identity and the presence of stronger university leadership as well as the greater independence of departments make positive coordination an imperative in the games that are played. This leads to a weakening of individual veto powers and strategies in departments in favor of the pursuit of common objectives of departments. These developments have effects on the opportunities of new scientific fields to be incorporated in universities. First, though currency multiplication remains the most feasible option, a selection process on the basis of "relative material value" of new scientific fields may set in. Second, cognitive differentiation by currency devaluation now has a better chance to become accepted as long as there is no resource competition. Third, currency competition becomes feasible though such scientific fields usually remain for some time in marginalized positions as "semi-peripheral" or "peripheral" institutions. The fragmentation of

interests within universities and the increasing opportunities for lobbying, however, increase the chances that such marginalized fields will become fully-fledged parts of the cognitive structure in the long run. Finally, cognitive differentiation by currency dualism could be put under stronger pressure than before if "size" matters for the development of departments and faculties. In that case, early attempts at "takeover" of such interdisciplinary fields might prevail. Active protection by university leadership is then required to give such fields a chance to develop their own "currencies."

All in all, these considerations offer a rather positive outlook on the development of scientific innovation: under the NPMM universities seem to become more open with regard to the inclusion of new scientific fields which would reduce at least some of the pressure from the increasing "diversity" of science. The openness remains strongly dependent, however, on the presence or absence of resource conflicts that are generated by the inclusion of new scientific fields. We have demonstrated that the resistance of the "Haves" in universities is reduced under NPMM because material advantages for the majority of members in departments outweigh individual disadvantages in terms of social status. The creation of majorities will, however, fail if these advantages are no longer given. All then depends solely on the authority of university leadership, i.e. if it wants and can include new scientific fields.

Though openness of universities might increase, the new opportunities might not be equal for all scientific fields. This is indicated by the selection considerations in departments: if material advantages are playing a more and more important role, it becomes imperative for new scientific fields to demonstrate their contribution to the social and economic status of the department. New scientific fields which fail in this respect have fewer chances to become integrated. This selection bias has not played a role under BOM.[7]

Finally, the new openness does not say anything about the effects the NPMM might have on the production of knowledge itself, i.e. on the "creativity" of science that is the base of scientific innovation. In this chapter we discussed the possibility of the institutionalization of scientific innovation and not the conditions of creativity. As regards creativity, NPMM might have serious flaws as indicated in the literature because of: the effects of this governance regime on the increasing burden of evaluation for scientists, which becomes as time-consuming as teaching and leaves less time for research; the pressure to raise research productivity, which increases the quantity of research output but not necessarily the quality; the stronger focus on the more lucrative "external" innovation, reducing opportunities for "internal" innovation with possible redistribution of university resources to these areas, etc. In short, though institutional conditions for the inclusion of new ideas might increase under NPMM, the system could run out of ideas.

[7] This is equivalent to what Lawn and Keiner have called the change from knowledge production, in which the "use-value" was relevant, to a knowledge "economy," in which the "exchange-value" determines the value of new scientific fields (Lawn and Keiner 2006).

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Chapter 9
Policy Pressures and the Changing Organization of University Research

Maria Nedeva, Kate Barker, and Sally Ali Osman

Introduction

The focus of this chapter is on policy effects and implementation in higher education. Through an in-depth examination of pressures for change in two UK universities we demonstrate that, within one policy environment, universities show different interpretations of the pressures and diverse responses. The implementation at organizational level appears to be highly dependent on the existing positioning of the universities within research spaces at different level of social aggregation and their organizational structure(s). We open for discussion the notion of overall policy effects and move towards a more nuanced understanding of the complex and mediated relationship between policy intervention and organizational change.

There has been a steady and rapid growth of academic literature, and policy debate, on the broad-ranging changes of the universities in the Western world. This reflects intense academic interest, not devoid of high emotion, as well as much more overt policy attention and changing empirical reality. Academic debates relate to the changes affecting university governance, the transformation of its missions (research and teaching) and the advent of a new 'third' mission. The consequences of this for the university and the emergence of new organizational forms and the reasons and social condition for all these changes to occur (or the 'pressures for change') occupy scholars of changes, policy makers and managers alike.

Thus, debates on the changing governance of the universities range from accounts of the introduction of management techniques (Shattock 2003) to innovative interpretations and analysis of academic leadership (Fuller 2007). Attention to the

M. Nedeva (✉) • K. Barker • S.A. Osman
Manchester Institute of Innovation Research, Manchester Business School,
University of Manchester, Oxford Road, Manchester M15 6BP, UK
e-mail: maria.nedeva@mbs.ac.uk; sallyaly74@yahoo.co.uk

C. Musselin and P.N. Teixeira (eds.), *Reforming Higher Education: Public Policy Design and Implementation*, Higher Education Dynamics 41, DOI 10.1007/978-94-007-7028-7_9,

changing missions of the university has been channeled through discussions about the 'third mission' and its transforming potential (Molas-Gallart et al. 2002; Jones 2002; Thorn and Soo 2006; Martin and Etzkowitz 2000; Nedeva 2007), and the transformations affecting the educational mission and the extent to which the university sector can or should directly provide the economy with employable, trained graduates (Clark 1930; Hillage and Pollard 1998; Harvey 1999, 2001; van der Heijden 2001; Boden and Nedeva 2010).

These accounts and analyses vary in terms of their approach, validity and empirical and intellectual rigor. However, they mostly share two core assumptions. One is the assumption of 'unity of object' whereby the changing object is constructed along institutionalist lines as 'the university' or 'higher education'. This masks important distinctions and division in terms of the changing object. Furthermore, there is empirical evidence, particularly in the UK, that 'the university' has undergone institutional dislocation and 'fragmented' into a plethora of rather different organizations. Interestingly, these organizations vary not only across national landscapes but also within the same funding landscape. In other words, it is not only that the universities in the UK and France are different kind of organizations but also, that the University of Oxford is not the same as, indeed hardly similar at all to, the University of Chester.

The second core assumption of the literature on university change is that pressures for change are universal. This, we posit, reflects a failure to distinguish between 'policies' and 'policy instruments', on the one hand, and 'pressures for change' on the other. Policies can be possibly be construed as 'universal'; 'pressures for change' are always specific for a social actor, or group of actors, since these are shaped by the policy as well as by the way in which it is interpreted depending on specific positioning and circumstances.

We challenge these assumptions by using information from a study of university change in the United Kingdom. This study was exploratory and used a case study research design to register a range of transformations (or the lack of such) in two universities and attribute the changes to specific policy developments. One of these, University A, is a research-intensive university the origins of which go back to the nineteenth century and it is a member of the Russell Group.[1] The other one, University B, is a teaching intensive university that became a polytechnic in the 1970s and was granted university status in 1992 as part of the Further and Higher Education act. Whilst the study explored change as an organizational characteristic of the universities, here we focus only on the findings related to changes related to university research and research policy.

This chapter is structured in six parts. Following this introduction, we explain the study design and methods used to select the cases and collect the data, setting out the key organizational dimensions of the cases. Following that, we present the cases focusing on the main differences between these and describe the policy

[1]The Russell Group is a grouping of 20 research-intensive universities in the UK which jointly undertake strategy setting and lobbying.

environment for universities in the UK; the main policy playing was the periodic national evaluation of research quality in UK universities, the Research Assessment Exercise or RAE. The findings on changes in research are presented using directly quoted statements in order to reveal the perceptions and views of the interviewees. We then consider our results, both in terms of whether our objects of study (the two universities) are a single type and also whether our universal policy (the national research evaluation system) produces universal pressures for change. We conclude with implications for the study of universities as organizations.

The Study: Approach and Methodology

This study aimed to explore the changes taking place in UK universities over the last 10 years and to link these changes to specific research and higher education policies. Furthermore, the issue of the pressures for change these policies constitute in terms of different universities and research fields was also interrogated. In other words, at a general level the focus of this study was on measuring university change and attributing it to policy measures.

These issues were approached by using a comparative case study design combining documentary analysis and semi-structured interviews with academics and academic leaders (Deans, Associate Deans and Head of Department level) in two UK universities. A total of 32 interviews were conducted and analyzed. These interviews sought to explore the opinion of academics and academic leaders regarding the change that has been occurring in the two universities and its attribution to policy.[2]

To select the cases we used a classification of UK universities based on their core functions, namely research and teaching. This used data from the Higher Education Statistics Agency (HESA) about amounts and sources of funding at the level of individual universities to divide the UK universities into two distinct groups, namely research intensive and teaching intensive. This taxonomy builds on the level of research and teaching activity carried out by the specific universities as measured by the amounts of funding generated through these; it does not, however, account for the quality or 'excellence' of these activities (and the universities performing them).

The total research funding included the funding from research councils, Higher Education Funding Councils (HEFCs), European Union (EU), charities, and industry. The total teaching funding reflected the amount of funds granted to universities,

[2] In principle, change and attribution can be interrogated using two framework approaches. One of these would build on multiple data collection whereby change is measured as a difference over time and attributed causally by describing the social mechanisms that could generate this change. Another approach would be to access both change and its attribution to specific policy developments through the opinions of the respondents. Whilst the former approach is probably superior in terms of both measurement and attribution it also needs to be carried out over a long time period and is rather expensive.

based on the number of students enrolled, and the fees paid by students at different education levels. HESA data for year 2005–2006 was used for this purpose. Using the ratio of total teaching funding to total research funding a coefficient was calculated and was arranged in ascending order, where the smallest coefficient reflects a research university with a relatively high research activity to teaching and largest coefficients represent universities with a relatively high teaching activity compared to research. Using the median measure, the UK universities were divided into two groups: research intensive and teaching intensive groups. From each group one university with a high research coefficient and another with a high teaching coefficient were selected, taking into account comparable size of the two universities.

Various typologies of universities exist and are present in the literature, yet they are rarely transferable from one national setting to another. Our exercise had the merits of being robust (based on published verified national data rather than on judgments and interpretations) and simple. Research-intensive universities also deliver teaching (including undergraduate teaching), but the presence of a significant income stream for research is likely to make these universities differ from those which have teaching as the dominant income stream.

We targeted the interviews within two faculties within each case university, in order to gain benefits of cross-checking accounts of change and to link managers to academics within the same branch of the organization. In this chapter, we will not consider differences between the disciplines, which were in any case less marked than we originally expected. In each university we studied a social science faculty and in University A also a science faculty. In University B we studied in addition an applied technology faculty.[3] All interviews were conducted face-to-face, in total 32 interviews with an average time of 50 min (ranging from 30 to 70 min), in the period between November 2007 and August 2008.

During the interviews three sets of issues were explored through applying an interview guide: (a) questions regarding the pressures for change and their origin (external or internal); (b) the perceived changes in research and teaching functions during the last decade; and (c) the perceived responses in the organizational context of universities to pressures for change. Furthermore, to prepare the interviews and contextualize and supplement the data we analyzed documents setting out the organizational structure, missions and performance of the selected universities; documentary analysis was also used to outline the research policy(ies) reported to be affecting university change. The main difficulty here was the unavailability of older internal documents which would let us see the situation before the responses to pressures for change. As a result, the most recent documents (mainly from web sites) were used to account for the changes that the interviewees mentioned during the interview.

[3]For practical reasons, since the science faculty was not available for interview within the time period of the study.

The Two Universities

University A is a large research-intensive university and a member of the Russell Group of research-intensive universities; its annual research income exceeds £100 million and it teaches around 30,000[4] students from all over the world on 650 undergraduate courses and 300 postgraduate courses. University A improved its ranking in the Research Assessment Exercise from the twenties in 2001 to the teens in 2008. It is also active in developing enterprise initiatives, according to indicators such as patents, partnerships with local companies, incubated companies and active spin-out companies valued at over £100 m.

Its origins go back to the nineteenth century with the founding of the medical school as a collaborative effort from the local community. In the late nineteenth century the college of science was founded as a response of public concerns about the local manufacturing industries and the threats it faced due to rapid technological developments. At the beginning of the twentieth century, University A was granted its own charter and became an independent institution. It has nine faculties containing schools and several research centers and institutions. In this case we covered the academic fields of Biological Sciences and Education.

