Jussi Välimaa
Oili-Helena Ylijoki
Editors

Cultural Perspectives on Higher Education

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Chapter 1
Introduction to the Book and Its Contents

Jussi Välimaa[1] and Oili-Helena Ylijoki[2]

The chapters in this book are based on presentations held in the Conference "Higher Education: The Cultural Dimension – Innovative Cultures, Norms, and Values", organized by the Consortium of Higher Education Researchers in September 2005 at the University of Jyväskylä, Finland. The aim of the Conference was to support disseminating a complementary perspective to higher education studies which have been dominated by debates on the problems and benefits of globalization, marketization, managerialism, and academic capitalism during the last decade. Without trying to deny the importance of these large-scale structural changes shaping the definitions and functioning of higher education institutions and their objectives, we aimed at paying attention to another main organizing principle of higher education institutions: their cultural dimensions. What is actually happening in the internal life of the higher education institutions, and how can we study the topic from a cultural perspective?

One of the goals of this book is to take a critical look at what cultural perspective means, and how it works in higher education institutions. We are not only interested in gaining a better understanding of the cultural aspects of higher education, but also in analyzing the potential of cultural perspectives as intellectual devices. The chapters selected for this book consist of studies in which culture has been either the object, or the structuring principle of the study, or in which cultural studies have been used as intellectual devices in the analysis. The main aim of the book is to provide the readers with a good understanding of the variety of possible cultural perspectives to higher education, and to show how they can be used in both qualitative and quantitative research. The chapters open a wide and well-documented overview on the wide variety of intellectual devices developed by a number of academics for promoting the cultural understanding of organizations, academic disciplines, and students. In what follows, we will give a short introduction to the contents of this collection of articles and the main topics addressed by the authors.

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This collection of articles is divided into three thematic parts, each focusing on somewhat different uses of cultural approaches in higher education research. Part I discusses the relationship between higher education, culture, and society. Part II consists of studies examining special academic practices from the perspectives of students, academic work, and identities. Part III consists of chapters in which cultural approaches have been used as frameworks or intellectual devices in the analyses of reforms and institutional changes in higher education.

In Chapter 2, which opens the book, Jussi Välimaa discusses the traditions of cultural studies in higher education research. He also analyzes different uses of cultural perspectives in this particular field of research, and examines the state of the art of cultural studies in higher education.

In Chapter 3 William G. Tierney analyzes trust and culture in higher education. Tierney begins his chapter by first summarizing how organizational culture has been defined, and moves on to discuss its nature from the perspectives of mission, environment, leadership, strategy, information, and socialization. He then turns to a discussion of trust, and considers how trust has typically been cast as a rational choice amongst actors in an organization, and contrasts that with a cultural view of trust. Tierney suggests that trust is a cultural construct that plays a critical role in enabling or stymieing an innovative role in tertiary institutions.

In Chapter 4 Rajani Naidoo focuses on the relationship between higher education and society. Focusing on the transformation of students into consumers in the national contexts of the United Kingdom and Australia she asks, how can student consumerism be understood as a cultural force in higher education in the context of knowledge economy? This chapter takes a look at how the new forms of organizational culture involving new modes of rationality and value systems are promoted, contrasting this with the proponents of the marketization of higher education, who argue that such mechanisms merely enhance the functioning of higher education. According to the argument presented in this chapter these developments have the potential to change the culture, and thereby the terms, on which teaching and learning take place in higher education.

Part II of the book focuses attention on academic practices and identities. It is opened by Hanna Päiviö, whose study examines the culture of business students (in Chapter 5). Her academic interests focus on the process in which students become socialized into different disciplinary and work cultures. How does this process actually happen in business education, and what kind of cultures and work communities become meaningful in the everyday life of the business students? Hanna Päiviö pays attention to the aspects, elements, and logics of studying that have relevance in the business students' everyday life, but are not directly visible to the students, their teachers, and other actors of the education. She approaches education and studying as cultural phenomena from a fresh perspective. The cultural approach described in this chapter can be considered "participatory", because the purpose of the study is not merely to describe and interpret the social reality of the business students, but also to change it with the students.

Chapter 6, written by Oili-Helena Ylijoki, studies the clash of academic cultures in the rapidly changing societal and academic environments through the case of

Dr. X. In a knowledge-based economy, university education and academic research are increasingly viewed and evaluated from an economic perspective. Both higher education policy and science policy have begun to stress the university's role as a crucial player in the national innovation system, and as an instrument for economic competitiveness in global markets. In accordance with this policy change, universities' funding patterns and management styles have witnessed deep-going transformations. Ylijoki focuses on the individual level by asking: how do academics themselves perceive and experience the growing pressures of the evermore required market-orientation in their work? Oili-Helena Ylijoki explores the conflicting elements in the social construction of academic identities from a cultural perspective. Through a fine-grained qualitative analysis of a single case, the case of Dr. X, she examines the tensions and dilemmas in academic work and the formation of academic identities in the present-day university.

In Chapter 7 Christine Musselin and Valérie Becquet open a wide perspective to academic work and identities. Using a comparative approach they study academic work in all its dimensions (teaching, research, administrative tasks, consultancy, doctoral training, professional training, etc.) in the disciplines of business studies, biology, history, and physics in French universities. Their study is structured by four main research questions: What is the content of these activities for each discipline, and the variation among them or within each of them? How do academics feel about these various tasks? How do academics allocate their time and attention to each of these activities? And how autonomous are they in making these kinds of decisions?

"Culture in Interaction: Academic Identities in Laboratory Work" is the topic of Chapter 8, written by Martin Benninghoff and Philippe Sormani, who present an ethnography of laboratory work in physics and genetics. Their ethnographic approach addresses the question of "academic identities" as a sociological issue. The main empirical question structuring their chapter is: how, if at all, are academic identities relevant for laboratory work? They approach this question from an ethnographic perspective of laboratory studies, supported by a detailed analysis of differently situated activities. This allows them to examine how lab members themselves achieve and exhibit the social organization of their laboratory, working activities, and respective identities.

Paula Nieminen focuses, in turn, on the dynamics of nursing as practice versus science in Chapter 9. This chapter takes a look at the process of academization in Finnish nursing, and the role of nursing science in the identities and practices of rank-and-file nurses. Nursing science offers an interesting starting point for the study of social professions and their expectations of "their sciences", of the division of labor and the functioning of the dual higher education model adopted in Finland, and of the specific obstacles female scholars face in their scientific endeavors. The author explores the relationship between academicians and practitioners in the field of nursing, and generates three identity narratives ranging from wage earning to the calling narrative.

In Chapter 10 Juha Tuunainen and Tarja Knuuttila focus on the diverse ways in which norms and rules pertaining to the university culture are contested and redefined

as universities get involved in business activities. They examine how the intermingling of academic and business activities is practically managed at the grassroots level of the university organization. Their empirical data originates from two research groups operating within a public and comprehensive European university, the University of Helsinki, in Finland. These groups sought to make commercial use of their research through spin-off companies while continuing, at the same time, their academic research and teaching. These cases provide excellent examples of "trading zones" between two distinct cultures, namely, university and business. Tuunainen and Knuuttila analyze the conflicts through discussing the different kinds of norms and rules pertaining to university practices.

Part III of the book focuses on recent reforms and changes implemented all over the globe from Australia to the United States to Portugal and Finland.

In Chapter 11 Helena Aittola analyzes changes in doctoral education through changes in the assessment of doctoral theses. The nature of doctoral theses varies even though there may exist universal consensus of some kind on the standards a doctoral thesis should meet. That is, a doctoral thesis may be traditionally defined as a piece of pure academic research, while at the same time more practice-oriented and vocational dissertations are also accepted. In addition, the thesis assessment process, assessment methods, and the role of preliminary thesis examiners vary according to national regulations. The quality issues revolving around doctoral education and doctoral dissertations concern not only academia or national higher education practices, but also the international context of doctoral education, which seems to have a trend towards uniform demands and global academic markets. However, the thesis assessment process itself has received little attention in higher education research. In her chapter Helena Aittola describes and analyzes the assessment of doctoral theses in Finnish higher education, in which the system of doctoral education was radically changed by the new graduate school system in 1995.

Kay Harman discusses, in Chapter 12, the different models of doctoral training and education that have evolved in a number of industrialized countries. She describes the integrated-cooperative (CRC) model, and the challenges it presents to traditional programs, and compares mainly the CRC-related students' perceptions about their training culture and research environment with those of their science-based peers in more traditional research training programs. The research findings are based on a social survey of all Ph.D. students in two Australian research-intensive universities that support a number of CRCs, and on interviews conducted with doctoral students and their supervisors in these locations. According to Kay Harman, CRC-related students were more positive about their training culture and the environment it provided, when compared with their science-based peers in more traditional research training programs, even though this model is not necessarily "one size fits all" model of doctoral education.

In Chapter 13 James S. Fairweather and Karen Paulson examine trends between faculty over time in four disciplinary categories – science, technology, engineering, and mathematics (STEM), humanities/fine arts, social sciences, and professional fields – and two major types of institutions – doctoral-granting/research and non-doctoral-granting (teaching-centered). Their analysis is based on data on

13,000 US full-time tenure-track faculty members, gathered by the 1993 and 1999 National Surveys of Postsecondary Faculty. Fairweather and Paulson identify disciplinary norms for teaching, research work load, and productivity, instructional pedagogy, and attitudes towards teaching and research. They compare these norms by disciplinary category across types of American 4-year institutions, and then examine the trends between 1993 and 1999 to see whether disciplinary differences are disappearing within a type of institution – the institutional isomorphism argument – or whether they continue as quite distinct "tribes" irrespective of institutional pressures.

In Chapter 14 Yuzhuo Cai provides insight into the construction of organizational culture in the context of post-merger higher education institutions, discussing possible approaches to its assessment with a particular emphasis on the quantitative ones. The chapter begins with a discussion on how the concept of organizational culture is understood in the setting of post-merger higher education institutions. It continues with a brief introduction to the trade-offs between qualitative and quantitative approaches for assessing culture. Yuzhuo Cai reviews instruments that can be used to access cultures, either in business mergers or between higher education institutions. His study concludes by identifying some of the implications of selecting or designing instruments for assessing cultural differences in post-merger higher education institutions.

In Chapter 15 David M. Hoffman, Mira Huusko, and Jussi Välimaa, analyze the influences of the Bologna Process on a Nordic system of higher education in Finland. This study offers an empirically based analysis of the Bologna process in the context of academic basic units. The results stem from a qualitative multiple case study which focuses on the way in which the Bologna Process reforms have been perceived and acted on in different disciplinary cultures. The interviews conducted for the study form the basis for a typology, which provides insights into the ways in which the challenges influenced by the Bologna Process have manifested in Finnish university units in clearly different ways. The discussion elaborates the concept of competitive horizon, which is used to place the identified issues into wider theoretical, ideological, and global debates on international comparative higher education.

Amélia Veiga and Alberto Amaral continue the theme of the Bologna Process in European higher education in Chapter 16. They ask: "How does the Bologna Process challenge national traditions of higher education institutions?" At the European level, the implementation of the Bologna Process is often viewed as a linear process of policy reform implementation. However, Veiga and Amaral maintain that organizations interact with their environment and define their own strategies for change. Therefore, the perceptions at the local level are somewhat different from the national or European level success stories, thus creating a need to analyze the changes that actually take place in higher education institutions. Veiga and Amaral use the grid/group Cultural Theory to gain a better understanding of the course of local level changes, using the implementation of the Bologna Process in Portugal as a case study. This analytical tool was proposed by Mary Douglas for the purposes of developing the Cultural Theory. She formulated a typology of social

cultures which comprises two dimensions: sociality and social incorporation. Sociality corresponds to the "grid" dimension, defined as the set of rules and norms that regulates individual interactions, whereas social incorporation corresponds to the "group" dimension defined as the extent to which the individual's life is absorbed in, and sustained by, group membership.