University A's vision is to secure a place among the top 50 universities in the world by 2015, achieved through the integrating world-class research, scholarship and education and making an impact upon global society.

University B is a teaching-intensive university. It was founded in the early nineteenth century as a specialized mechanics institute. It became a polytechnic in 1970, and was granted university status following the Further and Higher Education Act in 1992. It is one of the largest universities in the UK, having around 40,000 students. University B offers both undergraduate and postgraduate qualifications in several disciplines: architecture, graphic arts and design, business, computing, education, health care, hospitality, business management, information and library studies.

University B's vision is to provide high quality learning and teaching experience to students, to foster a community where research and scholarship inform teaching, to contribute to knowledge transfer and to collaborate with the business community.

In addition to the functional differences and orientations outlined above, the cases have different governance structures. In this chapter we do not attempt to link changes in research to governance structures (and it was not a theme which emerged from the empirical work). University B, being a post-1992 university, has a board of governors who are local senior members of the social and business community who have a strong influence upon the overall strategy of the university. The academics are consulted but not able to exert as much influence on organizational directions as University A, where the senate passes decisions on academic matters including curricula and quality and a council (including lay members) oversees the strategy and management.

[4] HESA Statistics – Higher Education numbers 2007/2008.

In the next parts of this chapter, we present our findings. Here, we use direct quotations from the interviewees to demonstrate the perceived pressures and changes in the domain of research. The direct quotations allow us to see the differences in perception and response to the national policy.

The Policy Environment

Universities in the UK have been subject to on-going changes in policy towards higher education and research. Many of these are in line with international trends: increasing participation in higher education, more internationalization (with research performance and competition for students no longer within the national domain) and institutional reforms. The UK has seen periodic reviews of higher education teaching quality processes, access and social inclusion, links to business and industry and, quite strongly, the skills and employability agenda (Boden and Nedeva 2010). Deem et al. (2007: 39) observed: "UK higher education has been the subject of a series of direct and indirect modernization endeavors by government and university funding bodies. Such an approach to higher education has, since the 1980s, placed considerable emphasis on cultural change and the need to overtly manage academics and academic work in the context of marketization and gradual privatization of publicly funded education, using explicit performance and quality indicators for teaching and research and at times introducing considerable restrictions on units of funding per student and capital expenditure".

Henkel (2005) argued that during the last quarter of the twentieth century higher education became an increasingly important instrument of national economic policy. As a result, universities were pressured to change their cultures and structures, and to review their assumptions about their traditional roles, relationships and boundaries.

For research, the dominant policy change for research in higher education has been the continual cycles (every 6–7 years) of the Research Assessment Exercise (RAE).[5] Although its origins lie in the low-key research selectivity exercizes which started in 1986, the policy imperative to concentrate research funding in the most highly performing universities has grown stronger. The RAE is a national research evaluation system, as defined by Whitley (2007) based on a peer review of research outputs in around 70 disciplinary areas. According to the ratings given and the number of people entered, the Higher Education Funding Agencies allocate research funding for the next period, about six billion UK pounds over the lifetime of the cycle.

The intention (and consequent expectation) has been to increase the concentration of funding to the very highest performers, meaning that only subject areas with "world leading" and "internationally excellent" research performance secure funding. Whilst there had probably been some grade inflation across RAE cycles, as

[5] Renamed the Research Excellence Framework or REF after the 2008 cycle, to denote some major changes in the formulation of the exercise.

the bar has constantly been raised, there has been enormous pressure on those universities who depend on this stream of research income to demonstrate international excellence and reputation.

The 2001 exercise attempted to concentrated further research funding in the universities with the highest ratings and so the consequences of failing here were severe for universities which depend on this research income. Doing well in the RAE became crucial for them and so they entered a strategic game to optimize their chances of success. This has involved attention to internal preparation, and performance management. There are some reported unintended effects of the RAE, such as discrimination against applied and interdisciplinary research[6] (for example, Vick et al. 1998; McNay 2003).

So we can already see that this national level policy is likely to be felt differently by different universities and parts of universities, for instance, those performing applied research versus very academic, disciplinary-bound research groups. Indeed, our interviewees whilst reporting rather different kinds of organizational change unanimously attributed these to past cycles of the RAE; they were speaking about the previous rounds which reported in 2001 (Roberts 2003) and 2008, and were following the debate regarding the rules of the forthcoming exercise of 2013.

Findings: Research Funding, Orientation and Evaluation

Our comparison will examine three areas of possible change in research, as elicited during the semi-structured interviews. The first area for questioning concerned research funding, including the level, the composition of sources, the intensity of competition for funding and the nature of support provided by the universities for funding applications (for example in writing proposals, coordination). These are summarized in Table 9.1.

Table 9.1 Research funding by university

	University A	University B
Level	Not changed – high	Not changed – low
Composition of sources	Not changed – HEFCE, Research Councils, other public; global	Not changed – very little from HEFCE, accidental from RCs and mostly from industry and users; local
Level of competition	High but coping (refers to RCs and global public)	Global public competition perceived as high but not relevant; private no change
Support for applications	Structures for support and prioritization have emerged	Not evident in research

[6]The REF requires reporting on the impact of research partly to offset the RAE's effect of focusing on publications in the most prestigious academic journals.

Perhaps somewhat surprisingly, the funding for research had not changed in both universities. In university A it remained high and in university B it remained low. In 2007–2008 university A secured over 100 million pounds (GBP) and in the 2008 RAE it ranked in the teens overall. In university B most of the research funding came from collaboration with industry:

> We get some funding from HEFCE but that is very small in comparison to research-intensive universities. We have to find other ways of funding research, we have certainly seen more confidence in bidding for research council funding and, yes, we have some success there although I am sure we could do better. I think what worked also is partnerships with other universities, perhaps those with a track record in research and that has helped us really well. (Vice Dean for Teaching University B)

Alongside little change in overall research funding, we see little change also in the composition of the funding sources. University A still secures funding from the HEFCE (via the Research Assessment Exercise ratings), from the research councils, other public sources and from international sources such as the European Commission. University B still secures very little from the HEFCE due to low performance in the RAE, some research council project applications which succeed but mostly still from local industry and users as well as within Europe as partners in consortia. Interestingly, in university B international PhD students are viewed as a source of research income, including those registered with the university but working at a distance. This is a different perception of what constitutes "research funding" from the research-intensive university:

> In terms of research money in the faculty, a lot of it comes from overseas international students, we deliver research abroad. We have a model that is unique. I think where we deliver is from America right across Europe, and we have registered research students whom we support at a distance and that has been very successful, that has generated income. (Dean, University B)

Both universities perceive increasing levels of competition for research council and international grants, but the reactions are different. University A notes very high levels of competition but is still succeeding:

> It is harder to get research money, I have been lucky, I always had a research grant, but it is hard to keep continual funding and it is definitely much difficult, especially for new people, who had to balance their teaching with applying for research grants. (Senior Lecturer, University A)

University B perceives the competition as high but not relevant as it can focus attention on its strength of industrial collaboration:

> It is clear that [funding] is becoming increasingly difficult to access. The sort of traditional research council type studentship and traditional grants of that sort, the competition now is much greater, the amount of money available for those organizations has been reduced and become much more focused…It has been easier for some of the more research-oriented universities to adjust and to form the necessary activities that are needed to access that funding. What we have tried to do is to work closely with industrial collaborators. (Professor, University B)

Table 9.2 Change of research orientation

	University A	University B
Application and use	Shift towards application	No change – always applied orientation
From individuals to groups	Yes	No change

So, university B attends to its industrial research and research students and does not attempt to compete for research council and similar grants, while university A re-organizes and introduces structures for support and prioritization in order to maximize its chances of winning research funding:

> From a grant-funding point of view, we now have teams of people who view applications for grants before those are submitted, so we try and say that we submit the best quality possible and the younger members of staff have regular mentoring meeting where they are encouraged to apply for money and keep publishing papers. (Senior Lecturer, University A)

We were interested to find evidence for changes in orientation in research (see Table 9.2). University B which concentrates on applied research and has expanded areas of research to support new areas of teaching, such as tourism, in partnership with employers:

> We have always considered ourselves as an institution of applied learning and I think people have generally considered that we are applying knowledge in the research we do. (Professor, University B)

University A shows change here. However, it is not towards more fundamental research as might be expected in order to win competitive peer reviewed grants, but towards more applied research. This change is seen as emanating from the research councils:

> Orientation is rather guided by the research councils as they are instructed by the government to have more directed research, the initiatives that call for proposals in certain areas, really dictate that people need to align their research, so there is much more structure I think in what funds are available for, research has to be within a given framework more than it was maybe 20 years ago, where simply the ideas were produced from the individual scientist. (Associate Dean for Teaching, University A)

Picking up the last point from the quotation above, university A reported shifts from individual to group research, something which university B did not mention. There is more collective research and grant applications, not only in sciences but also in social sciences:

> There is a much greater understanding that research had become a collectivised enterprise. We recognize that having lone, individual scholarship would not help our performance. There might be place for individual scholars but our work must be much more collectivised, otherwise how we are going to manage new scholars at the beginning of their career? I think schools and departments now structure and organize themselves around that collectiveness in a way that was not probably the case ten years ago. (Dean, University A)

Table 9.3 Change in evaluation

	University A	University B
Increase	Yes	Yes
Focus	Quality and impact of papers	General scholarship in relation to teaching
Follow up	Strategy for increasing impact of research	Strategy for applying research

Our final area for questioning concerned perceptions about changes in research evaluation (see Table 9.3). As we noted earlier, UK universities have been undergoing evaluations of their research output in the periodic assessment exercises which strongly determine levels of funding.

Here, both universities report an increase in evaluation, although in the teaching-intensive university the perceptions about the importance of evaluation were more varied. In both universities it is the RAE which is mentioned as the underlying driver for the increased focus on evaluation:

> I think before the RAE there was no formal evaluation of our research but after the introduction of the RAE specially the second and third round, a lot of pressure was felt by academics to produce more research with higher quality. (Associate Dean for Teaching, University A)

We see again evidence for different meanings given to research in the teaching-intensive university:

> Yes, now we are driven by the RAE. I have been around for 26 years and I can see, probably research was more informal. What you did is that you follow the area of interest but now you got to be more focused, you are target driven, and you have to meet those targets. I am not involved in the RAE; I am trying to develop an area of research with professors in creative technology, so I am trying to do collaborative research. In new universities, we have our teaching duties. I think it is expected from us to do some research, but without being monitored by someone closely as in the redbrick university in research, but most of us do it for our own benefit to expand our knowledge of our subject area, that is the main reason why I do it. (Professor, University B)

Research can be "non-RAE" and can include scholarship to support teaching in university B. There is more flexibility in how research is assessed within the teaching-intensive university:

> Our expectation is that all academic staff would involve and engage themselves in research and scholarship. That now features in terms of annual appraisal, where all staff are expected to account for their contribution to research and scholarship, but that is on a sliding scale going from high level high impact research in established research centers with critical mass, good productivity down to individuals who are making contributions to professional association, groups who are making contributions to research in pedagogy in terms of how it influences teaching, learning and assessment, in their particular area of the university. (Vice Dean for Research, University B)
>
> We are very low funded for research so we look at research more as part of a scholarly activity. Research is just a part of that. We have a new research strategy being in place, probably for two years and recently been reviewed. It looks at different patterns of applied research and what scholarship is and what research might contribute and it is a broader,

> more inclusive definition of that sort of activity, and each and every member of staff now is expected to engage in some or more parts of those and interestingly that wasn't the case before. (Dean, University B)

The second quote above shows us that evaluation and attention to research are still present in the teaching-intensive university, but its meanings are not the same as for the research-intensive university.

While university B focuses on the internal assessment of research and scholarship of individuals in the context of teaching, university A mirrors the requirements of the RAE by focusing attention on the quality of papers and journals and research income:

> The way grant funding bodies evaluate our research has not changed but the way the university evaluates our research has changed. Most of us feel that we are continuously assessed about how many papers we publish and the journals we publish in and how much money we succeed in getting into the university, I think that is much more publicly known among our groups than it was in the past. (Lecturer, University A)
>
> The basic principal in this faculty over the last few years was how to increase the number of high impact publications, so there were a number of things that we have done to look at that, in terms of peer review before publication, collaboration, someone maybe able to make a perfectly adequate publication from their science but actually by collaboration with somebody else internally just that 20 % of work could actually make it much more meaningful and publishable in one of the high impact journals. Certainly within this faculty we operate that system of collaborating within research groups and peer review of research publications. (Associate Dean for Research, University A)

From the above remarks, we see that both universities have developed strategies and evaluation, but the teaching-intensive university seeks to map and understand how it does apply research in different ways to support teaching, and the research-intensive university picks up the cues from the RAE about maximizing the academic impact of its research outputs.

The Universal Policy Pressure?

In both universities, changes are reported in research, although with large differences in the areas for change and the nature of the changes. The universal policy identified is the Research Assessment Exercise, as it is applied in the same way to all institutions of higher education in the UK. What is interesting is to see how the ways in which the two organizations interpret and mediate the policy to translate this in policy pressures are different. The research-intensive university (A) has introduced structures and organizational processes of internal control so that it can compete more effectively for public funding for research, both through the RAE and through grant applications. The arena for competition is not purely national, but international as well. The teaching-intensive university (B) is changing to position itself for a different market: a more local one for applied research, services and to improve teaching. After paying some attention to the RAE, this is now marginal to

their strategic considerations and changing to fit the requirements of the RAE is simply not relevant to their core mission:

> I wouldn't say the RAE has affected my type of research because I have always enjoyed looking at sport exercise research. I haven't let the RAE influence the type of research that I do. I still investigate what I am interested in. That didn't change for me personally. It may have changed to other areas because not all subjects are entered in the RAE. This is a selection process so you submit against the areas that you feel you are strong in. (Professor, University B)

The research-intensive university shows much more direct linkage between its changes and the policy:

> The internal pressures for change would be driven from the external pressures, so ultimately if there wasn't an RAE culture and if resources haven't dropped that much we would have been doing the same thing that we did twenty years ago. We had reorganization at the faculty level to produce the research institutes but that has been driven by the desire of the university to make sure that our RAE is high as possible, which is driven by external agenda to make sure that, it is of highest quality. (Associate Dean for Research, University A)
>
> It is really the university and the department responding to the external pressures, the RAE, the criteria of achieving, the desire of the university for more external research funding, it sees that as quite important probably because it is a very science-oriented university, but it's really, I think external pressures that brought about these changes. (Lecturer, University A)

The national research evaluation system as a universal policy does not, therefore, bring consistent responses in different types of university and its steering mechanisms are anything but universal. The pressures for change that universities experience, and respond to, crucially depend on their starting points and aspirations. Hence, the research intensive university (A) translates the pressures into intensifying efforts to achieve international standing in research and research income generation. It raises its game in professional management of research and re-organizes researchers in order to improve output quality, visibility, flexibility and grant-winning. The teaching intensive university B de facto opts out of RAE-type research which will stand the approval of traditional academic peer review. The pressure is translated rather into looking even more towards the locality for service provision and small scale applied research which cements teaching links.

Even what is meant by "research" in discussing with academics is different: in university A it means competitive grant-funded projects which lead to peer reviewed articles in influential journals, and in university B it means having some PhD students and working on problem-oriented research for business.

In some sense, finding these and similar changes is not a surprise: we did select the cases for difference. However, it is important that the different change is ascribed by our interviews to the same policy. Furthermore, were the assumptions of 'unity of object' and universality of pressures for change to hold one could reasonably expect that having to operate within the same policy and funding space would have led to a level of convergence in university structures, practices and strategic change. What we found is that traditional differences not only persist but also that the later change is path-dependent and follows long-standing and established organizational trajectories.

Conclusions

We set out to interrogate two key assumptions of the latest policy driven change in universities, namely the assumptions of 'unity of object' and 'universality of pressures for change'. We did this using results from an exploratory study of two universities in the UK based upon qualitative interviews with supporting documentary evidence; these universities represent two different types found in the UK.

Our data does not allow us to measure change directly (as difference over time) or claim causal relationship(s) to specific policies either through statistical analysis or by working out the mechanisms for change to occur. This is not our objective either. Working with the strongly held perceptions of both senior academic managers and leaders and more junior academics we believe that there are two distinct responses to a specific policy, namely the RAE. The pressures for change and the manifestations of organizational change are specific and not universal, even when the policy is "universal".

At one level, our argument and findings is fairly straightforward – different organizations translate policies as different pressures for change and act accordingly. In the case of universities, the outcomes of external pressures depend upon the nature of the policy, the positioning of the organization in the research space and the share of its participation in international research fields. Our findings, although indicative, illustrate two important points: (a) that the two universities are sufficiently different to generate variance in response; and (b) that one policy translated in rather different pressures for change as perceived by key organizational actors. In other words, the assumptions used by many studies of the effects of policy on university change do not hold. This in turn has two sets of implications.

Our argument and findings have conceptual and methodological implications in that attention should be paid to organizational differences among organizations: not all "universities" are the same, and not all "university research" is the same. These differences need to be better understood both within national settings for forming policy and steering mechanisms, and, even more so, for international comparative research and benchmarking. Methodologically it is important to continue work on developing analytical typologies of universities – this will allow the analysis to go beyond the institutional ('the university') or individual cases that are difficult to aggregate. Apart from that, it is important to develop more detailed and nuanced understanding of the complex and mediated relationship between policy and the organizations of research (universities, research institutes and research and knowledge communities).

Our findings contain a clear message for policy as well: blanket policies can, and indeed do have, many unintended and undesirable effects. In principle, there are two ways to deal with this matter, one of which is to aim to design differentiated policies accounting for the specificities of different organizational forms. This, however, is likely to have prohibitive development and implementation costs. Another option is to transform the way in which policy is developed, moving away from 'normative' pressures to providing more opportunity platforms and increasing the strategic space of organizations.

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Chapter 10
Reforming Faculties' Careers: The Swiss Labor Market Between Universalism and Particularism

Gaële Goastellec and Nicolas Pekari

Knowledge is the clarification of the structure of relationships

(Bell 1968, p. 406)

Introduction

Over the last few decades, the Swiss higher education system has introduced important reforms - both concerning its structure and its governance. As with other European countries, one of the most important changes consists of the strengthening of the research mission of universities. The political support of research activities goes through an increase in competitive funding and evaluation instruments (Whitley 2003; Kehm and Lanzendorf 2006; Välimaa 2004). Historically, the Swiss National Science Foundation (SNSF) is the most important institution dedicated to support and finance research activities in Swiss universities (Fleury and Joye 2002; Benninghoff and Braun 2010). For the last couple of years, the federal government, which finances the SNSF, has required that this institution should not only support research projects, as had been the case since the 1950s, but also academics in their research missions, in order to become more competitive in the national and international markets. Meanwhile, traditionally and historically, the definition of a

G. Goastellec (✉)
Observatory Science, Policy and Society, University of Lausanne,
Quartier Mouline, Bâtiment Géopolis, 1015 Lausanne, Switzerland
e-mail: Gaele.Goastellec@unil.ch

N. Pekari
FORS, University of Lausanne, Quartier Mouline, Bâtiment Géopolis,
1015 Lausanne, Switzerland
e-mail: nicolas.pekari@unil.ch

C. Musselin and P.N. Teixeira (eds.), *Reforming Higher Education: Public Policy Design and Implementation*, Higher Education Dynamics 41, DOI 10.1007/978-94-007-7028-7_10,

faculty member and his or her financial support has been supplied by the higher education institutions (HEI) themselves.

This redefinition of power relationships around the funding of academic temporary positions and research activities by the NSF can be analyzed as an attempt to reform the structure of academic careers and the allocation modes of academic positions. The issue of how academic positions are allocated within the normative structure of science departments (Merton 1973) has been the focus of various studies since the 1940s. Wilson (1943) analyzed academic hierarchy and the selection problems, Riesman (1956) produced an analysis of a merit based academic structure that describes the prestige ranking of higher education institutions and the implications of local and national disciplinary interests. More recently, Caplow and McGee (2001) underlined the decisive dimension of prestige as a measure of performance.

This chapter is an attempt to nurture this debate by questioning the tension between the uses of universalist and particularist criteria in the allocation of academic positions. Universalism supposes that the judgment of academics should be based on "pre-established impersonal criteria" (Merton 1942, 1973, p. 270), while particularism is defined by Long and Scott (1995, p. 46) as "the use of functionally irrelevant characteristics, such as sex and race, as a basis for making claims and gaining rewards in science" (Long and Scott 1995, p. 46). More specifically, we propose here to define particularism as the use of non-scientific criteria to include or exclude some specific social groups. This also includes the use of criteria such as favoring or excluding local candidates. The definition adopted here is specific in the sense that it does not necessarily presume the building up of exclusion processes per se but of possible exclusion processes as a consequence of the organization of academic markets and their embeddedness in a wider societal organization.

The increased power of the NSF in relation to the allocation of temporary positions and its impact on the organization of the academic market can be scrutinized within the framework of this debate. In order to analyze the relationship between the reforms of higher education and academic careers, this chapter is structured in three parts.

The first part of the chapter examines how the academic profession in general and academic careers in particular have become objects of political regulation by questioning the procedural dimension of the professionalization of academic careers: in Switzerland, we observe a social and political process aimed at modifying the characteristics of the academic profession, regarding the recruitment processes as well as the academic activities. The governance of academic careers in Switzerland depends on a plurality of instruments implemented by the National Science Foundation and the Higher education institutions during the last decade. The latest research on the impact of research instruments by the Swiss National Science Foundation (Joye-Cagnard et al. 2008. Goastellec et al. 2007; Felli et al. 2006) reveals that as a consequence the normalization of the Swiss market place has occurred through introducing, at various levels of academic careers, shared status, processes, and criteria. The Swiss market "follows" the European trend described by Musselin (2005) which is characterized by the emergence of a more regulated internal academic market: the progression of careers within a higher education

institution increasingly answers explicit rules and incentive mechanisms. It is also characterized by the development of the external market, faculties being always more required to prove their value in a national or international market.

The second part, based on quantitative research carried out on National Science Foundation research fellowships candidates over the last 14 years (Goastellec et al. 2010), proposes a quantitative analysis of the new career trajectories. Who are the research fellowships candidates? What are their ensuing careers? Which fellows have the most probabilities to access the professoriate? Based on a comparison between two types of fellowships at the different stage of the career, we identify structural characteristics that explain the conditions of becoming a faculty member: age, gender and discipline are important variables weighing on one's career. An in-depth statistical analysis through logistic regression provides more information on these career structures.

Finally, in the conclusion, we question how the development of SNSF fellowships for the different stages of a career can be part of a more general change in career structures and scientific criteria. We can observe a shift from an academic system based on hierarchical organization and implicit knowledge to an organization based rather on a network organized around scientific activities.

Academic Careers in Switzerland

Academic Market Specificities

Academic careers are not only part of social and power relations (Bourdieu 1984), but also of economic relations between employees and employers. As a consequence, the higher education system can be analyzed as a labor market (Crane 1970; Musselin 2000; Caplow and McGee 2001). In the Swiss academic market, the main employers are the ten cantonal universities, the two federal institutes of technology and the eight Universities of Applied Sciences.[1] These higher education institutions differ regarding their size: less than half of them employ more than three quarters of the faculties. Those faculties can be divided into several socio-professional categories that are more or less represented in the different institutions. In 2008, the ten universities and the two federal institute of technology were composed of 2,900 professors, 2,851 "other lecturers", 15,868 "assistants and scientific collaborators", and 11,132 "administrative and technical staff" (OFS 2010a). The 8 UAS employed 3,506 professors and a total staff of 10,205 persons (OFS 2010b).

[1]The Universities of Applied Sciences are composed of several institutions that are located in several cantons. For example, the UAS of occidental Switzerland regroups 27 schools located in 7 cantons. This institutional structure of the UAS explains the difference observed in terms of numbers of professors when compared with universities.