In the final chapter we conclude the main trends of cultural studies and discuss critically the future challenges. A crucial question is how to take cultural perspectives into account both in academic research and in the field of policy making. A cultural perspective, affecting all levels and aspects of higher education, is vital for understanding the diversity of functions and roles of higher education institutions. The profound changes in the environment of higher education, which challenge academic values, traditions and practices, make cultural studies particularly acute.

In order to respect the cultural variety of the writers' national backgrounds we have not tried to standardize the articles into a single linguistic norm of written English. The articles echo different versions of the English language, but each article follows only one of them. As the editors of the book we hope that you enjoy reading the articles as much as we did, because they open fresh perspectives to higher education as a social phenomenon, and also because they tell interesting stories about the small worlds of academia where we all live and work.

Chapter 2
Cultural Studies in Higher Education Research

Jussi Välimaa

Culture has so many meanings and uses in higher education research that this variety may seem frustrating to a reader who is not familiar with the traditions of cultural studies or qualitative research. The aim of this chapter is to contextualize various perspectives of culture as a social phenomenon and the uses of culture as an intellectual device in higher education research. I shall begin with the discussion of the many meanings of the concept culture, and continue by describing briefly the history of cultural approach in higher education studies in order to locate them in the present context. In the last part of this chapter I shall concentrate on *analyzing* the state of the art of cultural studies in higher education research.

2.1 Culture as a Concept and an Intellectual Device in Higher Education

The basic difficulty with the concept of culture is the existence of three main connotations and uses of culture in higher education research. The most basic conception is the understanding of universities as cultural institutions (with other cultural institutions such as museums, national archives, and libraries). The second important connotation related to culture can be defined as the cultural variation in the academic world as regards disciplines, institutions, and national traditions of higher education. Thirdly, the study of these cultural phenomena is related to methodological, epistemological, and philosophical discussion on the nature of knowledge.

Let us begin with one of the most popular understandings of culture in higher education. As a concept, culture is easily attached to images of higher education establishments as cultural institutions responsible for transmitting traditions, and cultural and social values to younger generations. It refers to universities as the carriers of intellectual, academic, and national traditions. In this sense, higher education institutions are seen as cultural institutions responsible for the socializing

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function in a society. This is, in fact, one of the oldest and most traditional social functions of higher education institutions as educational establishments. Cultural institution also refers to institutions with high social status in their respective nation states as the reproducers of elite (see Bleiklie et al. 2000). Metaphorically, these elite universities have been called as 'ivory towers'. As for the management of higher education, this cultural ideal refers to the idea of universities as institutions ruled and managed by academics with some help from the administrative staff (at least in the continental European universities).

However, with the emergence of mass higher education these traditional images of universities as cultural institutions are eroding in the Western cultural sphere. A variety of managerial fads (such as the New Public Management) have provided intellectual perspectives for criticizing higher education institutions as inefficient, bureaucratic, and economically unproductive. Often this criticism is supported by a variety of neo-liberal ideologies, which emphasize the role of higher education institutions as crucial institutions for the production of knowledge and (commercial and industrial) innovations, indicating an 'industrial" understanding of higher education institutions. The changing social roles of higher education institutions have been described with the help of the 'triple helix' ideas of knowledge creation, and the 'mode 1 and 2' ways of knowledge production (Etzkowitz 2003; Gibbons et al. 1994). They have also been described as academic capitalism, when the changing social dynamics inside higher education institutions have been analyzed (Slaughter and Leslie 1997; Slaughter and Rhoades 2004). These visions not only aim to analyze changes in higher education in a globalized world, but some of them also suggest normative ideals or models of how universities should adapt to entrepreneurial activities, strengthen their institutional management, and their interaction with industry and rest of the society (see Gibbons et al. 1994; Etzkowitz 2003; Clark 1998). However, one of the problems with these 'zeitdiagnoses'[1] and their (neo-liberally inspired) managerial technologies is a trend of seeing higher education institutions from only one – normally commercial – perspective. While emphasizing the market-orientation of higher education institutions and the innovative capacities of universities they also tend to see higher education institutions as culturally and institutionally monolithic entities. This is a problematic matter for a comprehensive understanding of higher education institutions, which are fragmented into innumerable 'small worlds' (Clark 1987) divided along the lines of disciplinary cultures, institutional traditions and resources, and the national systems of education. This is also potentially problematic for properly understanding the dynamic interactions taking place between the society and higher education institutions, with their variety of disciplines and institutional traditions.

Therefore, and secondly, cultural perspective to higher education often refers to the cultural variation seen in universities in a globalizing higher education. In this

[1] According to Tuunainen (2005, 283) 'Zeitdiagnoses' usually combine familiar materials in a novel way, are normative in nature and pursue a topical insight. For this reason they may be used as conceptual devices and points of departure for policymaking.

context cultural perspectives may open alternative points of views to analyzing the functioning of higher education. These comprehensive perspectives to higher education are especially popular among higher education researchers interested in the dynamics inside higher education institutions. This refers to the fact that even though higher education institutions are organizations – often described in hierarchical terms as a part of a national higher education system – they are also social spaces, where people work daily in the middle of their epistemic traditions, disciplinary cultures, local institutional conditions, and national traditions. A broad intellectual frame for analyzing these variations is provided by Marginson and Rhoades (2002) and also supported by the idea of disciplinary cultures as introduced by Tony Becher (1989).

The third connotation of cultural perspective is rooted in methodological issues, the ways of conducting research in and on higher education. It is assumed that a cultural perspective of higher education usually refers to studies, which have been conducted by using different kinds of qualitative methods of investigation. This assumption is clearly right with the notion that cultural studies are rooted in certain methodological devices developed in ethnology and anthropology (participant observations, field work), in linguistics (discourse analyses), in history (interpreting documents and emphasizing the importance of temporal contexts), and in social sciences and economics (case studies, ethnomethodology, grounded theory, action research etc.). However, it misses the point if it assumes that cultural studies are based on qualitative methods only. The examples in this book reveal the variety of possible approaches for studying higher education by utilizing both qualitative and quantitative methods. Cultural studies are rooted in qualitative methods, but this notion should not be over-emphasized, since a method is only a bridge which connects the researcher's questions to the actual research process.

However, methodological issues are not only methodological issues, but related to the nature of knowledge. In cultural studies the interest of knowledge often focuses on the local and particular situations of human beings. This issue, in turn, is basically rooted in the differences between the two main traditions of Western science as defined by Toulmin (1992), in which the *rationalist tradition* represents the generalizing and universal interests of knowledge, and the *humanist tradition* the interest of knowledge that focuses on particular, local, and timely elements of human behavior. However, without going deeper into this philosophical issue, it can be suggested that cultural perspective belongs to those intellectual devices, which are easily applicable in the humanist tradition, whereas it causes methodological problems in the rationalist traditions of Western science. One of the main reasons for this is the fact that in humanist tradition discussing the relationship between the researcher and the object of research is a crucial methodological question, whereas the rationalist tradition aims at defining the borderline that separates the researcher and the object of research (Välimaa 1998).

This is also a crucial methodological and epistemological question, especially for higher education researchers, because we are a part of the social phenomenon we examine (see, e.g., Alvesson 2003). Analytically, the challenge is to become

conscious of the limitations our positions impose on us – a concern shared by all researchers of higher education as Bourdieu has pointed out (1988).

2.1.1 Defining 'Culture'

What we mean by culture in this book? As editors of the book we understand culture in a way which covers the most of the definitions in this book. Following Becher and Trowler (2001, 23) we understand culture as a concept which refers 'to sets of taken-for-granted values, attitudes, and ways of behaving, which are articulated through and reinforced by recurrent practices among a group of people in a given context'. Thus, culture is a social phenomenon shared by a group of people in certain time and place in a way which makes their behavior natural for themselves. In addition to being a social phenomenon, culture is also an intellectual device used either to describe or to explain behavior, values and attitudes of groups of people.

2.2 On the History and Traditions of Cultural Studies in Higher Education: Student, Organizational and Disciplinary Cultures

The history of cultural studies on higher education began in the 1930s, when there emerged a need to gain a better understanding of *student cultures* in American higher education because of the pressures created by the Great Depression. According to Tyler (1963, 3–4), the studies of adolescents were contributed by the Great Depression which "highlighted serious problems of the American youth. Jobs for young people were scarce and they were staying longer in school." This new situation created problems for schools which were not prepared for the variety of different students. In this tradition of cultural studies in higher education the attention has been focused on student cultures and subcultures. Famous examples of this line of research are 'Boys in White', a study of student life in a medical school, by Becker (et al. 1961), as well as Bushnell's anthropological analysis of the 'Student Culture in Vassar' (Bushnell 1963). According to Becher (1987, 172), the studies of university and college student cultures have been "well served by research". In this book, Kay Harman (see Chapter 12) and Hanna Päiviö (see Chapter 5) can be seen as scholars continuing this tradition.

Historically, the second group of cultural research consists of studies, which focused on campus (and faculty) cultures from the beginning of the 1950s. One of the first examples is an early study on Faculty Cultures by Burton Clark (1963). This interest of knowledge developed into studies, in which higher education institutions are defined as cultural entities (or organizational cultures). One of the landmarks in the studies of *higher education institutions as cultural entities* is the work of Riesman and Jencks (1963). For them, college appeared not only as an

organization, but as a subculture "with its own idiosyncratic customs and concerns". It was a quite radical argument at the time, when they maintained that "an anthropologist can study it much the same way that he studies a primitive tribe or a modern community" (Riesman and Jencks 1963, 104). They also suggested that there is a need for anthropological field work to investigate not only students, but also "the student culture", the "faculty culture", and other subgroups that make up the college (Riesman and Jencks 1963, 105).

One of the most influential studies which developed the cultural approach of studying higher education institutions was 'The Distinctive College: Reed, Antioch and Swarthmore' by Clark (1970). The concept of *organizational saga* introduced in this study not only focused attention on cultural aspects of higher education institutions, but also became popular in the emerging studies of organizational cultures in other academic disciplines. The expansion of the cultural approach in organizational sociology and business sciences encouraged, in turn, new studies on higher education institutions as cultural entities. The studies of higher education institutions as cultural entities expanded in the 1980s, focusing attention on institutional missions, visions, and the processes of socialization, leadership, and communication in higher education institutions (see Tierney in Chapter 3, and Yuzhuo Cai in Chapter 14). These cultural studies focusing on institutional cultures were molded by a group of cultural points of departure mainly rooted in the traditions of sociology and anthropology, as Kuh and Whitt (1988) have emphasized.

Tony Becher's study 'Academic Tribes and Territories' (1989), in turn, laid the basis for studies of *disciplinary cultures*. This research interest can be seen in a historical continuum which began with C.P. Snow's book 'The Two Cultures and the Scientific Revolution?' (Snow 1993). Snow's book provoked a wide-spread debate on the two cultures in the academic world in the 1960s (Collini 1993). Important for higher education studies was the fact that this booklet promoted intellectual interest in higher education consisting of cultural entities based on disciplinary differences. This was a radical view in the 1960s and the 1970s, when Kuhn (1970) introduced his revolutionary book on the dynamics of scientific progress based more on social processes than internal dynamics caused by the objective development of knowledge (see Toulmin 1992). This understanding of the academic world as consisting of cultural entities with their own socially constructed realities, in turn, leads towards the development of the cultural approach in higher education research.[2]

The central thesis in Becher's main book Academic Tribes and Territories (1989) is analyzing the relationship between (academic) people and (disciplinary) ideas, starting with the theoretical assumption that academic communities are both epistemological and social communities. Becher analyzes the epistemic differences in the academic world with the help of categories, focus of knowledge, and structure of knowledge. The central analytical device for analyzing the differences

[2] The role of sociology of science in defining academic communities as cultural entities, see Pinch 1990, Swidler & Arditi 1994.

between knowledge is making a distinction between *hard, pure, soft*, and *applied knowledge*. With the help of these dimensions Becher classifies disciplines into four categories: hard pure, hard applied, soft pure, soft applied. As to social dimensions, Becher makes the distinction between rural and urban modes of research containing different patterns of working, communication, and publishing the research outcomes. In addition, Becher maintains that the disciplines can be analyzed as socially convergent or divergent disciplinary communities. This assumption is basically related to the work of Kuhn (1970), who assumed that there are social differences between paradigmatic and pre-paradigmatic disciplines.

The book Academic Tribes and Territories has been seminal, not only in showing the differences, but also in creating a possibility for understanding the different "small worlds" of academia (Clark 1987; Becher 1987, 1990). The disciplinary cultures approach has generated a variety of studies on higher education, which use disciplinary cultures as a cultural frame of analysis in higher education research (see Becher and Trowler 2001). In this book, too, most of the authors discuss the uses of disciplinary cultures as an analytical device in their study.

2.3 Recent Trends and the State of the Art

The traditions described above are all represented in this book's chapters, suggesting that these traditions continue to have a seminal impact on the field of research of higher education. However, in order to contextualize this book to the field of cultural studies in higher education, one should relate it to the recent trends in the research field. Due to the great number of studies published in journals and books worldwide, it was decided to write an overview of the cultural aspects in the articles published in *Higher Education* between 2000 and 2005. It can be assumed that the analysis of the articles published in one of the leading international journals of higher education is helpful in opening the discussion on the state of the art and the recent trends in higher education cultural studies, even though this would be quite a limited sample for a statistical analysis.

There are 274 academic articles published between years 2000 and 2005 in *Higher Education*. The total number of articles, which used some kinds of cultural devices or a cultural perspective for discussing the topic, was 93, which is 34% of all the published articles. I began my analysis by reading all the articles published in 2000, 2002, and 2003 in order to develop an understanding on the different uses of cultural perspectives in relation to all published articles. The analysis was then continued by making a search in the electronic journal database by using 'culture' and 'cultural' as keywords, and by analyzing all the articles found with this method.[3] However, one of the dangers in this kind of

[3] I excluded book reviews and editorial articles of special issues from the analysis, because they are introductions to the topic. I also excluded a study, in which culture was one of the concepts taught to students (see Abrandt Dahlgren & Öberg, 2001).

analysis is exaggerating the importance of the perspective. This bias may emerge especially if one tries to interpret every study containing the word 'culture' as a cultural study. Therefore, I excluded articles in which culture was mentioned only once or twice, and only as a word without any indication of intellectual perspective related to it.

2.4 Uses of Cultural Perspectives in Higher Education Studies

The following categories are based on the articles analyzed. For methodological reasons, I refer to respective articles in each category, even though some articles may appear in several categories. The aim is to discuss the variety and opportunities of using cultural perspectives in higher education research, instead of trying to put all the articles into one single category.

2.4.1 Disciplinary Cultures

Disciplinary cultures belong to one of the popular cultural frames in the analyses of higher education. The uses of disciplinary cultures as an intellectual device, however, vary significantly. Disciplinary cultures may be used as one of the structuring principles in the study, essential for the analysis of the empirical data (see Gizir and Simsek 2005; Kekäle 2000; Quinlan and Åkerlind 2000; Ylijoki 2000, 2003). These studies may also discuss and develop cultural studies on higher education through introducing new concepts – like departmental culture – to be utilized in the analysis (Quinlan and Åkerlind 2000). Disciplinary cultures are also a useful point of reference, when discussing academic identities (see Henkel 2005).

Disciplinary cultures have also been used more like a 'discussion companion', when analyzing different kinds of research outcomes. In these kinds of studies disciplinary cultures approach is not necessarily the structuring principle of the study, but disciplinary variation is referred to in order to understand the research outcomes better, and to contextualize them in the academic world or to institutional cultures (see Albert 2003; Hodson and Thomas 2003; Tight 2003).

Studies utilizing disciplinary perspectives may also focus on cross-disciplinary studies, which aim at gaining a better understanding of the nature of variation in academia. In these studies, disciplinary cultures provide a useful intellectual device for seeing the differences even though it is not necessarily used analytically in the study (see, e.g., Carpenter and Tait 2001).

2.4.2 Institutional and Campus Cultures

Institutional culture belongs – together with one of its variations 'campus culture' – to one of the broad intellectual devices used by higher education researchers. Institutional culture is a useful concept because it describes the social fabric of higher education institutions (see Chan 2005; Harman 2002; Mabokela 2002). It focuses attention on the fact that institutional practices are rooted in their traditions, and also on the fact that institutional cultures may well be changed (see De Zilwa 2005; Levin 2001; Mapesela and Hay 2005).

2.4.3 Students as the Object of Studies

Cultural perspectives to higher education students provide useful explanatory perspectives when analyzing students moving across countries (see Golbart et al. 2005). Quite often cultural background is taken in to account, when the aim is to analyze minority or nontraditional students in higher education. Cultural traditions of students are then used as an explanatory factor for locating learning difficulties or for understanding differences in learning outcomes. (see Anderson and Day 2005; Boulton-Lewis et al. 2000, Boulton-Lewis et al. 2004; Dooley 2004; Meyer and Land 2005; Wierstra et al. 2003). Comparative studies of students with different cultural backgrounds often refer to these differences as an explanation or description of differences, even though the studies do not necessarily aim at analyzing what the nature of these differences is (see, e.g., Ramburuth and McCormick 2001; Koljatic and Kuh 2001). Furthermore, sociocultural perspectives have also been found useful, when explaining student behavior with the help of cultural and social capital, thus leaning on Pierre Bourdieu's field theory (see e.g., Avrahami and Daz 2004).

2.4.4 National Cultures

National cultures are often used as an intellectual device for explaining typical behavior in a national system of education. Using culture as an intellectual device makes it easier to explain traditional patterns or sociocultural structures, which influence the social dynamics of higher education, in order to contextualize it into wider historical and political movements. (see, e.g., Cross 2004; Liefner 2003; Robertson and Bond 2005; Välimaa 2004).

However, cultural perspective may also play a minor role in studies focusing on one nation state. In these studies, it is quite normal to mention that a national culture has an impact on the social phenomena examined. In this context culture is an academically economic concept to be used a descriptive notion when referring to the nation's traditions without having the need to analyse further

how it has developed. (see Cliff and Woodward 2004; Ensor 2004; Geva-May 2001; Henkin and Hsin-Hwa 2000; Honan and Teferra 2001; Mannan 2001; Morgan and Bergenson 2000; Moscati 2001; Pinilla and Munoz 2005; Post et al. 2004). In this sense, culture may be used metaphorically as a description of complex social phenomena, indicating that human activities are embedded in their cultural traditions (see, e.g., Adeyemi 2001; Adeyemi and Akpotu 2004; Taylor and Harris 2004; Teferra and Altbach 2004; Vaira 2004; Yang 2004).

Culture may also be understood as a subject matter which needs to be transmitted to people through higher education, in which case a culture is synonymous to a tradition (see, e.g., Banya and Elu 2001). The notion that national systems of higher education have a different character, which is rooted in their traditions either as Humboldtian, Napoleonic, Anglo-American, Nordic, Japanese etc. is an example of the way national cultural contexts are recognized as important factors, when explaining the functioning of higher education institutions in certain time and place.

2.4.5 Comparative Studies

Culture as a social force – whether it concerns academics, institutions, or nations- has been recognized in a number of comparative studies. To give some examples, cultural perspective to higher education is used to support a more comprehensive understanding of higher education, when discussing topics like assessment (Mollis and Marginson 2002; Billing 2004), or quality (van Damme 2001; Hodson and Thomas 2003), or when criticizing the invasion of economic and managerial values into higher education (Marginson 2002). The influence of culture has been noted in several comparative studies on different reform processes, because "culture both facilitates and blocks change" (see Brennan and Shah 2000, 341). In these studies references to cultural differences are necessary for the analysis even though these studies do not necessarily define the origins of cultural differences (see, e.g., Zhang and Watkins 2001).

Cultural aspects of higher education are often recognized as an explanatory device in order to understand the differences between countries or higher education institutions studied from different topical perspectives (see Amaral and Magalhaes 2004; Bradley 2000; Xiao-Xing et al. 2000; Huisman and Currie 2004; Mason et al. 2001; McBurnie and Ziguras 2001; Subramaniam 2003). There are also studies, which analyze cultural differences between countries, when the topic of the research is for example academic work (see Musselin 2004).

It is also common that cultural perspectives (in other words, values, norms, and behavior) are used as a kind of 'discussion companion' in a study, to gain a better understanding of the phenomenon under examination, or when interpreting the research outcomes. (see Gordon 2000; Jensen and Aamodt 2002; Jones and O'Shea 2004; Kyvik 2002; Vermunt 2004; Weiler 2004; Åkerlind 2005). It is also possible that these kinds of studies utilize concepts like "hard" and "soft" developed in cultural studies, when analyzing their data (see Smeby 2000).

2.4.6 Studies of Change Processes

One of the most popular topics in higher education – as in other social research – is change. Normally change is examined from a certain perspective – especially when it can be seen in a causal relationship with policy changes (then to be called reforms) or as the introduction of new management ideas (to be named as fads) or by learning processes or through natural development of higher education.

Cultural change is, in turn, one of the terms used for explaining difficulties met, when trying to implement changes in higher education institutions. This term (together with cultural clash) aims at showing that institutional cultures tied to institutional traditions are often considered a conservative social force in higher education institutions. The inertia of higher education institutions to change is often rooted in institutional (or organizational) cultures in higher education. (See Brennan and Shah 2000; Curri 2002; Harman 2002). This suggests two things. Firstly, traditions, identities, and cultures are real social forces in higher education. Secondly, culture as an intellectual device captures well this most important social force in and of higher education institutions. The analysis of changing organizational cultures may be important for explaining change processes (see Levin 2004; Tuunainen 2005).

The use of cultural approach is also typical of studies, which analyze change in higher education reforms, whether the reforms are exported (Morgan and Bergenson 2000) or more domestically initiated policy actions (Hórvath et al. 2000). Cultural understanding of higher education institutions plays a significant role, in the analyses of changes in the management of universities or in their identities (see, e.g., Poole 2001; Stensaker and Norgård 2001).

The political power of the concept of culture is also visible in policy goals, where the aim is to establish a "fee-culture" or "quality culture" or to introduce some other reforms, which aim at changing the social dynamics of a system of higher education (See Duckett 2004). "Evaluative culture", in turn, provides an example on the use of culture as an explanatory concept, when analysing changes in the creation of national and institutional systems of evaluation. In this context, culture provides a concept for analysing the trend of changes (see Askling 2001).

2.4.7 Culture as a General Perspective to Higher Education

Various cultural dimensions of higher education have been used in a number of studies as a general orientation basis for examining higher education as a social phenomenon. In these kinds of studies culture may be used as a crucial intellectual device for describing the research topic, or general characteristics of higher education (see Marks 2005; Sellers 2002; Trowler and Turner 2002). The cultural element of the academic world may also be considered important,

when explaining its functioning, or when developing new perspectives, or new thinking for explaining its social dynamics (see, e.g., Palonen and Lehtinen 2001; Tierney 2001; Slaughter 2001). Studies which aim at developing further the cultural approach by discussing it with other research traditions in social research also belong to this group of studies (see Ylijoki 2000). For example, Allen (2003) discussed the cultural understanding of higher education institutions, when analyzing their organizational climate.

Cultural approach may also be used as an analytical tool for explaining the social phenomenon under study (see Norgård and Skodvin 2002; Billing 2004). In these cases, cultural approach refers to higher education institutions, which are embedded in their beliefs, norms, values, and traditions. Cultural perspectives to higher education may also utilize several perspectives paying attention to national, institutional, and disciplinary cultures, with the aim of understanding higher education institutions, and their processes in a comprehensive way (see Heffernan and Poole 2005). Culture may also be used as an explanatory concept emerging from the data. One typical example is provided by Fisher and Atinson-Grosjean (2002), who speak about the 'cultural clash' between university and commercial cultures, when analysing their interview data.