Other important characteristics of the Swiss academic market relevant to understanding the academic careers and recruitment procedures are its strong internationalization and its weak feminization. In 2008, more than a third of the total staff were of foreign origin, mainly coming from European countries (85 %), amongst whom Germans were the most represented (46 %). About 50 % of the professoriate is composed of foreigners, with important variations between universities[2] (OFS 2010a). But it is amongst the assistants and scientific collaborators that the foreigners' rate is the highest (50 %).

Those differences between higher education institutions can be explained by the fact that, in the federalized context, they do not depend of the same public authorities (the steering can be cantonal, federal or mixed). As a result, the academic marketplace is characterized by a wide array of employees' relations and engagement rules. The ten cantonal universities each have their own legislation, which represents the main institutional governance framework (along with the federal law on universities' help and higher education institution cooperation). In addition to differences between universities of a same country, variability can also be observed between countries. As underlined by Musselin (2005), each country has its own rules regarding university careers, which depend on the higher education national configuration.

Nevertheless, some common trends can be identified. For example, most of the jobs offered are limited in terms of time, and 60 % of the hiring concerns part-time jobs. Here, a strong difference can be observed between the different faculty members, with 80 % of the professors having full time jobs compared with 14 % of the others members. More importantly, the majority of these (86 %) are working at less than 50 % (OFS 2010a).

The way faculties are funded also reveals some specificities of the Swiss academic labor market: 75 % of all faculties' salaries are funded by the institution's core budget (which comes from the public authorities). The National Science Foundation finances 10 % of the salaries and the remaining 15 % are funded by third parties (private organizations, European funding). Here again, some differences appear depending on the type of academic status: higher education institutions fund 92 % of their professors salaries and other lecturers (*Maîtres d'enseignement et de recherche*, *Maîtres assistants*), but only 60 % of assistants and other scientific collaborators (OFS 2010a). For the latter categories, the SNSF plays an important role.

Career Diversity

Regarding recruitment, in terms of the decisive sequence of academic careers, the Swiss system shares some commonality with the German model, particularly with regard to its recent changes (Enders 2001; Kaulish and Salerno 2005).

[2]For example, the University of Italian Switzerland has the higher rate of internationalisation (71 %), followed by the Institute of Technology Zurich (63 %) and the Institute of Technology Lausanne (57 %).

In Swiss universities, the responsibility for the recruitment is usually distributed between the cantons and the universities, the universities being responsible for choosing who they want to recruit while the hiring power and the definition of the salaries scale mostly goes back to the public authority.

Another dimension shared with the German system, the obtaining of professor tenure, tends to happen relatively late in one's career due to the chair system: in terms of professional ascension trajectory, a Swiss academic career is divided into different steps, from the status of assistant, to *Maître Assistant*, to *Maître d'enseignement et de recherche*, and finally to the professoriate; this last category being subdivided in several ranks including tenured or non tenured professors. In Switzerland, the denominations and status can vary from one institution to the other. We also observe a difference between the prerequisite to obtain a professor position in the German speaking part of Switzerland compared with the French and Italian speaking parts: in the former, the Habilitation is required.

A System in Transformation

As in other European countries, Swiss universities have faced important changes during the last few decades: the student body increased by more than 50 % during the 1980s as a result of the 1960s baby boom, increasing the need for professors, while 30 % were expected to retire between 2000 and 2007. At the same time (1990–1998), the federal and cantonal governments faced huge financial difficulties.

As a result of these structural and conjunctural changes, the necessity to optimize the use of public funds and to increase the efficiency and effectiveness of state actions has been underlined in several political and administrative reports (CF 1998, 2002; Kleiber 1999). To reach these goals, political actors have identified the coordination and competition ("coopetition"[3]) as new modes of state regulation in higher education and research. In addition, the contractualization of the relations between public authorities and higher education institutions has lead to greater autonomy among university governing bodies in the management of their human and financial resources (Weber 1998; Perellon and Leresche 1998; Baschung et al. 2009).

Consequently, at the cantonal level, most of the laws for organizing universities funding were revised during the 1990s (Fumasoli 2008). At that time, universities' autonomy increased and their internal governance bodies were reinforced, particularly in regard to their relationships with the academic professions. Before these revisions, cantonal governments were entitled to nominate university professors. Subsequently, universities were given this responsibility. Cantonal governments have no legal influence on basic conditions such as the tenure or the structure of the market; the employee classification system being the prerogative of the institutions.

[3]This notion (buzzword) was used by actors to legitimate the European "Lisbon strategy". On this issue, see: I. Bruno (2008).

At a federal level, the Confederation encouraged competition through modifications in funding allocations (introduction of "output" criteria) and partly increased the budget allocated to the National Science Foundation. The federal government estimates that the NSF must play the role of a leader to foster renewing the faculties.

Fostering the Regeneration of the Academy: The SNSF Tools

To foster the efficiency of the academia, a large number of tools have been created, aimed at sustaining the different stages of an academic career (from assistant to professor), the plural activities of faculty members (teaching and research), taking into account the disciplinary and institutional specificities, as well as the gender inequality issue.

In particular, one can distinguish between tools for project funding, publication and conference funding, special program funding, such as infrastructure, funding of international research cooperation, and individual funding.

In this chapter, we only deal with SNSF individual funding, as it is the one most strongly interwoven with individual careers trajectories. Six main categories of individual funding have been implemented by the SNSF: beside the Marie Heim-Vögtlin, aimed at providing an opportunity to women whose trajectories have been slowed down or interrupted due to family constraints, the five other programs specifically address each stage of an academic career: ProDoc is designed to fund doctoral students. The Fellowship for Prospective Researchers provides funding for the last stage of the PhD or for a first post-doctoral research; the Fellowship for Advanced Researchers finances second post-doctoral research abroad; Ambizione then allows the students to come back in Switzerland for 1–3 years of research in a HEI other than the host institute to take a PhD thesis; and the Fellow Professors funding provides 4–6 years funding with an autonomous research team to develop original research in a Swiss Higher Education Institution.

The creation of these tools impacts on the academic marketplace by introducing more competition and explicit selection criteria. For example, the Fellow Professors program aimed stimulating academic careers in their last stages (Professor) has introduced the possibility of obtaining the title of professor in a short period of time after the PhD (it is aimed at researchers having presented their PhD during the last 2–9 years). Also, without making it compulsory, it has push universities to implement a formal or informal tenure track process. As a result, amongst the fellow professors that have been selected by the SNSF and hosted in a HEI, a large number are granted tenured in their host institution. Another important change was that this program required that all universities develop the assistant professor status, a status that did not previously exist in all of them (Goastellec et al. 2007).

Therefore, the SNSF plays an important role at an individual level, regarding academic trajectories, but also at a structural level, regarding the harmonization

of the criteria, status and understanding of academic careers. To whom are these instruments dedicated? A sociological description of the fellowship candidates stresses the social and individual conditions that foster an academic career.

In order to answer these questions, on the one hand we can analyze SNSF prospective and advanced fellowship candidates' trajectories and, on the other, the SNSF professorships.

First Steps in Academic Careers Through Prospective and Advanced Fellowships[4]

SNSF Prospective research fellowships are aimed at sustaining researchers at the beginning of their career through a research stay abroad. This program concerns finishing PhD candidates (6–24 months stay) and postdoctoral research (12–36 months stay abroad). Fellowships are attributed through SNSF commissions based in each higher education institution. Completing advanced research fellowships also implies a stay abroad (12–36 months) but the candidate must hold a PhD, have at least 1 year of post-doctoral activity, and present a project aimed at "deepening knowledge" and improving their "scientific profile". In this case, fellowships are attributed at the SNSF level.

Those entitled to apply for these fellowships are researchers of Swiss nationality, residence or settlement permit holders, and researchers who have worked or studied for at least 2 years in a Swiss higher education institution. The PhD must have been obtained in the last 5 years for advanced fellowships and in the last 3 years for fellowships for prospective researchers. Those applying without a PhD must have obtained their master's at least 2 years previously.

The database is composed of 1,540 fellow candidates, including 585 doctoral students, 615 post-doctoral researchers and 540 advanced researchers. Among the 1,540 candidates, 1,321 obtained the fellowship, while 219 did not. Women accounted for 33 % of the applicants, and 37.9 % of the unsuccessful candidates. The mean age was 31.4 years and foreigners represented one fifth of the applicants. The period covers the years 1996–2006, with two subgroups being distinguished depending of the year of application (before and after 2000, the age criteria having changed in 2000). The success rate in 2008 was estimated by the FNS at around 76 %, ranging from 79 % for prospective researchers to 64 % for advanced researchers (FNS 2008) (Table 10.1).

[4] An online research was carried using LimeSurvey amongst *prospective SNSF fellow candidates* that applied between 1998 and 2000 and then between 2003 and 2005, and *advanced SNSF fellow candidates* that applied between 1996 and 2000 and between 2003 and 2007. The net response rate obtained has been of 55.8 %.

Table 10.1 The main characteristics of the sample by stage in academic career

		Fellowship obtained	Age		Women	Foreigners	Human and social sc.	Math., natural sc., engineering	Biology and medicine
	N[a]	%	Mean	SD	%	%	%	%	%
Prospective	1,000	86.6	30.4	2.5	33.9	21.7	40.4	31.8	27.8
Advanced	540	84.3	33.2	2.7	31.3	17.2	35.8	23.2	41.0
All	1,540	85.8	31.4	2.9	33.0	20.1	38.8	28.7	32.5

[a]Total number of cases. Depending on the variable, the numbers vary slightly

Which Factors Influence the Probability to Obtain a Fellowship?

As the measured outcome in models 1–3 – obtaining a scholarship or not – is binary, a logistic regression is used (see Gelman and Hill 2007). The dependent variable was coded as 1 if the person obtained the scholarship and 0 if the person did not. In model 4, the dependent variable being also binary – remaining or not in academia – a logistic regression model was estimated.

A first binary logistic regression thus allows us to estimate the probability for an applicant to get a fellowship (Prospective or Advanced). After controlling for the linguistic region[5] of the universities the applicant comes from, we distinguished between socio-demographic variable (gender, age, nationality, father level of education) and socio-academic variable (the existence of a professional project for after the fellowship, the knowledge of other projects that were previously granted a fellowship, the discipline, the type of Higher Education Institution).

Four variables appear in terms of discrimination. Two are ascribed status: gender (men are 85 % more probable than women to receive a fellowship) and age (the younger the better). Those are not surprising, as the gender gap is well documented in Swiss higher education and more broadly in Swiss society (see for example Goastellec and Pekari 2013; Goastellec and Crettaz Von Roten 2014), and as age is associated with precocity as a positive criteria in academic careers. Nationality is also an influence: Swiss applicants have twice the probability to obtain a fellowship when compared with foreigners (what can be linked to the nationality formal requirements in the selection process). Finally, candidates coming from universities have twice the probability of obtaining a fellowship compared with non university candidates (e.g. candidate coming from a University of Applied Science), which illustrates the historical hierarchical structure in higher education institutions and in the recently upgraded tertiary institutions which have now risen to the rank of universities (with the restriction that they cannot supervise PhDs).

[5]It is traditionally, important that criteria such as the careers organization vary between the German-Speaking and the French-speaking part of the Swiss higher education system.

Table 10.2 Models 1–3 – Fellowships candidates: all, prospective researchers, advanced researchers

	Odds ratio		
Independent variable	All	Prospective	Advanced
Age at the time of application	0.872***	0.848***	0.847***
Origin (French speaking universities and EPFL)			
Others	0.541**	0.445**	0.572
German speaking universities and EPFZ	1.374	1.485	1.174
Existence of a professional project for after the fellowship (Yes)	1.06	1.08	1.055
Knowledge of others fellows successful projects (yes)	0.903	0.922	0.813
Discipline (Human and Social Sciences)			
Mathematics, natural sciences and engineering sciences	0.693	0.589*	1.21
Biology et medicine	0.757	0.92	0.479
Gender (male)	0.539***	0.520***	0.672
Nationality (foreign)	2.246***	2.393***	2.280***
Father's level of schooling (compulsory schooling)			
Secondary	0.985	0.994	1.065
Tertiary	1.286	1.655	0.836
Doctorate	0.906	0.743	1.669
Constant	373.814	744.450	1429.528
Pseudo R2 (Nagelkerke)	0.099	0.120	0.115

Category of reference between brackets
*** Significant at level of 1 %; ** significant at level of 5 %; * significant at level of 10 %

The success of the candidacy thus appears less dependent on clear goals and good knowledge of how to present one's candidature than already belonging to the prestigious sector of higher education when applying.