The cultural dimension of higher education may also be recognized as one of the dimensions of higher education relevant for classifying higher education institutions. In these kinds of studies culture may be used instrumentally as an intellectual device for categorizing universities (following Sporn's 1996) or for explaining their characteristics or obstacles to change (Bartell 2003; Biggs 2001; Ogawa 2003).

Furthermore, the cultural dimension of higher education may also be useful, when challenging monolithic or otherwise over-simplifying perspectives to higher education. Typical examples include the 'Zeitdiagnose' type of arguments, which propose that everything in higher education is changing in the same direction (like mode 1 and 2 debates show, see Bleiklie and Bjyrkeflot 2002; Enders 2004; Teichler 2004). Referring to cultural studies helps to develop arguments stating that even though part of the disciplines may be developing into a certain direction, this is not necessarily the case with all the disciplines or with all the national traditions.

2.5 Discussion

On basis of this overview of cultural studies in higher education, it is obvious that all the traditions of cultural studies described above are alive in today's higher education research. The references to institutional and campus cultures in the analyses of changes in higher education institutions and the importance of disciplinary cultures have become established perspectives of higher education research. On basis of this investigation it is not exaggeration to say that cultural studies on and in higher education belong to one of the popular perspectives in the higher education research field.

There are two main reasons for using or referring to cultural perspectives in higher education. Firstly, cultural perspectives have normally been utilized by academics who need to explain the variety in their data – whether the differences concern academic staff, students, or higher education institutions. These studies may focus on the disciplinary differences among academic staff, differences in the processes of change, or in the students' learning outcomes. Variety and its explanation often occur in a comparative research setting, both as a social phenomenon and as an intellectual challenge of explaining it.

The second main motivation for utilizing cultural perspectives as an intellectual device emerges when the contexts of higher education play a significant role. These studies are often conducted in a comparative research setting, or they aim at analyzing social phenomena in a certain nation state. These studies may also focus on institutional management topics or students who come from a nontraditional cultural background.

The intensity according to which cultural perspectives have been utilized as an intellectual device also varies to some degree in higher education studies. The strongest orientation to cultural perspective as an analytical device is typical of studies in which the aim is to develop the cultural approach theoretically or to study cultural variation among faculty members (disciplinary cultures), students, or higher education institutions, whereas the weakest orientation is common in studies in which culture is used metaphorically or mentioned as one of the descriptive background factors only. The middle ground is occupied by academics, who refer to cultural perspectives as a discussion companion, to reflect on the research outcomes or the topic concerned.

It makes no sense trying to calculate the percentage of using cultural perspective among these three main orientations. One of the reasons is that culture may have different connotations in one single study. However, it should be mentioned that methodologically all these studies belong to qualitative research traditions. These studies share the interest in knowledge, which focuses on understanding the social phenomenon under examination. Studies with an interest of knowledge, which aims at modeling or generalizing human behavior (whether it concerns students, faculty, or institutions), do not normally rely on cultural perspectives in their analyses.

These methodological issues are also related to research traditions and academic disciplines utilized in the cultural studies of higher education. Epistemic backgrounds of cultural studies are often rooted in some variation of social constructionist perspective to world. In this tradition it is accepted that knowledge is socially constructed by a group of people interacting with each other, whereas in rationalist tradition this is a contested assumption on the nature of the knowledge.

There are also challenges to reflect on. This overview has revealed that behind the surface of the topics of research there are also certain research settings (like comparative research) and cultural social forces (processes of change), which pose new challenges to cultural studies of higher education. One of the challenges this research faces is the question of developing more sophisticated cultural devices for comparative studies. In addition, cultural categories have also been utilized remarkably little in statistical analyses of higher education, despite the evident advantages

they open as a background variable for a more comprehensive understanding of the variety among students, faculty, or institutions.

References

Abrandt Dahlgren, M. and Öberg, G. (2001). Questioning to learn and learning to question: Structure and function of problem-based learning scenarios in environmental science education. *Higher Education*, *41*(3), 263–282.

Adeyemi, K. (2001). Equality of access and catchment area factor in university admissions in Nigeria. *Higher Education*, *42*(3), 307–332.

Adeyemi, K. and Akpotu, N. (2004). Gender analysis of student enrolment in Nigerian universities. *Higher Education*, *48*(3), 361–378.

Åkerlind, G.S. (2005). Academic growth and development – How do university academics experience it? *Higher Education*, *50*(1), 1–32.

Albert, M. (2003). Universities and the market economy: The different impact on knowledge production in sociology and economics. *Higher Education*, *45*(2), 147–182.

Allen, D.K. (2003). Organisational climate and strategic change in higher education: Organisational insecurity. *Higher Education*, *46*(1), 61–92.

Alvesson, M. (2003). Methodology for close up studies – struggling with closeness and closure. *Higher Education*, *46*(2), 167–193.

Amaral, A. and Magalhaes, A. (2004). Epidemiology and the Bologna Saga. *Higher Education*, *48*(1), 79–100.

Anderson, C. and Day, K. (2005). Purposive environments: Engaging students in the values and practices of history. *Higher Education*, *49*(3), 319–343.

Askling, B. (2001). Higher education and academic staff in a period of policy and system change. *Higher Education*, *41*(1–2), 157–181.

Avrahami, A. and Yechezkel, D. (2004). In a practical mood: Studying for a profession in the changing Kibbutz. *Higher Education*, *47*(1), 51–71.

Banya, K. and Elu, J. (2001). The World Bank and financing higher education in Sub-Saharan Africa. *Higher Education*, *42*(1), 1–34.

Bartell, M. (2003). Internationalization of universities: A university culture-based framework. *Higher Education*, *45*(1), 43–70.

Becher, T. (1987). The Cultural View. In B.R. Clark (ed.) *Perspectives on higher education. Eight disciplinary and comparative views.* University of California Press, Berkeley, Los Angeles, London, pp. 165–198.

Becher, T. (1989). *Academic tribes and territories. Intellectual enquiry and the cultures of disciplines*. Milton Keynes: SRHE & Open University Press.

Becher, T. and Trowler, P.R. (2001). *Academic tribes and territories. Intellectual enquiry and the culture of disciplines*.Second Edition. Buckingham: SRHE & Open University Press.

Becker, H.S., Geer, B., Hughes, E.C., and Strauss, A.L. (1961). *Boys in white: Student culture in medical school*. Chicago: University of Chicago Press.

Biggs, J. (2001). The reflective institution: Assuring and enhancing the quality of teaching and learning. *Higher Education*, *41*(3), 221–238.

Billing, D. (2004). International comparisons and trends in external quality assurance of higher education: Commonality or diversity? *Higher Education*, *47*(1), 113–137.

Bleiklie, I. and Byrkjeflot, H. (2002). Changing knowledge regimes: Universities in a new research environment. *Higher Education*, *44*(3–4), 519–532.

Bleiklie, I., Hostaker, R. and Vabo, A. (2000). *Policy and practice in higher education: Reforming Norwegian universities*. Higher Education Policy Series 49. London: Jessica Kingsley.

Boulton-Lewis, G.M., Marton, F., Lewis, D.C. and Wilss, L.A. (2000). Aboriginal and Torres Strait Islander university students' conceptions of formal learning and experiences of inormal learning. *Higher Education*, *39*(4) 469–488.

Boulton-Lewis, G.M., Marton, F., Lewis, D.C. and Wilss, L.A. (2004). A longitudinal study of learning for a group of indigenous Australian university students: Dissonant conceptions and Strategies. *Higher Education*, *47*(1), 91–112.

Bourdieu, P. (1988). *Homo Academicus*. Translated by P. Collier. Stanford: Stanford University Press.

Bradley, G. (2000). Responding effectively to the mental health needs of international students. *Higher Education*, *39*(4), 417–433.

Brennan, J. and Shah, T. (2000). Quality assessment and institutional change: Experiences from 14 countries. *Higher Education*, *40*(3), 331–249.

Bushnell, J. (1963). Student Culture in Vassar. In Sanford, N. (ed.) *The American College. A psychological and social interpretation of the higher learning*. New York: Wiley, 489–514.

Carpenter, B. and Tait, G. (2001). The rhetoric and reality of good teaching: A case study across three faculties at the Queensland University of Technology. *Higher Education*, *42*(2), 191–203.

Chan, A.S. (2005). Policy discourses and changing practice: Diversity and the university-college. *Higher Education*, *50*(1), 129–157.

Clark, B.R. (1963). Faculty Cultures. In Lunsford, T.F. (ed.) *The Study of Campus Cultures*. Western Interstate Commission for Higher Education. Boulder, Colorado, 39–54.

Clark, B.R. (1970). *The distinctive college: Reed, Antioch and Swarthmore*. Chicago: Aldine.

Clark, B.R. (1987). *The Academic Life. Small Worlds, Different Worlds*. Princeton: The Carnegie Foundation for the Advancement of Teaching.

Clark, B.R. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation*. Oxford, New York: IAU Press & Pergamon Press.

Cliff, A.F. and Woodward, R. (2004). How do academics come to know? The structure and contestation of discipline-specific knowledge in a Design school. *Higher Education*, *48*(3), 269–290.

Collini, S. (1993). Introduction in C.P. Snow, The Two Cultures. Cambridge: Cambridge University Press, vii-lxxi.

Cross, M. (2004). Institutionalising campus diversity in South African higher education: Review of diversity scholarship and diversity education. *Higher Education*, *47*(4), 387–410.

Curri, G. (2002). Reality versus perception: restructuring tertiary education and institutional organisational change – a case study. *Higher Education*, *44*(1), 133–151.

De Zilwa, D. (2005). Using entrepreneurial activities as a means of survival: Investigating the processes used by Australian universities to diversify their revenue streams. *Higher Education*, *50*(3), 387–411.

Dooley, K. (2004). Pedagogy in diverse secondary school classes: Legacies for higher education. *Higher Education*, *48*(2), 231–252.

Duckett, S.J. (2004). Turning right at the crossroads: The Nelson Report's proposals to transform Australia's universities. *Higher Education*, *47*(2), 211–240.

Enders, J. (2004). Higher education, internationalisation, and the nation-state: Recent developments and challenges to governance theory. *Higher Education*, *47*(3), 361–382.

Ensor, P. (2004). Contesting discourses in higher education curriculum restructuring in South Africa. *Higher Education*, *48*(3), 339–359.

Etzkowitz, H. (2003). The norms of entrepreneurial science: Cognitive effects of the new university-industry linkages. *Research Policy*, *27*(8), 823–833.

Fisher, D. and Atinson-Grosjean, J. (2002). Brokers on the boundary: Academy-Industry liaison in Canadian universities. *Higher Education*, *44*(3–4), 449–467.

Geva-May, I. (2001). Higher education and attainment of policy goals: Interpretations for efficiency indicators in Israel. *Higher Education*, *42*(3), 265–305.

Gibbons, M., Limogenes, C., Nowotny, H., Schwartzman, S., Scot, P. and Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in Contemporary Societies*. London: Sage.

Gizir, S. and Simsek, H. (2005). Communication in an academic context. *Higher Education*, *50*(2), 197–221.

Goldbart, J., Marshall, J., and Evans, I.R. (2005). International students of speech and language therapy in the UK:. Choices about where to study and whether to return. *Higher Education*, *50*(1), 89–109.
Gordon, G. (2000). Comparability of postgraduate academic qualifications: Some issues challenges and experiences. *Higher Education*, *40*(4), 377–388.
Harman, K. (2002). Merging divergent campus cultures into coherent educational communities: Challenges for higher education leaders. *Higher Education*, *44*(1), 91–114.
Heffernan, T. and Poole, D. (2005). In search of "the vibe": Creating effective international education Partnerships. *Higher Education*, *50*(2), 223–245.
Henkel, M. (2005). Academic identity and autonomy in a changing policy environment. *Higher Education*, *49*(1–2), 155–176.
Henkin, J.R. and Hsin-Hwa, C.J. (2000). Faculty autonomy: Perspectives from Taiwan. *Higher Education*, *40*(2), 203–216.
Honan, J.P. and Teferra, D. (2001). The US academic profession: Key policy challenges. *Higher Education*, *41*(1–2), 183–203.
Hórvath, F., Weber, K. and Wicki, M. (2000). International research orientation of Swiss universities: self-regulated or politically imposed? *Higher Education*, *40*(4), 389–408.
Hodson, P. and Thomas, H. (2003). Quality assurance in Higher Education: Fit for the new millennium or simply year 2000 compliant? *Higher Education*, *45*(3), 375–387.
Huisman, J. and Currie, J. (2004). Accountability in higher education: Bridge over troubled water? *Higher Education*, *48*(4), 529–551.
Jensen, K. and Aamodt, P.-O. (2002). Moral motivation and the battle for students: The case studies in nursing and social work in Norway. *Higher Education*, *44*(3–4), 361–378.
Jones, N. and O'Shea, J. (2004). Challenging hierarchies: The impact of e-learning. *Higher Education*, *48*(3), 379–395.
Kekäle, J. (2000). Quality assessment in diverse disciplinary settings. *Higher Education*, *40*(4), 465–488.
Koljatic, M. and Kuh, G.D. (2001). A longitudinal assessment of college student engagement in good practices in undergraduate education. *Higher Education*, *42*(3), 351–371.
Kuh, G.D. & Whitt, E.J. (1988). The Invisible Tapestry: Culture in American Colleges and Universities. ASHE-ERIC Higher Education Report No. 1. Washington: ASHE.
Kuhn, T.S. (1970). *The structure of scientific revolutions*, 2nd edn, enlarged. Chicago: The University of Chicago Press.
Kyvik, S. (2002). The merger of non-university colleges in Norway. *Higher Education*, *44*(1), 53–72.
Levin, J.S. (2001). Public policy, community colleges, and the path to globalization. *Higher Education*, *42*(2), 237–262.
Levin, J.S. (2004). Organizational paradigm shift and the university colleges of British Columbia. *Higher Education*, *46*(4), 447–467.
Liefner, I. (2004). Funding, resource allocation, and performance in higher education systems. *Higher Education*, *46*(4), 469–489.
Mabokela, R.O. (2003). Donkeys of the University: Organizational culture and its impact on South African women administrators. *Higher Education*, *46*(1), 129–145.
Mapesela, M. and Hay, M.R. (2005). Through the magnifying glass: A descriptive theoretical analysis of the possible impact of the South African higher education policies on academic staff and their job satisfaction. *Higher Education*, *50*(1), 111–128.
Mannan, A.M. (2001). An assessment of the academic and social integration as perceived by the students in the University of Papua New Guinea. *Higher Education*, *41*(3), 283–298.
Marginson, S. (2002). Nation-building universities in a global environment: The case of Australia. *Higher Education*, *43*(3), 409–428.
Marginson, S. and Rhoades, G. (2002). Beyond national states, markets, and systems of higher education: A glonacal agency heuristic. *Higher Education*, *43*(3), 281–309.
Marks, A. (2005). Changing spatial and synchronous structures in the history and culture of learning A Heideggerian analysis of the history of the English university. *Higher Education*, *50*(4) 613–630.

Mason, T.C., Arnove, R.F. and Sutton, M. (2001). Credits, curriculum, and control in higher education: Cross-national perspectives. *Higher Education*, *42*(1) 107–137.
McBurnie, G. and Ziguras, C. (2001). The regulation of transnational higher education in Southeast Asia: Case studies of Hong Kong, Malaysia and Australia. *Higher Education*, *42*(1) 85–105.
Meyer, Jan, H.F. and Land, Ray. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, *49*(3), 373–388.
Mollis, M. and Marginson, S. (2002). The assessment of universities in Argentina and Australia: Between autonomy and heteronomy. *Higher Education*, *43*(3), 311–330.
Morgan, A.W. and Bergenson, A.A. (2000). Importing organizational reform: The case of lay boards in Hungary. *Higher Education*, *40*(4), 423–448.
Moscati, R. (2001). Italian university professors in transition. *Higher Education*, *41*(1–2): 103–129.
Musselin, C. (2004). Towards a European academic labour market? Some lessons drawn from empirical studies on academic mobility. *Higher Education*, *48*(1) 55–78.
Norgård, J.D. and Skodvin, O.-J. (2002). The Importance of geography and culture in mergers: A Norwegian institutional case study. *Higher Education*, *44*(1), 73–90.
Ogawa, Y. 2002. Challenging the traditional organization of Japanese universities. *Higher Education*, *43*(1), 85–108.
Palonen, T. and Lehtinen, E. (2001). Exploring invisible scientific communities: Studying networking relations within an educational research community. A Finnish case. *Higher Education*, *42*(4), 493–513.
Pinch, T. (1990). The Culture of Scientists and Disciplinary Rhetoric. *European Journal of Education*, *25*(3), 295–303.
Pinilla, B. and Munoz, S. (2005). Educational opportunities and academic performance: A case study of university student mothers in Venezuela. *Higher Education*, *50*(2), 299–322.
Poole, D. (2001). Moving towards professionalism: The strategic management of international education activities at Australian universities and their Faculties of Business. *Higher Education*, *42*(4), 395–435.
Post, D., Clipper, L., Enkhbaatar, D., Manning, A., Riley, T. and Zaman, H. (2004). World Bank okays public interest in higher education. *Higher Education*, *48*(2), 213–229.
Quinlan, K.M. and Åkerlind, G.S. (2000). Factors affecting departmental peer collaboration for faculty development: Two cases in context. *Higher Education*, *40*(1), 23–52.
Ramburuth, P. and McCormick, J. (2001). Learning diversity in higher education: A comparative study of Asian international and Australian students. *Higher Education*, *42*(3), 333–350.
Riesman, D. and Jencks, C. (1963). The Viability of the American College. In N. Sanford (ed.) *The American college. A psychological and social interpretation of the higher learning*. New York: Wiley, pp. 74–192.
Robertson, J. and Bond, C. (2005). The research/teaching relation: A view from the 'edge'. *Higher Education*, *50*(3), 509–535.
Sellers, E. (2002). Images of a new sub-culture in the Australian university: Perceptions of non-nurse academics of the discipline of nursing. *Higher Education*, *43*(2), 157–172.
Slaughter, S. (2001). Problems in comparative higher education: Political economy, political socio logy and postmodernism. *Higher Education*, *41*(4) 389–412.
Slaughter, S. and Leslie, L.L. (1997). *Academic capitalism: Politics, policies and the entrepreneurial university*. Baltimore/London: Johns Hopkins University Press.
Slaughter, S. and Rhoades, G. (2004) *Academic capitalism and the new economy. Markets, state and higher education*. Baltimore/London: Johns Hopkins University Press.
Smeby, J.-C. (2000). Same-gender relationships in graduate supervision. *Higher Education*, *40*(1), 53–67.
Snow, C.P. (1993). The Two Cultures: A Second Look. In S Collini, (ed.) C.P. Snow, The Two Cultures. Cambridge: Cambridge University Press. First printing 1964.
Stensaker, B. and Norgård, J.D. (2001). Innovation and isomorphism: A case-study of university identity struggle 1969–1999. *Higher Education*, *42*(4), 473–492.
Sporn, B. (1996). Managing university culture: An analysis of the relationship between institutional culture and management approaches. *Higher Education*, *32*(1), 41–61.

Subramaniam, N. (2003). Factors affecting the career progress of academic accountants in Australia: Cross-institutional and gender perspectives. *Higher Education*, *46*(4), 507–542.
Swidler, A. and Arditi, J. (1994). The New Sociology of Knowledge. *Annual Review of Sociology*, *20*, 305–329.
Taylor, B. and Harris, G. (2004). Relative efficiency among South African universities: A data envelopment analysis. *Higher Education*, *47*(1), 73–89.
Teferra, D. and Altbach, P.G. (2004). African higher education: Challenges for the 21st century. *Higher Education*, *47*(1), 21–50.
Teichler, U. (2004). The changing debate on internationalisation of higher education. *Higher Education*, *48*(1), 5–26.
Tierney, W.G. (2001). The autonomy of knowledge and the decline of the subject: Postmodernism and the reformulation of the university. *Higher Education*, *41*(4), 353–372.
Tight, M. (2003). The organisation of academic knowledge: A comparative Perspective. *Higher Education*, *46*(1), 389–410.
Toulmin, S. (1992). *Cosmopolis. The hidden agenda of modernity*. Chicago: The University of Chicago Press.
Trowler, P.R. and Turner, G.H. (2002). Exploring the hermeneutic foundations of university: Deaf academics in a hybrid 'community of practice'. *Higher Education*, *43*(2), 173–201.
Tuunainen, J. (2005). Hybrid practices? Contributions to the debate on the mutation of science and university. *Higher Education*, *50*(2), 275–298.
Tyler, R.W. (1963). The Study of Campus Cultures. In Lunsford, T.F. (ed.) *The study of campus cultures*. Western Interstate Commission for Higher Education. Boulder, Colorado, pp. 1–10.
Vaira, M. (2004). Globalization and higher education organizational change: A framework for analysis. *Higher Education*, *48*(4), 483–510.
Välimaa, J. (2004). Nationalisation, localisation and globalisation in Finnish higher education. *Higher Education*, *48*(2), 27–54.
Välimaa, J. (1998). Culture and identity in higher education. *Higher Education*, *36*(2), 119–138.
van Damme, D. (2001). Quality issues in the internationalisation of higher education. *Higher Education*, *41*(4), 415–441.
Vermunt, J.D. (2005). Relations between student learning patterns and personal and contextual factors and academic performance. *Higher Education*, *49*(3), 205–234.
Weiler, H.N. (2004). Ambivalence and the politics of knowledge: The struggle for change in German higher education. *Higher Education*, *49*(1–2), 177–195.
Wierstra, R.F.A, Kanselaar, G., van der Linden, J.L., Lodewijks, H.G.L.C. and Vermunt, J.D. (2003). The impact of the university context on European students' learning approaches and learning environmet preferences. *Higher Education*, *45*(4), 477–501.
Ylijoki, O.-H. (2000). Disciplinary cultures and the moral order of studying – A case-study of four Finnish university departments. *Higher Education*, *39*(3), 339–362.
Ylijoki, O.-H. (2003). Entangled in academic capitalism? A Case-study on changing ideals and practices of university research. *Higher Education*, *45*(3), 307–335.
Xiao-Xing He, Zhu-Yu Li, Jian Shi, Rong Mao, Rong-Hua Mu and Yi-An Zhou (2000). A Comparative study of stress among university faculty in China and Japan. *Higher Education*, *39*(3), 253–278.
Yang, R. (2004). Openness and reform as dynamics for development: A case study of internationalisation at South China University of Technology. *Higher Education*, *47*(4), 473–500.
Zhang, Li-Fang, and Watkins, D. (2001). Cognitive development and student approaches to learning: An investigation of Perry's theory with Chinese and U.S. university students. *Higher Education*, *41*(3), 239–261.

Chapter 3
Trust and Organizational Culture in Higher Education

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Organizational culture is a topic that has become embedded in research pertaining to organizations in general and tertiary institutions in particular. Culture pertains to the norms, values and ideologies that are created, shaped, and sustained in an organization. Rather than a search for universal underlying structures or meanings that pervade all organizations, the focus is on the study of individual organizational cultures as unique and autonomous systems of meaning. Although the very notion of "organization" assumes an entity that has boundaries, students of organizational culture pay particular attention to the interactions individuals have with each other in the organization and how those boundaries are drawn and redefined.