When the same analysis is applied to the group of candidates for a "prospective researcher" fellowship, similar trends can be observed. Two other dimensions appear as well: the level of education of the father and the discipline of the candidate (selectivity seems stronger in mathematics and engineering sciences compared to human and social sciences). However, these effects are not clearly statistically significant and it is thus not possible to draw conclusions about them. The Swiss education system is highly socially selective early in the education process, and what explains that social background does not weigh on the latest stages of academic selection.

Regarding the "advanced" fellowships, the only significant variable is age. Nationality somewhat loses its significance but the effect remains very important. On the other hand, the effect of the level of education of the father completely disappears. The social origin dimension thus seems to progressively lose its effects when one progresses in an academic career (Table 10.2).

Staying in the Academic World

When we study the probability of fellowship candidates for remaining in the academic world, four main explicative rationales appear:

Firstly, having obtained a fellowship and the type of fellowship obtained: having obtained an "advanced researcher" fellowship increases the probability (compared with a "prospective researcher" fellowship or no fellowship) of staying in the academic world.

Secondly, the extent to which scientific activity and academic integration are undertaken: fellows that have published several peer review articles have a stronger probability of remaining in the academic world compared with those that have published one or none. The same occurs regarding the involvement in scientific networks: fellows that have integrated researcher networks have more often remained in the academic field than the others. These dimensions are no surprise: they affirm the importance of the scientific dossier on the probability of developing an academic career.

In addition, two individual characteristics play a role: those of foreign nationality are more likely to have remained in the academic market than natives. One can make the hypothesis of a higher selectivity regarding foreigners in the selection process, and this may impact positively on the probability of their remaining in academia. In fact, the analysis previously carried out on the probability of obtaining a fellowship revealed an inversed trend, which would confirm this hypothesis: over selected at the candidacy stage because of the requirement for strong integration in the Swiss higher education system, foreign academics can easily find a job after the fellowship, not because they are foreigners but because of this over selection.

Another individual variable is the level of education of the father: everything else being equal, a fellow candidate whose father holds a doctorate has a stronger probability of remaining in academia than one whose father had not finished compulsory school (significant at 5 %). We also observe that fellow candidates whose mother holds a PhD are twice as likely to have remained in the academic world, compared with those whose mothers had no tertiary degree. We can see here some influence of cultural and social capital in the probability of pursuing an academic career, but this trend isn't statistically significant, which pleads for a relative absence of social inequalities at this stage of their career (Table 10.3).

Becoming a Professor: The SNSF Professorships

Under this program, the "junior professor" may hire doctoral students in order to implement a research program. Therefore, research activities are predominant. This type of program provides an opportunity for potential candidates to expand their CV (in terms of publications), to be more competitive on the academic job market and thereby to improve their employability, especially in academic institutions.

Table 10.3 Model 4 – Remaining in the academia

Independent variable	Odds ratio
Fellows/non-fellows, prospective/advanced: (Prospective fellows)	
Advanced fellows	1.831***
Prospective non fellows	0.596*
Advanced non fellows	0.864
Publications peer-reviewed (0)	
1	1.164
2–3	1.785***
4+	2.969***
Being part of researchers scientific network (0)	
1	2.134***
2	2.218***
3 or more	2.748***
Field of study (Human and Social Sciences)	
Mathematics, natural sciences and engineering sciences	0.844
Biology and medicine	1.252
Gender (man)	1.064
Nationality (foreigner)	0.615***
Father level of education (compulsory school)	
Secondary school	0.894
Tertiary education	1.195
Doctorate	1.595**
Constant	1.079
Pseudo R2 (Nagelkerke)	0.156

Category of reference between brackets
*** Significant at level of 1 %; ** significant at level of 5 %; * significant at level of 10 %

As a first step, candidates for this program choose their host institution, which has to agree to host the candidate. Then, they return to the SNSF, who select the candidates on the basis of their scientific dossier. Thus, under this program, universities are largely relieved of their ability to select professors, and thus to plan and manage successions financed by subsidies from the Confederation. Whereas this procedure is meant to ensure the scientific quality of the candidate's record (via peer review), it partially reduces the autonomy of universities in the appointment of professors.

The beneficiaries of the SNSF Professorships program are relatively young (mean age 37 years), which corresponds to the objectives of SNSF, who wish to support "young talented researchers active in new research areas, and thus contribute to forging the future of science at the university" (SNSF 2006, 25). In terms of individual trajectories, early beneficiaries of this program of excellence are even more striking since they received their doctorate 3–4 years earlier than the Swiss average. This program seems to promote a career profile "faster" than the national average, although there are also profiles of older stock in particular within the humanities and social sciences.

The SNSF Professorships fellows are mostly men, although there are about 30 % of women beneficiaries of the program, matching the aim sets by the NSF. From a field of study point of view, there are no surprises: women are more present in social sciences and humanities, while men dominate the technical sciences (88 %), medicine (82 %) as well as science, economics, and law (84 %). Thus, if there is at present an improved rate of women at this level (compared with the percentage of female "traditional" assistant professors), the gender imbalance of the academic disciplines remains a continuing issue.

The internationalization of candidates to the fellowship is striking, since no fewer than 20 nationalities are identified in the period, although the final 70 % of beneficiaries have a Swiss origin. From the point of view of the academic discipline, there are two forms of logic at work: on the one side, the program "Professorship Fellows" encourages young scholars in areas where a national job requirement from the Swiss researchers is high. On the other hand, international competition plays a strong role in the allocation of professorships.

Moreover, half the beneficiaries had received a previous SNSF grant research. It is likely that, having already been selected by the SNSF played a positive role in the process of evaluating the quality of case file of candidates. Thus, the theory of cumulative advantage (cf. the notion of "Matthew Effect" by Merton), which means that the most advantaged tend to increase their advantage over others (e.g.: "unto those that have shall more be given"), also appears to have relevance to this program. This is especially true as the beneficiaries mostly had full-time positions just prior to receiving the subsidy, even if there were differences between genders: 86 % of the men had a full-time job compared to 68 % of the women.

Beyond Individual Trajectories: Structural Dimensions of an Academic Career

In looking at both instruments, we have seen that institutional location (the type of Higher education institution) may be a factor in the probability of getting a SNSF fellowship: when applying, coming from a university or a federal institute of technology provides better opportunities than coming from a research institute or a university of applied sciences, which illustrates the institutional hierarchy characterizing the Swiss higher education system. Moreover, fellows who have completed their research in the US have a certain advantage in the pursuit of a career. It may be difficult to identify whether this is the consequence of a stronger selection for fellows based in the US or if the stay in the US provides an added value to an academic curricula. One could make the hypothesis that the two effects reinforce each other.

The role of the discipline, corresponding to differentiated academic markets, is also important: selectivity is stronger for fellows in mathematics, natural sciences and engineering sciences, compared with humanities and social sciences. Not surprisingly, social sciences produce 22 % of the PhD students, compared with 32 % in mathematics and natural sciences. Nevertheless, when it comes to the

outcomes of the mathematics, natural and engineering sciences' fellows, compared with those in humanities and social sciences, the latter are less often in tenured positions. Also, candidates in medicine and biology, or mathematics, natural and engineering sciences are more often working full time than those in human or social sciences, and work more often abroad.

Being in medicine or biology in turn represents a handicap when it comes to access to the professoriate, compared with being in human or social sciences (five times less probable). This result is related to the more competitive structure of the biosciences fields rather than the social sciences.

We can see here that academic trajectories may be conditioned by disciplinary origins as well as specific marketplace organizations and dynamics. In humanities and social sciences, it is easier to obtain a prospective research fellowship and to become a professor, but part time and untenured jobs are more often the rule. The marketplace also appears to be more national and less competitive.

Another structural dimension which affects the probability to getting an SNSF fellowship is related to the type of working contract: part time or full time, and whether tenure is secured or not. In a SNF Professorship, candidates who have a full time position have a higher probability of getting a fellowship. In that sense, this fellowship reinforces the already existing structural inequality between workers in the academic world. But on the other side, this type of fellowship overcomes some problems in authority relationships related to the structure of the disciplinary elite. Indeed, the candidates are selected by the SNSF through an international peer-review that may bypass some "localism" (which expresses structural power relation inside higher education institutions).

Looking at structural male-female relations (gender issues) our analysis shows that, every thing being equal, women are constantly disadvantaged compared with men, except when they apply for an advanced researcher fellowship. We thus observe here a contextual effect upstream in the career. Other research which studies differences in access to tenured employments in Germany 8 years after the PhD graduation reveals differences between disciplines but no gender influence (Kaulisch and Bohmer 2010).

Finally, social origin, measured by the level of parental education, seems to have a slight influence on the probability of obtaining a prospective researcher fellowship as well as on the probability of the candidates remaining in the academic world, but globally, it remains insignificant in terms of overall academic trajectories. This is quite unsurprising, considering that the Swiss education operates a very specific form of social selection, leading to strong social reproduction when it comes to access to universities.

Examining the grounds for social organization and dynamics, where contextual and scientific variables are bound to characterize specific scientific processes and systems, individual variables remain more controversial. Also, the specificity of the gender handicap, everything else being equal, in an academic career, testifies to the perpetuation of a masculine domination that can be understood, at best, in terms of differentiated access to implicit codes, and at worst, in terms of power relationships.

Conclusion: Changing Academic Careers

The complexity, if not the multiplicity, of the Swiss higher education labour market favors the co-existence of different career structures and recruitment criteria. How does the NSF attempt to integrate this multiplicity within a new frame? How are NSF tools impacting on the academic organization?

The SNF's explicit criteria in the recruitment of fellows is characterized by an attempt to be universalist through the objectivization of the FNS fellow candidates' scientific files, but with the use of particularist criteria to reach the universal dimension (for example in the policies regarding the age limit aimed at favoring more gender balance in the academia, women share targets in the allocation of fellowships) or to adapt the instrument to the national context (asking foreigners to testify of a link with the Swiss higher education system).

If we analyze the implicit criteria here, with regard to both the recruitment of fellows' and their further career, particularism also appears as a dimension impinging on academic careers, including after the obtaining of a NSF fellowship: being a women is subject to an exclusion process, and social origin discretely influences one career.

Thus, it appears that the SNF instruments constitute an attempt to orient the organization of the Swiss academic market towards a more performance-based organization promoting the use of universal criteria, although particularist' criteria sometimes appear as tools to reach a universalist goal.

This is linked with the organization of the Swiss higher education system: although internationalized and institutionally diversified, it is still largely based on a chair structure and the articulation of a complex scale of short time employment that favors strong inbreeding while reinforcing the power of those few who are tenured. The development of SNSF individual fellowships has helped to introduce some changes in this organization, along with some harmonization in career stages, status, and selection criteria.

All these tools which have been developed by the SNSF lead to the rejuvenation of the academic careers as well as the slipping of the historical career model: the classical 'inbred' chair system, characterized by more local careers, a slow statutory evolution and the concentration of power in the hands of Ordinary Professors is changing towards an open chair model (with opened, competitive, (inter)national recruitment). The development of a system that celebrates precocity, mobility and a form of entrepreneurial excellence characterized by the precocious autonomy of scholars has been superposed upon this, which is close to the collegial model of a department defined by Neave and Rhoades (1987). These models coexist, depending on the situation of the institutions and academic disciplines on the national and international market: the department model appears to be more developed in the Federal institutes of technology and in "hard" sciences, compared with the humanities and social sciences. This model tends to define more strongly and quickly those who are "in" and those who are "out", those who remain in the academic system and those who leave, because it limits the length of temporary contracts before accession to the professoriate. The superposition of the two models induces an

ex post evaluation of the academic files that has not necessarily been anticipated by the individuals. In doing so, it produces a strong feeling of injustice. At the same time, it is perceived as the key to career rationalization, and, by doing so, as a possible objectivation of academic files that are expected to produce a new form of equity in terms of access to professorships.