The components of an organization's culture have been delineated (Tierney, 1988; Valimaa, 1998), but one area that has been overlooked pertains to the idea of trust. In what follows, I briefly summarize how organizational culture has been defined, and then turn to a discussion of trust. I consider how trust typically has been cast as a rational choice amongst actors in an organization and contrast that with a cultural view of trust. My purpose here is to suggest that trust is a cultural construct that plays a critical role in enabling or stymieing an innovative role in tertiary institutions.

3.1 Reviewing Organizational Culture

Although *organizational culture* is as slippery a term as the word *culture*, over the last generation scholars have generally agreed that a set number of ideas might be investigated when one wants to understand an organization's culture (Table 3.1). That is, just as traditional anthropologists will enter the field with an understanding of key cultural terms such as kinship or ritual, so too will students of organizational culture also have a basic understanding of cultural terms that pertain to an organization.

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Table 3.1 A framework of organizational culture

Mission
Environment
Leadership
Strategy
Information
Socialization

Organizational *mission* refers to how the institution's participants define the overarching ideology of the university. The mission of an organization is an interpretive act that provides meaning, direction and purpose. In part, an organization's mission is defined by the history of the institution. Further, to speak of any social institution is to speak of an organization that exists in an *environment*. As with the idea of organizational mission, however, how an institution's participants define the environment gets worked out within a cultural framework. That is, from a cultural perspective, the world is socially constructed and how concepts such as environment get defined is not so much a given fact but rather is something constantly considered, redefined, and reinterpreted (Tierney, 1994).

Leadership is also a cultural construct that demands investigation when studying colleges and universities. Leaders enact scripts through an interpretive lens that enables them to act and communicate in one way in one organization and another in a different organization. Indeed, who the leaders are, and whether the organization permits only formal leaders or relies on informal leaders is contingent on culture. Similarly, the manners in which the organization defines *strategy* and *information* are not fixed definitions irrespective of organizational type, but instead revolve around cultural interpretations of what the actors have come to expect about "how we do things around here." People come to believe in their institution by the ways they interact and communicate with one another. Cultural norms surrounding such key issues as how decisions get made by whom, who is privy to information, and how information gets conveyed plays a key role in facilitating or impeding organizational change. Finally, *socialization* helps actors determine what is important to the organization. Indeed, how individuals learn about the organization and what they learn by whom are key signals for newcomers about what the organization values and how they should act.

From a policy-related perspective the advocacy of thinking about organizational culture can be maddeningly obscure. Insofar as a cultural framework assumes that organizational life is interpretive, no one key model fits all organizations. Thus, an effective mission in one institution will not be in another; the successful socialization of individuals in one university may be an abysmal failure in another, and so on. Nevertheless, the worth of such a framework is that it enables an analysis of the interconnections that exist in organizational life and encourages participants and scholars alike to investigate ways to strengthen culture and highlights how the ignorance of culture can stymie innovation. Curiously, one aspect that has been ignored in studies of organizational culture is the idea of trust. As I elaborate, trust

is a concept imbued with interpretive aspects contingent upon the organization's culture and it plays a key role in enabling or blocking institutional change.

3.2 Trust and Culture

Trust is a nebulous idea that nevertheless has long-standing currency in Western thought. Philosophers have debated its meaning, and common usages often equate it with a moral good or positive asset. A statement like "he inspires trust" implies strength, just as "he isn't trustworthy" appears as a weakness. And yet, one surely does not want to trust a tyrant, even though it is possible to trust that the tyrant will act in a predictable manner. The possibility that the citizenry might trust someone to act in a particular way does not mean that the person's actions are either morally worthy, on the one hand, or reprehensible, on the other.

In the last decade, students of organizational behavior have developed a theoretical interest in trust, motivated in part by a desire to understand how to bring about cooperative behavior (Kramer & Tyler, 1996). Lack of trust, or distrust, generates one set of conditions for civic engagement. Trust and trustworthiness generate another. What are the conditions for change when trust exists? How does trust come about? Who is able to engender trust? Scholars have asked such questions in order to consider how to improve organizational effectiveness. Whereas some have pointed out how power, authority, or contractual arrangements might bring about desired goals, others have asked what part trust plays in sustaining cooperation and, in turn, enhancing organizational effectiveness (Gambetta, 1988; Luhmann, 1988; Tyler & Degoey, 1995).

One working assumption is that people's social motivations play a central role in defining how individuals work together, which in turn impacts the quality of what they produce. From this perspective, trust exists in a productive work environment characterized by complex technologies. Such a premise is particularly important for organizations that need to undergo significant changes. When the status quo is no longer viable and change is imperative, then risk taking will be necessary. Thus, the question turns on what role trust plays (both directly and indirectly) in enabling risk-taking behavior.

Although the concept of organizational trust is related in various ways to interpersonal trust, I concentrate here on the conditions for creating trust in an academic organization. In the end psychological or normative accounts of how an individual creates trust in his or her life differ considerably from an organization's constituents' ability to create the conditions for trust. Simply stated, one cannot personify a social construction; i.e., an organization. The individual relationship two parties build with one another differs from the relationships individuals have with their organization. At the same time, individuals create relationships with one another in an organization, and individuals develop attitudes towards the organization based on the myriad of personal relationships that occur in that context over time.

Societal trust and trust in government are also related to organizational trust but again the two entities – society and organizations – are ultimately not analogous.

A citizen's trust in government is more a belief in an ambiguous idea than a construct that gets defined by ongoing social relations. To be sure, the "consent of the governed" must be attained for a democratic society to function, but such consent is different from the individual relations and networks that occur within an organization. Russell Hardin (2002) usefully points out that what one needs in a democracy is less a concern for the citizenry to trust in government than for individuals to find its government trustworthy. Trustworthiness in this case is less a matter of the parameters of belief by one party than a measure of the other party's ability to enact what was implied. Trust in organizations is relational; it is neither an abstraction nor entirely circumstantial. Although some may argue that trust may be "impersonal" (Brennan, 1998) and hence citizens trust in democratic structural arrangements, my focus here is more on creating the conditions for personal trust within organizations.

3.2.1 Trust within a Rational Choice Framework

A great deal of research on trust has utilized a rational choice perspective. The unit of analysis is the individual who exists within a social structure. Rational choice theorists assert that trust is an individual's subjective assumption about what is going to happen (Hardin, 1993; Morse, 1999; Dunn, 1988). The trusted have incentives to fulfill the trust, and the trusters have information and knowledge that enables them to trust. Thus, by way of a series of complex rational expectations, individuals come to trust others.

James Coleman (1990), a leading proponent of rational choice theory, has pointed out the commonsensical idea that "social interdependence and systemic functioning arise from the fact that actors have interests in events that are fully or partially under the control of others" (p. 300). Continuing from this observation, he argues that the actors are necessarily engaged in an exchange relationship that encourages trust to develop because it is in the interest of both parties. While his assessment of the nature of social relations goes well beyond the idea that society consists of a set of individuals who act independently from one another, Coleman and other rational choice theorists (Putnam, 1995) assume that conditions for trusting relationships can be replicated, irrespective of the context and the individual.

Trust is a two-party relationship in which an individual commits to an exchange before knowing whether the other individual will reciprocate. The focus of the exchange occurs within a structure of relationships where the motives for trust are instrumental. The researcher investigates the incentives involved in getting the trusted to do what is obligated, and the knowledge needed by the truster to trust. Social obligations, expectations, norms, and sanctions are primary arrangements used to build trust. When trust is absent, or does not develop, it is primarily because of the pathologies of the individuals involved in the interactions. When trust exists it is because the individuals have utilized the structures in a manner that fosters trusting relationships.

A certain logical circularity exists with the rational choice approach, presumably justifying rather than explaining the existing social order. The wealthy have trusting relationships, which enable them to send their children to good schools, where the children in turn have trusting relationships that enable them to study hard and get into good colleges, where they will develop more trusting relationships and get good jobs and so on. The poor do not have such relationships. In this light, rational choice is more an explanation of the status quo rather than an examination of organizational or societal power, structures and functions. Nevertheless, the rational choice framework has led to useful analyses. Rational choice theorists were reacting against an overly individualistic or psychological view of life. Although I disagree with the idea that for trust to exist individuals need to subjugate their views within existing social structures, a focus on structure is useful in moving one's thinking away from a strictly psychological notion of trust. Rational choice usefully points out that there are certain structures in which individuals are embedded. How those structures function is critical to understanding trust and numerous other phenomena such as how change occurs. Proponents of rational choice are often criticized because of their static view of the world, in which structures exist preformed and determined. If such an interpretation is correct, one then needs to consider how individuals are able to shape the structures in which they reside, or if they are simply passive observers who react to societal forces.

The concern with rational choice when one thinks of colleges or universities pertains as much to ideological notions of the world as to an individual's ability to create change in his or her life and work within an organization. That is, rational choice theorists hold an implicit assumption that a structure exists, but an explicit analysis that an overriding ideological view of the world is framed within that structure is absent. One understands how different phenomena function by analyzing the social networks of individuals within these structures. Those who are unsuccessful can change by altering their view of the world and trying to fit within the overarching structure. A view of school failure, for example, will focus more on how to fix the student, given that the structure is not seen to be the problem. Thus, one investigates the networks in which a family is embedded and how those networks might be changed in order to improve the lives of the children. Structures from this perspective are neutral and not powerful forces that reinforce ideological hegemony. Trust comes about when individuals hold views of the world that are in sync with the structures in which they reside.

3.3 Trust within a Cultural Framework

An alternative view is to conceive of organizations as social structures that individuals construct and reconstruct in a manner akin to the terms outlined above – mission, environment and the like. A cultural view of the organization forces an analysis not only of structures but also of the social contexts and histories in which these structures are embedded. Trust gets contextualized and understood not only from

an individualistic standpoint but also from a vantage point that seeks to interpret how actors define the individual and how that individual acts/reacts within the organization (Seligman, 1997). From this perspective one seeks to understand the social bonds and shared identities that enable trust to occur. The focus is on the internal dynamics within the organization as well as on the social forces that help shape the organization. Feelings of a shared identity and interpersonal connections need not be shaped to an impersonal and impervious structure, but instead have broad leeway for interpretation and reinterpretation, as individuals enter and exit the organization, relating to it differently over time.

In this framework, rather than pawns within a rigid structure, individuals become social decision-makers. Whereas a rational choice framework seeks to understand how individuals might align themselves to the structure, a cultural view enables the researcher to see the organization in much more fluid terms. Organizations simply do not bend one way or another but have ideological parameters framed in part by the larger social structure. Higher education, for example, is not simply an avenue for upward mobility for whoever desires it, but a filter that promotes some and excludes others. Testing is not only a process that enables reviewers to know who knows what about a particular subject; it also maintains the social order for those who have access to what Bourdieu defined as "cultural capital." The challenge for the researcher, then, is not figuring out how to align individuals with predetermined social structures, but instead figuring out how relationships that build commonalities across differences might be developed, promoting agency within individuals.

In order to elaborate on how trust operates within a cultural framework I turn now to three key components that help frame how trust becomes understood in an organization. The first component pertains to how an organization's members come to hold *shared experiences*. How a culture's participants make meaning is an important part of whether trust is pervasive, fleeting, or absent. The second component addresses how one *learns* about shared experiences. The socializing experiences of new members as well as the reiterated interactions and experiences that individuals have with one another lead to the kinds of epiphenomenal interpretations of organizational life that enable trust to occur. And third, a cultural view suggests that concepts such as trust are *conditional*; they are never taken for granted or assumed, but when one enters an organization certain conditions exist that need to be taken into account in order for trust to occur. Larger sociocultural events in which the organization is embedded, as well as the historical legacy of the organization and its actors, help frame how trust is built, maintained, or destroyed.

3.3.1 Trust as Shared Experience

Trust does not come about without a framework and language for common understanding. As Russell Hardin (2002) notes, "When I trust you in the sense that your interests encapsulate mine in at least the matter with respect to which I trust you, we can, naturally, be said to share interests to some extent" (p. 144). One way to

share interests is by common interpretation. Two parties view events similarly when they have a mutual interest in attaining the same goal, and see the path to that goal in a similar manner. Trust occurs when both parties share interests such that what is good for one party is also good for the other. Such a view is context specific; one party trusts the other on a specific issue, but both parties may not have developed a generalized trust (Table 3.2).

Common interpretations, however, can never be assumed. Individuals arrive to an organization with their own unique histories and ways of viewing events. For example, if a college president concludes that his or her institution is in fiscal jeopardy, it does not mean that the faculty will come to the same conclusion. A rational choice perspective, however, assumes otherwise, arguing that when two people are faced with a choice and share the same information and the same values, they must rationally make the same decision.

Proponents of a cultural framework disagree. A cultural view acknowledges that perfect information is impossible and that a multitude of viewpoints exist about a particular issue (Tierney, 1988). The challenge for the organizational leader turns less on collecting and disseminating perfect data so that everyone will view the information in a similar manner and more on how to build an organizational culture that incorporates multiple viewpoints and calls upon cultural symbols, rituals and communicative processes to highlight organizational goals and overriding ideologies. From this perspective, trust develops through the ability of individuals to communicate cultural meanings rather than rational facts.

A second way for trust to develop is, on the surface, a beneficent view in which one party adopts another's interests with an overt sense of obligation. Rather than being context-specific, this form of trust transcends a specific event, occurring instead through assumptions about the nature of the relationship. Even though one party may enter into such an agreement without a reciprocal commitment on the specific issue, the larger assumption is that both parties are bound together over time through a sense of mutual purpose. As Kramer, Brewer, and Hanna (1996) have written, "the logic of reciprocity-based trust is simple; 'I will engage in trust behavior because I believe you are likely to do the same' " (p. 373). The assumption of reciprocity and trust is rooted in a sociological and anthropological tradition. Marcel Mauss (1967), for example, wrote in his classic essay about gift giving that the giver always gave a gift with a sense that eventually some form of reciprocity and social exchange would occur. Obviously, when a person gives a gift to an individual on her birthday, for example, the giver does not expect something similar in return. However, a belief system is built up such that individuals understand obligations to

Table 3.2 Characteristics of trust as shared experience

Offers a common interpretation of events
Fosters shared interests in the organization
Allows for the communication of cultural facts
Emerges from reciprocity and mutuality based in structures and beliefs
Cannot be summarized as rational

others. This point is useful because it highlights the social interactions involved in trust; trust is neither simply a cognitive response of one individual nor a structural response of two individuals who are acting in a rational manner.

On an organizational level this form of trust also occurs through shared meaning of the culture. If the aforementioned college president concludes that a fiscal crisis is on the horizon, individuals will trust him or her not through rational persuasion but through a culture of reciprocal obligations. When individuals and groups are involved in reciprocity-based trust, multiple factors come into play. Such a relationship occurs over time within the context of specific situations. Simply because an individual claims a crisis exists does not mean everyone will agree. The individual claiming a crisis has to have built up a relationship over time so that the organization's participants are willing to believe him or her. Conceivably, a new leader may have more trust if he/she was elected rather than appointed; another leader may enter an institution with trust "credits" earned elsewhere. The individual also needs to have some claim to competence. The president may be believed if the crisis pertains to the college's finances. However, if the president states that a crisis is going to be caused by an impending natural catastrophe that will destroy the institution's buildings, then presumably the organization's participants will be less likely to trust in his or her prediction.

The adult learns to trust as a means of cooperation. Russell Hardin (2002) speaks of "encapsulated trust". Individuals trust one another because it is in their mutual interest to take each other's involvement in the same matter seriously. Such a view incorporates parts of a rational view, but ultimately, is inherently subjective. That is, encapsulated trust assumes individuals make rational choices about trust, and in part, those choices are framed by the psychological backgrounds of the parties. However, the focus of encapsulated trust is not only on future expectations of what will occur, but also on past interactions and interpretations. In an organization, encapsulated trust takes place when an individual enters into a trusting relationship because of his or her particular view of the organizational world, a view framed in part by the culture of the organization. The mores of the organization, the symbolic and communicative processes that exist as well as a host of cultural artifacts, enter into how cooperation is likely to occur.

Although there are plenty of stories of office rivalries, demagogic managers and petty intrigue, a significant body of research highlights the importance of cooperation in organizations. This line of research views individuals as decision-makers and active agents who are likely to perform better in an environment that exists through reciprocal obligations rather than individualized desires and wants. The research moves, then, from atomistic analyses that center on an individual's rational choices within predetermined structures, and toward an understanding of how social connections within an organization are developed, maintained, and enhanced. Other than highly contractual arrangements where all parties are clear about how each is to respond to different situations, what kind of relationships might engender trust?

Increasingly researchers have found that successful organizations need not rely on hierarchical control and legalistic mechanisms for their day-to-day existence. Instead, organizations with cultures of lateral alliances and cooperative behaviors

have been found to be effective and high performing. To be sure, hierarchical commands or someone's political machinations may produce one or another result, but high performance organizations reproduce a system for effectiveness over time rather than periodically. Such an observation points out a key precept for the conditions of trust; i.e., trust occurs over time with a set number of people.

Academic organizations exemplify the kind of cultural entities where trust has the potential to flourish. A great many people stay in the academy for a significant length of time, and they generally interact with one another because they desire to rather than because of a command. Long-term working relationships are most successful when they embody encapsulated trust. The social context of the college or university has relied more on a sense of collegiality than a legalistic contract. In this light, trust is an orientation toward the organization and toward one another that cannot be precisely or neatly summarized as "rational." One has faith that because one works in the organization, and because the participants in the organization have a particular history with one another, the organization will respond in ways that reinforce trust.

One of the curious aspects of colleges and universities is that, on the one hand, they are organizations with highly autonomous workers – the faculty. And yet, on the other hand these autonomous workers assume a great deal of voluntary work in their organizational and professional lives, a fact that further binds them together. In effect, academic organizations utilize a human resource model that assumes workers will be creative and inner-directed, and the workers in turn assume that they have obligations to one another and the organization. The challenge for the leaders, then, is to create and maintain an organizational culture where the conditions for trust flourish.

3.4 Trust as Learned Experience

One can neither command nor coerce an individual to trust. Although an individual may do what a superior wants because the latter has power over or has coerced the individual, trust will not be part of the interaction (Luhmann, 1980). A professor may demand certain behaviors from students because of the role that each inhabits. Similarly, if individuals in an organization constantly receive messages that command them to act in one way or another they may do what they are told. But trust has nothing to do with these interactions. For there to be a trusting relationship it is necessary to believe that the relationship one has with the other individual is useful; the truster must also have confidence in the other individual. While an element of risk is always involved because one can never be certain that the trusted party will do what is expected, the interactions always occur within the ongoing social contexts of the organizational actors. Trust is learned (Table 3.3).

At the most elemental level, an infant learns to trust a parent. The infant is helpless and hopefully learns through repeated actions to trust the parent. When an infant cries and the parent picks him or her up, this is not solely a functional act. The

Table 3.3 Trust as learned experience

Influenced by an individual's background
Affected by cultural contexts
Guided by socializing mechanisms that induct individuals into the culture

infant learns that he or she matters to the parent. The parent is trustworthy. To be sure, there are numerous examples in which an infant does not learn such a lesson, and some will suggest that trust is instead "imprinted" on an infant. But from a cultural perspective, the infant–parent connection is perhaps the clearest example of trust as learned experience.

The infant example is useful in a discussion about organizational trust in two respects. First, one need not be a psychoanalyst to recognize that some individuals will come to a situation with an ability or inability to trust that has less to do with the particular situation or organization than with the individual's background and history. The manner and contexts in which an individual was raised surely provided environments for learning about trust. A secure familial structure would have taught one lesson and an insecure structure another. If trust exists by way of learned experiences then the kind of interactions that one has as a child are crucial. Although one may change his or her perspective over time as new experiences occur, a high capacity for trust is based in part on personal history.

Trust is enwrapped in cultural contexts. The way different parents and different villages or towns treat their children vary greatly. One point that has been learned pertaining to cultural minorities and schooling, for example, is that different groups view their children's schools in significantly different ways. The same holds true for class. Mainstream middle and upper class families frequently think of school as a place where their child will learn the information necessary to prepare them for college. Interactions with the school are usually frequent and anxiety-free. Low-income minority families, however, frequently see school as an alien environment where their children are taught to reject their culture, and hence, their families. When minority family members are called to school it is frequently because their child is in trouble. Language differences often keep parents away from school; their only interaction with the school, then, is when their son or daughter has gotten in trouble. Thus, when a teacher offers a lesson that involves some form of risk, different individuals will interpret those lessons differently—not because one is rational and the other is not, but because each individual's cultural background has framed the issues in different ways, forcing different interpretations.

At the organizational level, the assumption that trust is learned behavior suggests that of necessity one investigate the socializing mechanisms and processes that induct the individual into the culture. Academic life is imbued with socializing experiences. Initiates learn a great deal about academe as soon as, if not before, they become recruits; i.e., in graduate school. Institutional pecking orders, the importance of research, how one works with one's colleagues, what is and is not important, are all lessons that individuals learn en route to the PhD. Although these lessons are frequently implicit, rather than explicit, one should not overlook their symbolic importance. Similarly, when one arrives on campus as a new assistant

professor the array of experiences that occur make an inevitable imprint about the organizational culture. How an individual achieves tenure, what one has to do to achieve it, and the inevitable aspects surrounding departmental politics all teach lessons to the initiate.

Because individuals will interpret events differently my point here is not to suggest that socialization is a lockstep process that moves individuals through academic life as if they are on a production line in a factory. Indeed, one's past experiences as well as the different ways that organizations treat individuals both lead to differential interpretations. A new assistant professor whose parents were faculty will arrive at the institution with a different set of assumptions than someone who is the first in the family to attend college. In an engineering department the same kind of tenure process may be assumed for everyone, but that process may be experienced differently depending on one's gender. A woman who is the only female in the department may have very different interpretations about what one needs to do to achieve tenure, compared with a man, who might not feel at all out of place.

Thus, an individual's experiences and an organization's socializing processes both have a significant impact on what one learns about trust. The culture of the organization provides a variety of symbolic processes that teach individuals about trust. An individual receives one message when at the start of the school year a college president says that teaching is important, for example, and another message when a colleague is denied tenure because of a lack of research. By contrast, consider a university in which the message from the provost is that individuals should take intellectual risks, and the faculty are frequently rewarded when they take such risks. In the former example individuals learn not to trust what the president says, and in the latter they learn to trust what emanates from the provost. Learning is rarely a singular event, but is rather ongoing and multidimensional.

3.5 Trust as Conditional

Organizational trust, as distinct from individualized and abstract trust, is not only shared by constituents but is also conditional (Table 3.4). Individualized trust is based on a one-to-one correspondence between truster and trustee. Abstract trust in one's government or church has more to do with confidence and belief than trust. One comes to have confidence, for example, that the abstract system of "democracy" will perform in a manner to which one has become accustomed. Organizational trust is not only constituted by the participants' shared beliefs about the culture; it is also conditioned by assumptions about social and moral obligations within the organization. One arrives at an organization with a set of role expectations. While

Table 3.4 Trust as conditional experience

Influenced by assumptions about social and moral obligation to the organization
Influenced by the temporal context
Affected by the competence of the trusted

individuals may change these expectations in one way or another, it is important to acknowledge that the conditions for trust also exist prior to an individual's entry into the organization.

If trust is a social construction within an organization, then of necessity the researcher searches out the variety of conditions that individuals inherit, change and create to enable trust to occur. From this perspective, trust is neither a preordained quality nor simply a psychological facet of the human mind. Further, trust is neither a unitary act nor pervasive and unchanging. Trust occurs over time, and the creation of a trusting relationship is highly contingent on the social and cultural contexts in which individuals are embedded.