Through these instruments, the aim is thus to integrate the market by pushing in, at the different levels of an academic career, shared status, processes and criteria. In a highly decentralized federalist system, the impulse provided by the SNSF participates in the harmonization of academic careers at a national level, and at international level (through doctoral schools, tenure track, etc.). This is similar to the European trend described by Musselin (2005) regarding the implementation of more regulated internal academic markets and its consequences, the transformation of the professional model previously founded on the Swiss academic market. This increased formalization participates in the transformation of the academic profession: it tends to progressively free the young researchers from the traditional chair based system. However, as a consequence of this emancipation, scientific requirements increase or change, regarding both the ability to publish and to obtain research funding.

In a short but insightful article, Altbach and Musselin (2008) characterize an efficient career structure by its capacity to allow universities to be attractive, stimulating and rewarding to their staff. In order to achieve this, career stability, transparency in the organization of the career, rigorous and meritocratic procedures, and the guarantee that high scientific achievement will lead to career stability and success, are all required. The reorganization of academic careers in Switzerland and the increased role played by the NSF seems to be pushing toward this ideal.

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Chapter 11
The Conflict Between "New" and "Old" Governance Following the Introduction of Performance-Based Funding in German Medical Departments

Patricia Schulz

Introduction

Science policy across Europe has been the subject of recent reforms. In general terms, these reforms aim to translate established systems of governance, which are based on oversight and departmental regulations, into new and diverse market-orientated practices (Braun and Merrien 1999). Among these new practices is the introduction of performance-based (PBF) funding to some university departments. Although many reforms are still in their introductory phases, we can already see a familiar pattern associated with institutional change. A new policy reform discourse may have emerged, but the behaviors of established actors for whom these measures are intended are not always amenable to change. How, then, can we evaluate the efficacy of "new" forms of science policy governance against the "old?"

Clearly, a distinction between "old" and "new" governance is arbitrary if it fails to point to significant change when answering questions about how to govern. Influential literature suggests that the rise of "new public management" (NPM) indicates a significant change that affects the way in which those involved in governance think about and coordinate their objectives and means (Power 1997). However, the literature on institutional change also suggests that actors who are particularly concerned with reform subvert these attempts in order to retain control (March 1981; Powell and DiMaggio 1991; Greenwood and Hinings 1996).

Discussions on the "new governance of science" draw heavily from NPM literature, which claims that science policies along with the administration of science have become increasingly influenced by private sector management

P. Schulz (✉)
University of Bielefeld, Bielefeld, Germany

Wissenschaftszentrum Berlin für Sozialforschung, Forschungsgruppe Wissenschaftspolitik, Reichpietschufer 50, 10965 Berlin, Germany
e-mail: patricia.schulz@wzb.eu

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techniques (Slaughter and Rhoades 2004; for a critical discussion of this see Whitley 2007). However, deBoer, Enders and Schimank have argued that these new governance structures result in a new "governance mix" in which different stakeholders adopt new roles, whereas some forms of (self-)governance remain stable (De Boer et al. 2007).

New governance structures do not necessarily indicate a significant change in the governance of science, however. This chapter argues that actor constellations within universities and departments must be analyzed in order to explain the effects of science policy reforms. I posit that the effects of governance reform cannot simply be explained by looking at societal and economic contexts, but they also rely largely on strategies, actions, and behaviors of department managers, administrators, and faculty members in their everyday settings—an environment aptly named the "academic trenches" by Irwin Feller (2009: 327). This assertion corresponds with Feller's observation that ingrained cultural, professional, and institutional patterns and expectations are at play when governance reforms are adapted in university departments.

The empirical research in German medical departments used in this chapter shows that popular narratives about science policy reform, such as "new governance replaces the old" or "scientists lose authority to administrators," are less suitable for the current situation than the dominant literature suggests (Schimank 2005; Muench 2007, 2009, 2011). Even if new forms of governance have had an impact on the management of medical departments in Germany, this chapter's main claim is that established intra-university collegial bodies (in German usually called *Fakultaetsraete*) have significantly influenced and continue to influence science policy reforms. Although NPM, in the form of performance-based funding (PBF), has given more autonomy to the department management, it has not substantially affected the autonomy of departmental academics. Despite traditional collegial bodies not having any officially sanctioned decision-making function in the development of PBF systems, their influence is clearly visible in the outcomes of the policies introduced. PBF systems operate according to special regulations that represent the authority structure of a department. In short, even though the new governance actors have wrested away some authority from those of the old system, the established actors are still capable of looking after their own interests (Martin and Whitley 2010; Huether 2010).

By employing qualitative methods and empirical data, this chapter tests both the specific case of PBF in German medical departments and the general framework of NPM as expressed most prominently by De Boer et al. (2007):

> The individual academic's influence and power to defend his own status and autonomy has been weakened, as has the formal collective power of academics in intra-university collegial bodies (150).

The next section poses this study's central research question of whether German medical departments experienced a shift from professional-collegial control toward internal bureaucratic control following the introduction of PBF.

The Main Question

Although scientific endeavors rely on a global network of institutions that bestow reputation upon its practitioners, science policy differs substantially between countries (for an overview see Braun 1997). The distinction between diverse, market-oriented universities in the United States and their European counterparts with stronger governmental regulations is the most frequently cited example of policy differences (Clark 1983; Kruecken et al. 2007). Nonetheless, analyses of university governance reform claim to see a trend towards a "global model" (Baker and Lenhardt 2008) that strengthens competition and the internal hierarchies of universities while weakening the state's capacity for direct intervention, as well as the authority of academics. Irwin Feller (2009), for example, argues that in the United States the government's demand for accountability in performance, "especially in this era of evidence-based decision making" (Feller 2009: 329), has led to "increasingly formalized planning, performance management and performance measurement requirements" (329). This has led to an[…] increased use of quantitative measures alongside of and at times in lieu of collegial assessments, and the shift from collegial-professional to [internal] bureaucratic modes of decision-making (341).

Feller gives a convincing account of how decision-making processes in the American system have become increasingly bureaucratized. Following the notion of a global model, this study's main question is: Has this shift also occurred in Europe, specifically in Germany? Despite the rhetoric of increased autonomy at universities in the mainland Europe, many authors claim that bureaucratic and administrative university structures have thrived at the expense of the autonomy of European academics (Schimank 2005; De Boer et al. 2007; Kehm and Lanzendorf 2006).

In order to see if a similar shift from collegial-professional to internal-bureaucratic control has occurred as an effect of reform, I will look at the example of recent reforms that have PBF in German medical departments. All medical departments in German universities are subject to inner-departmental formulas that allocate funding (and sometimes laboratory space) according to indicators unique to each department. These performance indicators, such as publications, teaching, and third-party funding, sometimes differ significantly within one federal state (*Bundesland*). All departments' formulas consider the amount of third-party funding and the "quality" of publications, which is mostly measured by using the journal impact factor. Only in one instance was "quality" measured by using the number of citations.[1] Because these performance indicators play a central role in the allocation of funding, they were accorded considerable importance when collecting and organizing this chapter's data.

[1] Measuring the quality of publications like this is extremely controversial since the journal impact factor does not reflect the impact of a single article. For an introduction into the subject see Decker et al. (2004).

Data and Methods

The introduction, establishment, and reform of PBF in German medical departments illustrate how government, university administration and management, and intra-university collegial bodies interact with each other at different stages of the process in which a PBF system at a department is constructed. This chapter's use of PBF systems as an example allows a detailed analysis of what happens when political actors who are external to the institution disrupt internal actors by offering them incentives to which they are not accustomed, and how these disruptions affect research policy reform.

German medical departments were also chosen because they are the only departments that have been thus far subjected to inner-departmental PBF at every German university,[2] which allows for a comparison of different departments across the country. Additionally, PBF systems have been in place for over 10 years, so the development could be observed over a longer period of time. Finally, PBF in medical departments is not simply symbolic; it distributes large amounts of funding and can therefore be expected to have observable effects on academics' behavior.

This study's data was collected using two methods. The first involved conducting 22 key informant interviews in German with members of the departments' management—deans (*Dekane*), vice-deans of research (*Forschungsdekane*), and research coordinators (*Forschungsreferent/innen*[3])—from ten medical departments in Germany, which were carried out between December 2009 and May 2010. The second methodology was an analysis of internal documents (protocols, memos, and manuals) from six medical departments. These documents span the time from which the first discussions about establishing performance-based funding emerged in the mid-1990s to current debates about reforming the established formulas.

The purpose of the interviews was to understand and record these actors' operative knowledge, particularly with regard to the establishment and implementation of performance-based funding within their department. The access to the information this provided was privileged access that would not have been possible through other sources (Meuser and Nagel 2003).

Using the critical interview method proposed by Meuser and Nagel (2005 [1991]: 83–91) and Bogner et al. (2005 [2002]) (see also Bogner and Menz 2005 [2002]), this approach considered the deans and vice-deans to be not only key informants, but also subject to performance-based funding. It therefore controlled for bias by excluding statements made in formalized language. The exclusion of formalized language inhibited the respondents from giving a normative presentation of

[2] Medicine seems to be the forerunner in this case because of its perceived generally poor international performance, as explained at the beginning of the next section.

[3] Whereas deans and vice-deans in Germany are elected from within the group of professors at a department for a limited time to fulfill this administrative office, *Forschungsreferent/innen* manage departments' research activities without being researchers themselves. Albeit this position is lower in the management's hierarchy than deans and vice-deans, there are typically no term limits.

themselves, which Goffman (1959) describes as the best self. At the same time, the analysis focused particularly on the use of detailed examples, which forced subjects to move beyond telling the official institutionally sanctioned story (Schuetze 1977).

Apart from testing the results of the key informant interviews, the purpose of the document analysis was twofold. One part of its purpose was to identify dominant actors and inner-departmental dynamics that are instrumental in establishing and reforming performance-based funding. The other was to discover patterns of explaining (and legitimizing) the established systems. A computerized collection of actors' names and topics mentioned in the protocols helped support the document analysis.

The medical departments were chosen on the basis of structural data made available by the German Association of Medical Departments (*Medizinischer Fakultaetentag* and the German Association of Medical Schools (*Verbund der Universitaetsklinika*). The selection criteria included:

- amount of funding from government and state sources
- amount of third-party funding
- number of publications
- number of research and teaching staff.

Additional criteria were:

- existence of statewide performance-based funding (in which medical departments across one state compete for funding according to a formula)
- type of connection between department and teaching hospital
- geographic location.

The data sample, which is based on a wide variety of medical departments whose selection was based on representative criteria, ensures that the results are also representative of a wide range of medical departments.

The Case of Performance-Based Funding in Germany

PBF has been comprehensively established in university medicine owing to the perception that it would help solve several problems that departments were facing prior to its introduction, which was a notion held especially among the agents of scientific self-governance, such as the German Research Foundation (*Deutsche Forschungsgemeinschaft*, DFG and the Science Council (*Wissenschaftsrat*, WR).[4] First of all, the pre-PBF allocation of resources was considered "inadequate" (DFG 1999)

[4]In the German science system, the DFG is the dominant agency to distribute third-party funding for science. This is done through highly a competitive and highly reputable system, which relies heavily on peer review. The DFG and the WR evaluate and advise scientific institutions, give opinions on science policy, and mediate between science and politics.

because it mostly relied on counting the number of beds occupied by patients—a system considered disadvantageous to clinical research. In the eyes of the DFG and German Science Council, this was a main contributing factor to the German medical departments' poor international research performance. The Science Council therefore urged medical departments in 1999 to adopt some form of financing system that would distribute funds according to research performance commensurate with the existing performance indicators for patient care (WR 1999).

The impetus for the introduction of PBF cannot be attributed to one actor. Rather, three actors that operate at different levels have embraced the idea. First, the German Science Council recommended establishing PBF to the medical departments it evaluated in the mid-1990s. Second, the Federal Ministry for Education and Research (BMBF) aimed an initiative at eastern German universities that required medical departments seeking special funding to distribute at least 30 % of their funding based on performance. Third, some federal states introduced PBF systems at the state level. This state-level initiative froze or decreased medical departments' funding, which provided an incentive for those departments to introduce internal PBF systems as well.

The process introducing PBF is remarkable for two reasons. One is that it supports the claim that governments—in this case at both the state and the federal level—have recently been following more NPM-inspired governance techniques by not establishing complete sets of rules, despite the introduction of external requirements. Instead, they formulate goals or offer incentives that prompt departments to determine individual paths to reach those goals. This can be expected to increase the influence of those actors within the departments who decide which paths are taken. The second notable observation about the PBF process is tied to the German Science Council, which is one of the country's most important intermediaries between science and state politics. Its role as an early supporter of PBF must not be underestimated. The Science Council's peer reviewers themselves had possibly promoted PBF "initially in the name of rational management but increasingly as devices to foster reputational enhancement," in the way that Feller (2009: 323) suggests. The results from the key informant interviews support the notion that the Science Council's evaluation of several cases resulted in disparate PBF systems across Germany, which also launched reforms of the departments' managerial structures.

German medical departments started to develop internal PBF systems following the evaluations by the Science Council, the above-mentioned BMBF governmental initiatives, and the federal states. However, the evolution of these systems did not follow a uniform pattern. Many departments had already developed systems, even before important intermediaries between politics and academia, such as the Association of the Scientific Medical Societies in Germany (AWMF or the DFG, published concrete recommendations in 2004 and 2005, respectively. Departments thus developed individualized systems. And while all internal allocation formulas consider the amount of third-party funding and the "quality" of publications, evaluation criteria are not fixed, and faculty performance in many departments is also assessed according to other indicators such as teaching activity, patents, and awards.

The room for differences—and thereby the need for expertise—is thus considerable: A typical PBF formula might distribute 30 % of the funds according to teaching load, that is to say, the number of hours taught per teacher, and 70 % according to research performance. Research performance might be measured 40 % by acquired third-party funding, in which different funds will most likely be ranked according to how competitive the process of acquiring the funds was. For example, funds received after a very competitive peer review process, such as those given out by the DFG, will be multiplied by one, while funds received from the pharmaceutical industry without peer review would be multiplied by 0.2, with less competitive processes located somewhere in between. The remaining 60 % of research performance might be assessed by computing journal impact factors, in the simplest case by adding all impact factors. However, many departments use more complicated methods of assessing the quality of publications, allowing for the size of medical fields, different types of publications, and the number of authors of each publication.

Results

The interviews and document analysis explain the large variety of PBF formulas as the result of negotiations between department heads, administrators, and researchers. Old and new conflicts surfaced in these negotiations, while responsibilities and authority were partly redistributed—but often remained the same.

New Responsibilities and Authority

As the interviews show, these processes of creating often-complicated PBF formulas led to new responsibilities for departmental management. This is especially true for departmental administrators, who were the typical candidates for becoming PBF experts:

> Well, by now, what I do is that I calculate the performance indicators for all our clinics and institutes according to our two criteria impact points and third-party funding. Those performance indicators are then used to determine the budget (research coordinator, author's translation).

In at least one case, a research coordinator was asked to serve on an expert council to the state government:

> Maybe we are a special case in that we have developed a statewide tool in which we agree which foundations really use peer review and which do not. […] So I get together with [representatives from the state ministry for research and education] and look at the list, and the result is binding for all [statewide-PBF] reports to the ministry (research coordinator, author's translation).

Additionally, managers and administrators are relieved to have concrete numbers, which gives them bargaining power when negotiating with high-status clinic

directors. A PBF system would allow department managements to "finally" be able to make decisions based on "somewhat safe information" (vice-dean of research, author's translation).

New Conflicts

Of course, this decision-making process was a source of conflicts during the debates about the appropriate PBF formula. While one dean joked that he was asked "whether I could still cross the street at night without a bodyguard" (author's translation), another dean of research explained:

> There was resistance about details; for example, discussions about whether weighted or unweighted impact factors [according to subject] should be used. That was a longer discussion, which I was able to defuse by calculating the difference over 4 years [for our department], [it showed that] the results on the level of distribution are the same, no matter how it's calculated […] My colleagues in medicine are usually pragmatic people, so the objections came to a stop [laughs]. […] Still, we have discussions every year about which publications count or not (author's translation).

The above quote shows academics' concerns about the formula doing justice to their particular field, as well as their institutes' particular funds. One academic, who is now the dean of research in his department, explains his position at the time of the initial discussions:

> At the end of the nineties [when PFB was first discussed in the department], I was told that PBF should only be applied to experimental fields. I would not need anything but pencil and paper. I would not need any funds! (author's translation).

Clearly, academics were afraid that their particular fields would be disadvantaged by PBF, and that PBF might be used to deprive their field of the funds needed to continue working. At the same time, department management teams were concerned that academics would sabotage a system aimed at solving the departments' problems:

> Well, that's one of the problems with the academic system: sometimes an opinion leader stands up and says: "That's not going to happen." And then sensible ideas are destroyed out of principle (vice dean of research, author's translation).

Old Responsibility and Authority

The preceding quote provides some indication of the results of the documentary analysis: Even though it seems that performance-based funding as a form of NPM has resulted in increased internal managerial control in German medical departments, resistance from (senior) department members must be taken into account. These established senior members have been active in the departments' governing bodies since before PBF became an issue, and they have accumulated significant

amounts of prestige within the department as well as within the academic community. Their authority within a department is considerable.

One might observe that most medical departments have formed special commissions to create their PBF formula, presumably bypassing established professional-collegial governing bodies. Assuming that bureaucratic has control increased would, however, be shortsighted for two reasons. One reason is that the commissions which developed the formulas were comprised primarily of *senior faculty members*. Examining the protocols from these commissions, one can see that after departments had experienced the first year of PBF, some senior faculty members immediately became members of commissions and argued the case for their institute and medical field. They often achieved substantial adjustments to the PBF formula. Only in some cases were bibliometrics experts or junior faculty members also asked to participate. The dominant presence of senior faculty members reaffirms the established form of professional-collegial control that Feller and others (Feller 2009; Schimank 2005) consider to be losing influence.

The second ground for rejecting the actual ruling power of "new" governance is that PBF systems had to be approved by *established bodies of governance*, which was a course of action that gave proponents of traditional professional-collegial procedures ample opportunities to intervene. The effects of professional-collegial intervention on the (re)adjustment of reforms have been expressed in both the interviews and in the document analysis. Several years' worth of protocols from PBF commissions illustrate how, at first, only faculty members with a particular (often academic) interest in performance measurement chose to be part of the discussions about PBF development. There is no observable overrepresentation of any specific medical field among those groups. At the same time, however, large medical fields such as internal medicine or surgery are usually well represented. After the PBF system was introduced, faculty representation of smaller, more specialized fields such as the history of medicine or clinical psychiatry entered the discussion about how "quality" and "performance" should be measured. Realizing that funding, and possibly reputation, was at stake, they defended their fields' special interests, primarily to give a voice to smaller but highly influential journals in particular subfields, and also to acknowledge unorthodox monographs and work presented at specialized conferences.

Old Conflicts and New Competition

The process of creating a PBF system that most faculty members would accept was an intense topic for discussion among colleagues. One key informant recalled:

> We had quite a few controversies among the professors who realized that they were not the winners in the [PBF] system, but finally they respected it because they knew they would not have anything taken away […] That was a happy accident which helped implement the system, that it did not really affect the substance of the established [academics] (dean, author's translation and emphasis).

Those "happy accidents," in which some faculties consent to relaxed PBF standards for their established members, turn out to be rather common among current PBF systems. As one research coordinator put it:

> Surely, institutes and clinics with a historically good funding pedestal will not necessarily complain. That will change in the future because newly appointed professors will start with completely different criteria (author's translation).

This suggests that some faculty members continue to abide by established internal procedures, even regarding new external initiatives such as PBF, and will continue to do so as long as established actors are active in the departments. This means, of course, that newly appointed academics in many medical departments are less comfortably financed at the outset than established department members. But even departments that do not give special treatment to established members have created special "innovation funds" or bonus payments for successful fundraising to supplement their institutes' assets:

> That is why these bonuses were established. They are valued by the majority of my colleagues, even those who are net payers [in the PBF system] and do not profit from [the PBF system]. When they have raised funds, they receive a bonus. Because those [bonuses] flow immediately, they should not be underestimated (dean, author's translation).

As the above quote shows, medical departments have found different ways to sweeten their PBF systems, which otherwise would be considered bitter pills to swallow. Thus, although the introduction of PBF in German medical faculties gave some additional authority to department management and administration, these empirical findings show that faculty members—established actors in many cases—who were able to make themselves heard among their colleagues, and within particular governance bodies, exercised a substantial amount of professional-collegial control and influence over the way PBF systems were developed and reformed.

Discussion and Conclusion

This chapter's data and results represent a period of 15 years, during which PBF systems in German medical departments were introduced and developed. On the one hand, the results show that some administrative changes have occurred. This is natural and to be expected after the introduction of any large-scale initiative such as PBF. On the other hand, this chapter's findings strongly suggest that the tenacity of professional and institutional cultural patterns and expectations ensure that observable and significant degrees of influence and authority remain in the hands of researchers. This means that the notion of "more influence for the administration means less power for academics" might not be applicable to every institutional arrangement. Additionally, in keeping with the literature on institutional change, the idea that "new" governance signifies a considerable change from "old" governance cannot be upheld. Instead, I argue for the necessity to differentiate between actors according to observable changes in their roles. Only then can the precise differences

between the effects of governance reform in different universities be examined. The analysis of this chapter's case suggests that at least three groups of actors and their changing roles have thus far affected governance reform:

1. Governmental actors are observed to have changed their role from designers of concrete governance procedures to facilitators of new initiatives and creators of the frameworks in which they are situated. This process has been a recent development in Germany.
2. Management in the relevant departments has taken on a new policy-orientated role in addition to its traditional one as a mediator between governmental actors and scientists.
3. Scientists concurrently react to and shape science governance by employing both established and new bodies of self-governance, thereby retaining much of the professional-collegial authority that is supposedly diminishing according to research about new public management framework. However, this authority is observably restricted to the more reputable members of agencies, such as the German Science Council, and to established senior faculty members within departments.

Therefore, in the light of this chapter's case study, a new form of governance that signifies a substantial change in respect to the management-academic dynamic cannot yet be observed. This study benefits from a combination of document analysis and qualitative interviews. It would be interesting to see the results of studies which apply similar empirical research methods to university governance structures in other countries. We can expect to see management enforcing general governance policies, which would also include performance-related policies. I suggest that we would see similar cases of actors, both management and scientists, adapting to new policies, but could also expect to see an observable retention of professional-collegial control within departments.

Yet how long will this retention of control last? It is not surprising that established actors maintain significant degrees of control along with much of the financial benefit. Bourdieu (1984) would define these high-powered actors as scientists endowed with cultural and social capital who are well-connected and revered within the medical community. It is common for longevity and respect in any given professional field to be rewarded with financial gain, and a good reputation is a core value among professionals. Nevertheless, it might not be possible to uphold these established relations since they conflict with one aim of PBF: To attract top-level academics with the promise of additional funds. As I have shown, the PBF system in many German medical departments is biased against newly appointed academics in comparison to established department members. This is hardly appealing to scientists looking for new positions; in fact, some current PBF systems might even discourage mobility.

However, this could be a temporary problem of transition from one system of allocating funds to another. Having dealt with the possible conflicts between younger and older academics, the next generation of scientists will be equally affected by PBF, which raises the more fundamental question of whether PBF disrupts conventional meanings of professional respect. Possibly the conflict between new and old governance

in academic departments is an indicator of changing meanings of respect and success, and PBF intensifies the equation of professional success with financial awards. Or it could be that the new policies meet the greatest resistance upon their introduction, when established actors accustomed to "old" forms of governance—based on reputation and longevity—clash with "new" meanings of success based on formulas that measure performance. We will see how this development unsettles or bolsters traditional meanings of professional success with regard to the new generation of professionals who compete for performance-based funding.

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Authors

Katharine Barker is a Senior Lecturer at Manchester Business School within the Manchester Institute of Innovation Research where she teaches research methods, literature review and research process on the doctoral program. Her research concerns publicly funded research organizations and evaluation of research impacts.

Lukas Baschung holds a doctoral degree in political sciences from the University of Lausanne (Switzerland). He conducted 5 years' research in the field of higher education studies, among others, within the European Network of Excellence PRIME (Policies of Research and Innovation in the Move towards the European Research Area). His PhD thesis led to research in Norway (Department of Administration and Organization Theory in Bergen and Norwegian Institute for Studies in Innovation, Research and Education in Oslo) and France (Center for the Sociology of Organizations/Sciences Po in Paris). Since 2010 he has worked at the Board of Higher Education of the Canton of Vaud (Switzerland), becoming Operational Director in August 2012.

Dietmar Braun, professor of comparative political science at the Institut d'Etudes Politiques et Internationales of the University of Lausanne (Switzerland), has studied political sciences at the University of Amsterdam (PhD) before he worked as a research fellow at the Max-Planck-Institute for Societal Research in Germany and as an assistant professor at the Institute for Political Science at the University of Heidelberg where, in 1996, he presented his habilitation. In October 1996, he became full professor in Lausanne. Since the 1st of March 2004 he is member of the National Research Council of the National Science Foundation in Switzerland. Dietmar Braun has published on labour market, higher education and research policies, on federalism as well as on modern political theory. Monographies are: (with Björn Uhlmann) *Die schweizerische Krankenversicherungspolitik zwischen Veränderung und Stillstand*. Politikanalyse – Analyse des Politiques Publiques 9. Rüegger Verlag (2011); *Delegation in* Contem*porary Democracies*, London: Routledge (2006); *Fiscal policies in federal states*. Aldershot: Ashgate (2003); *Public Policy and Federalism.* Aldershot: Ashgate (2000); *Public Policy and*

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Political Ideas. Cheltenham: Edward Elgar (1999); *The Governance of Universities in a comparative perspective*. London: Jessica Kingsley (1999); *Theorien rationaler Wahl in der Politikwissenschaft. Eine kritische Einführung*. Opladen: Leske + Budrich (1998); *Die forschungspolitische Steuerung der Wissenschaft. Ein Beitrag zum "Kooperativen Staat*". Frankfurt a.M.: Campus (1997).

John L. Brennan is Emeritus Professor of Higher Education Research at the Open University and a Visiting Professor at the University of Bath and London Metropolitan University. His interests lie broadly in the area of higher education and social change. For nearly 20 years, he directed the Centre for Higher Education Research and Information at the Open University where he led and participated in many national and international projects on topics such as graduate employment, quality assurance, the academic profession, and universities and social transformation. He has published several books and many reports and articles on higher education and its changing relationship with society and has spoken at countless conferences on higher education in the UK and many other parts of the world. Before joining the Open University in 1992, he had been Director of Quality Support at the Council for National Academic Awards and had held academic posts at Lancaster University and Teesside Polytechnic.

Sofia Bruckmann is a PhD student holding a scholarship from FCT – Fundação para a Ciência e a Tecnologia (Foundation for Science and Technology), enrolled in the Doctoral Programme on Higher Education Studies at the University of Aveiro, within which she is working on a doctoral thesis on *"Changes in Government and Management in Portuguese Higher Education Institutions"*.

Teresa Carvalho is Professor at the University of Aveiro and senior researcher at CIPES. Her main research interests are New Public Management and managerialism, institutional governance and management, professions and professionalism and gender issues. Recent publications include articles in: Minerva, Higher Education, Higher Education Policy, Journal of Health Organization and Management, Higher Education Quarterly, European Journal of Education, Journal of Higher Education Policy and Management, Journal of Management Research, Tertiary Education and Management and Equal Opportunities International. She is also co-editor of the Changing Dynamics of Higher Education Middle Management (Springer, 2010).

David D. Dill is Professor Emeritus of Public Policy at the University of North Carolina at Chapel Hill. He has been a Visiting Research Fellow at the University of Manchester Business School, a Visiting Fellow at Wolfson College, Cambridge University, a Visiting Professor at the Center for Higher Education Policy Studies (CHEPS) at the University of Twente, the Netherlands, and a Visiting Professor at the European University Institute in Florence, Italy. He has conducted research in academic and industrial settings, has consulted with academic and government organizations and agencies in the U. S., Europe, and Asia, and has written numerous articles, chapters, and books. His most recent books are: (with Frans A. van Vught) *National Innovation and the Academic Research Enterprise: Public Policy in*

Global Perspective. Baltimore: The Johns Hopkins University Press, 2010; (with Maarja Beerkens) *Public Policy for Academic Quality: Analyses of Innovative Policy Instruments*. Dordrecht, The Netherlands: Springer, 2010; and (with Pedro Teixeira) *Public Vices, Private Virtues?: Assessing the Effects of Marketization in Higher Education.* Rotterdam: Sense Publishers, 2011. His research interests include public policy analysis, the regulation of academic quality, and research policy. He was Director of the Research Program on Public Policy for Academic Quality (www.unc.edu/ppaq), a cross-national study of quality assurance policies in higher education supported by the Ford Foundation, and has served as a quality assessor for agencies and universities in the US, Europe, and Asia. He is a member of the Association for Public Policy Analysis and Management, The Consortium of Higher Education Researchers, and a Fellow of the Society for Research into Higher Education.

Donald Fisher is a Professor at the University of British Columbia, Canada and a Fellow of The Centre for Policy Research on Higher Education and Training (CHET). His most recent publication emerging from work on a common survey of academics in 18 countries is a 2011 co-edited volume, *Changing governance and management in higher education*: The perspective of academics (London: Springer). Dr. Fisher is a Past President of the Canadian federation for the Humanities and Social Sciences.

Gaële Goastellec is a sociologist, assistant professor (MER) and head of the politics and organizations of higher education research unit at the Observatory Science, Policy and Society, University of Lausanne, Switzerland. She leads comparative research on higher education systems, social inequalities and societal identities. She has been a Fulbright New Century Scholar fellow 2005–2006. Amongst her latest publications (2010, Ed.) *Understanding Inequalities in, through and by higher education,* Rotterdam, SensePublishers, and Benninghoff M., Fassa F., Goastellec G., Leresche J-P (Ed), 2012, *Inégalités sociales et enseignement supérieur*, DeBoeck, collection Perspectives en education et formation.

Christine Musselin is the director of the Centre de Sociologie des Organisations, a research unit of Sciences Po and the CNRS. She leads comparative studies on university governance, public policies in higher education and research, state-universities relationships and academic labour markets. Her book, *La longue marche des universités françaises* published by the P.U.F in 2001 has been edited in English (*The Long March of French Universities*) by Routledge (2004). A new book, *Le marché des universitaires, France, Allemagne, Etat-Unis* was published in November 2005 by the Presses de Sciences Po and edited in English by Routledge in 2009. In 2008, she published *Les universitaires* (La découverte, Coll. Repères). She has been a DAAD fellow in 1984–1985 and a Fulbright and Harvard fellow in 1998–1999. She is co-editor of *Higher Education* and a member of the editorial board of *Sociologie du Travail*.

Maria Nedeva is a Senior Lecturer at Manchester Business School, the University of Manchester. He research is about science dynamics; more specifically it is about

'policy driven' change affecting both the social conditions of science and research, and their intellectual conditions. In this context, Dr. Nedeva researches and publishes on university and university management, research funders and selection of research, and research policy, governance and impact.

Sally Ali Osman is currently a lecturer at the Faculty of Commerce, Ain Shams University in Egypt. Dr. Ali's PhD thesis for the University of Manchester was on the changes that the British universities, as organizations, are undergoing in terms research, teaching and commercial and public engagement. A case study methodology was used so that organizational differences could be accounted for. Her research interests include higher education policy, human resources management and organizational behavior.

Nicolas Pekari is a researcher affiliated to FORS – Swiss Centre of Expertise in the Social Sciences hosted by the University of Lausanne. His areas of expertise include quantitative research, survey methodology, and public policy. He has worked in the areas of higher education, electoral behavior, and political participation. He has a Master's degree in Work Psychology from the University of Neuchâtel in Switzerland, as well as a Master's degree in Public and Social Policies from the Pompeu Fabra University in Barcelona, Spain.

Emilia Primeri graduated in Political Sciences in Siena and in 2009 finished her PhD in Methods and instruments for the evaluation of Research, University G. d'Annunzio Chieti – Pescara, defending a thesis on "The internationalization of Italian scientific institutions. The analysis of the effects of EUFPs participation on academic institutions through a case study". Since February 2008 she is research fellow at CERIS CNR collaborating on several European and national research projects. Main research interests concern policies for higher education and governance systems, evaluation of public research, the analysis of internationalisation of HEIs research activities with specific focus on the European Research Area construction process and the participation of Italian HEIS to European Union Framework Programmes.

Emanuela Reale political scientist, is a Senior Researcher at CERIS – CNR, Unit dealing with Institutions and research policies of the public sector, located in Rome. She was the scientific responsible for CERIS CNR in many international projects. From 1998 to 2009 she acted as expert of Research Evaluation for the National Committee for the Evaluation of Research CIVR of National Research Assessment Exercise. Presently she is Principal investigator in research projects on higher education (Projects TRUE ESF-EUROCORE, PREST-ENCE ANR, France, POCARIM, VII EUFP), research evaluation (PRIN) and indicators (Coordinator of JOREP Project, EC VII EUFP). She cooperates as an Expert for ANVUR –the Italian Agency for the evaluation of universities and research, for the International Advisory Board of European Projects, the ESF MO Forum on Indicators for the Evaluation of the Internationalisation of the Public research organisations. She is Vice President of the Italian Evaluation Association, and of the Eu-SPRI Forum, member of the executive board of the European Network of Indicators Producers (ENID; www.enid-europe.org) and member of the Board for the European STI Indicators Conference Series.

Kjell Rubenson is a Professor at the University of British Columbia Canada, and Co-chair of The Centre for Policy Research on Higher Education and Training (CHET). His most recent publication, emerging from work on The International Encyclopaedia of Education, is a 2011 edited volume, *Adult learning and adult education* (Oxford : Elsevier). Dr. Rubenson is the Founding President of the European Society for research on the Education of adults (ESREA).

Patricia Schulz is a science studies scholar at Bielefeld University and a member of the Research Group Science Policy Studies at the Social Science Research Center Berlin (WZB). Her current research project concerns the improvement of science communication and is conducted as part of the National Academy of Science. Her dissertation analyses the construction of science and scientific knowledge in scientists' public communication in the cases of anthropogenic climate change and the theory of evolution.

Sofia Branco Sousa is a researcher at the Centre for Research in Higher Education Policies (CIPES) in Portugal. Trained as an Educationalist her main research interests are related to higher education studies, research policies, academic community/profession, research careers, knowledge production, epistemology and methodology in social sciences and discourse analysis. She is involved in national and international research projects and is an author of several book chapters and papers.

Pedro N. Teixeira is Associate Professor at the Department of Economics (University of Porto) and Director of CIPES (Centre of Research on Higher Education Policy). He holds a PhD in Economics (Exeter University, UK), a Masters in the Economics of Higher Education at CHEPS (University of Twente, The Netherlands), and a BA in Economics (University of Porto). His research interests focus on the economics of higher education, notably on markets and privatisation, and the development of human capital as a research program. He is the author "Jacob Mincer – A Founding Father of Modern Labour Economics" (Oxford UP, 2007), which was awarded in 2009 the Best Book Prize by the European Society of History of Economic Thought. He has also co-edited the following volumes: "Markets in Higher Education – Reality or Rhetoric?"(Kluwer, 2004), "Cost-Sharing and Accessibility in Higher Education – A Fairer Deal?" (Springer, 2006), and "Public Vices, Private Virtues? Assessing the Effects of Marketization in Higher Education" (Sense, 2011). He has also published several articles and book chapters on the history of economic thought and on the economics of higher education. He is a IZA Research Fellow (since 2003) a PROPHE Associated Researcher (since 2004) and has been a Visiting Fellow at Oxford University (2011–2013).

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