Such an argument rejects the notion that if adequate information is supplied to an individual then he or she will be able to find another person, or an organization, trustworthy. An adequate explanation of trust hinges not exclusively on facts and information, but on the organizational conditions that lead to trust being accepted or thwarted. Trust can be episodic, long-standing, or nonexistent depending upon the conditions at work over time within the organization's culture. An organization that has a culture of trust may, for example, have that trust destroyed in a relatively short time by a new president who betrays the culture. Conversely, a new president who arrives at a university that has been without a trusting culture will need to develop certain conditions before trust can occur. What are those conditions?

Three conditions already have been inferred. First, trust occurs over time. Second, trust depends on the competence of the trusted. Trust cannot occur if the trusted has no claim to do what he or she says will be done. Third, trust can neither be coerced nor commanded. Trust depends upon overlapping and ongoing relationships that exist within social and cultural contexts. Such relationships generate a great deal of knowledge that individuals call upon to determine whether someone else is trustworthy. Further, personal characteristics like race, gender, sexual orientation and the like not only impact how an individual views trust, but also how he or she comes to think about trustworthiness.

Bernard Williams (1988) defines trust as a function of thick relationships. By "thick relationships" Williams means that individuals have a rich history with one another, a history that informs decisions about whether or not to trust. Although trust may occur with "thin" relationships in a political or societal context, I am in agreement with Williams that individual and organizational trust occurs through multiple and overlapping conditions. Face-to-face interactions; communicative frameworks; and organizational processes, structures and actions help individuals decide whether the conditions for trust exist.

To be sure, different kinds of conditions influence the nature of the relationships and interactions. How one comes to trust one's partner in a loving relationship, for example, is related but different from how trust exists within an academic department. Further, it may be possible to have a campus with a high level of trust within groups, but a low level of trust between groups. The individuals in an academic department may trust one another, for example, but the same individuals and department may not trust their dean. The challenge for someone who wants to develop trusting relationships across the organization is try to make sense of the various conditions

that can potentially allow for thick relationships to be built. Hardin (1993) nicely summarizes here by saying, “If we wish to understand trust for real people, what we will have to understand are the capacities for commitment and trust, which must largely be learned” (p. 508). These conditions are not only learned; they are also shared, highly contingent, and constructed.

3.6 Discussion

I have purposefully confined this discussion to interactions that take place within organizations. Trust is invariably quite different depending on the level of analysis. As I have noted, organizational trust may resemble the trust an infant places in his or her parent, or a citizen places in his or her government, but in the end the former is decidedly different. Trust in organizations involves an analysis of individual and group interactions as well as an understanding of the ties that bind people to one another. From this perspective trust is not an atomized gesture between one social actor and another, but instead is embedded in a network of social relations created within the organization’s culture.

Trust is particularly important in organizations where risk-taking needs to occur and where task requirements are not clearly delineated (Creed & Miles, 1996; Luhmann, 1988; Meyerson, Weick & Kramer, 1996). An organization that does not need to innovate or succeeds by adherence to the status quo may not depend as much on an environment of trust insofar as expectations and outputs are clear and defined. Legalistic mechanisms or contract-like arrangements also might substitute for trust in organizations where an individual’s work requirements are clearly delineated and can be articulated into codified tasks. Ultimately, any organization’s goal will be first to define and then to accomplish the goals the participants have set for themselves. A key characteristic of effectiveness, of course, is to secure compliance from the organization’s actors to accomplish what has been set. Although compliance may occur in any number of ways – threat, coercion, incentives, or contractual arrangements, to name a few – organizations that operate in dynamic environments where risk is involved and participation is not mandatory are more likely to need to call upon trusting relationships. Voluntary involvement in an organization calls upon a different form of engagement than a hierarchical organization where participants follow orders and undertake routinized tasks.

Colleges and universities in the twenty-first century are in highly unstable environments that necessitate risk-taking behavior. Academic organizations have tried to institute more managerial and hierarchical mechanisms in response to the turbulent external environment (Rhoades, 1998). However, colleges and universities continue to use decentralized decision-making processes, in which power is diffuse and shared. The result is that the participants in colleges and universities will face change not through a hierarchical chain of command but by way of a system that necessitates collaboration and cooperation. A level of trust is critical if individuals are going to take risks and participate in shared decision-making. A culture of

obligation and cooperation is fundamental. Bureaucratic structures that try to outline and constrict individual behaviors are not useful, but trust also does not naturally develop in an organization simply because a leader sees its utility. Instead, trust needs to be nurtured over time. The manner in which trust manifests itself will be highly contingent on the culture of the organization.

As noted at the outset, my goal here has not been to provide a tested model of trust and trustworthiness that might be utilized in the decision-making analysis of the many problems that institutions confront. Instead, I have sketched the lineaments of trust and suggested that trust is a cultural construct that helps individuals interpret reality and shapes their visions not only of how to respond, but of what type of response they will develop. Again, I am not suggesting that trust is a generic virtue that individuals or organizations hold, as if some institutions are virtuous and others are not. However, I am arguing that a culture where trust is embedded in the organization's fabric is likely to be better prepared for dealing with the myriad problems that exist on the horizon than those institutions that reach for bureaucratic and hierarchical solutions.

References

Brennan, G. (1998). Democratic trust: A rational-choice view. In Braithwaite, V. and Levi, M. (eds.) *Trust and governance*, New York: Russell Sage Foundation., pp. 197–217.

Coleman, J. (1990). *Foundations of social theory*. Cambridge, MA: Belknap Press.

Creed, W.E. and Miles, R.E. (1996). Trust in organizations: A conceptual framework linking organizational forms, managerial philosophies, and the opportunity costs of control. In Kramer, R.M. and Tyler, T.R. (eds.) *Trust in organizations: Frontiers of theory and research*, Thousand Oaks, CA: Sage Publications., pp. 16–38.

Dunn, J. (1988). Trust and political agency. In Gambetta, D. (ed.) *Making and breaking cooperative relations*, New York: Basil Blackwell, pp. 73–93.

Gambetta, D. (1988). Can we trust? In Gambetta, D. (ed.) *Trust: Making and breaking cooperative relations*, New York: Basil Blackwell, pp. 213–237.

Hardin, R. (1993). The street-level epistemology of trust. *Politics of Society*, *21*, 505–529.

Hardin, R. (2002). *Trust and trustworthiness*, New York: Russell Sage Foundation.

Kramer, R.M., Brewer, M.B., and Hanna, B.A. (1996). Collective trust and collective action: The decision to trust as a social decision. In Kramer, R.M. and Tyler, T.R. (eds.) *Trust in organizations: Frontiers of theory and research*, Thousand Oaks, CA: Sage Publications, pp. 357–389.

Kramer, R.M. and Tyler, T.R. (eds). (1996). *Trust and organizations: Frontiers of theory and research*, Thousand Oaks, CA: Sage Publications.

Luhmann, N. (1980). *Trust: A mechanism for the reduction of social complexities in trust and power*, New York: Wiley.

Luhmann, N. (1988). Familiarity, confidence and trust: Problems and alternatives. In Gambetta, D. (ed.) *Trust: Making and breaking cooperative relations*, New York: Basil Blackwell, pp. 94–108.

Mauss, M. (1967). *The gift: Forms and functions of exchange in archaic societies*, Norton, New York.

Meyerson, D., Weick, K.E., and Kramer, R.M. (1996). Swift trust and temporary groups. In Kramer, R.M. and Tyler, T.R. (eds.) *Trust in organizations: Frontiers of theory and research*, Thousand Oaks, CA: Sage Publications, pp. 166–195.

Morse, J.R. (1999). No flames, no freedom: Human flourishing in a free society. *Social Psychology and Policy*, *12*, 290–314.

Putnam, R.D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, *6*(1), 65–78.
Rhoades, G. (1998). *Managed professionals: Unionized faculty and restructuring academic labor*, Albany, NY: State University of New York Press.
Seligman, A.B. (1997). *The problem of trust*, Princeton, NJ: Princeton University Press.
Tierney, W.G. (1988). Organizational culture in higher education: Defining the essentials. *Journal of Higher Education*, *59*(1), 2–21.
Tierney, W.G. (1994). Organizational culture and interpretive strategy: Implications for Latin American Higher Education. *Revista IGLU*, (6), April, 85–100.
Tyler, T.R. and Degoey, P. (1995). *Collective restraint in a social dilemma situation: the influence of procedural justice and community identification on the empowerment and legitimation of authority*. Unpublished manuscript, University of California at Berkeley.
Valimaa, J. (1998). Culture and identity in higher education. *Higher Education*, *36*(2), 119–138.
Williams, B. (1988). Formal structures and social reality. In Gambetta, D., (ed.) *Trust: Making and breaking cooperative relations*, New York: Basil Blackwell.

Chapter 4
Building or Eroding Intellectual Capital? Student Consumerism as a Cultural Force in the Context of Knowledge Economy

Rajani Naidoo

4.1 Introduction

Public rationales for a wide variety of government interventions in higher education have been linked to the integration of national economies and other political and cultural changes associated with globalisation and the emergence of the knowledge-driven economy. This new economy signals a trend away from material production and manual work in developed countries. Instead, the state's ability to compete successfully in the global context is now seen to rely on the production of higher value-added products and services, which are in turn dependent on knowledge, especially scientific and technological knowledge, and on continuos innovation (see for example, Castells 2001). Notwithstanding the cautionary caveats raised in relation to the direct links made by policy makers between the upgrading of skills and economic prosperity, intellectual capital continues to be portrayed in government policy as one of the most important determiners of economic success and as a crucial resource in the scramble for global profits. In this context of knowledge-driven capitalism, higher education has been positioned as a major and indispensable contributor to the transition to a high skills economy and one of the main institutional sites for the production, dissemination and transfer of knowledge, innovation and technology. The perceived relationship between higher education and national economic advantage has led to increased government attempts to develop policy frameworks to regulate and harness higher education more directly to national skills formation strategies.

Policy advisors around the world have argued that higher levels of skill within the workforce are a basic prerequisite for economic activity in the developed world to shift from the old Fordist and Taylorist paradigms into a new high skills mode of working. Skill formation strategies have therefore focussed on lifting the entire national skills base rather than limiting the opportunity for high level education and training to a small elite cadre of workers. There has therefore been significant pressure on national higher education systems to move from elite to mass institutions.

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Universities are expected to develop policies and strategies to increase the total proportion of the population entering higher education as well as to encourage the participation of members of social groups previously excluded from higher education.

There are also a range of arguments which state that current economic conditions require a change in the nature of skills and its relationship to productivity. The argument is that the emphasis on value-added production through innovation and changes in technology require a configuration of skills that is at a substantially higher level and of a more generic kind than the technical competences required to perform specific occupational roles (Brown et al. 2001). Generic, transferable and interpersonal skills as well as the intellectual and attitudinal skills related to lifelong learning are seen to be essential in meeting the requirements of dynamic markets. Higher education is expected to train the new 'knowledge workers' with the technical, personal, social and managerial skills to take their place in the knowledge economy and contribute to the Governments 'high skills' post-industrial strategy (Gibbons et al. 1994).

This chapter seeks to understand the likely impact of the implementation of funding and governance regimes based on models of consumption on the high skills agendas currently embraced by a wide range of governments. It focuses in particular on the transformation of students into consumers and draws in particular on the national contexts of the United Kingdom and Australia. While proponents of the marketisation of higher education argue that such mechanisms merely enhance the functioning of higher education, this chapter will show how new forms of organisational culture involving new modes of rationality and value systems are promoted. The argument of the chapter is that these developments have the potential to change, fundamentally, the culture and thereby the terms, on which teaching and learning take place in higher education.

I will begin by situating consumerism within the context of the introduction of neo-liberal market and new managerialist principles to higher education. The paper will then draw on the theoretical framework of Pierre Bourdieu to develop an understanding of the cultural shift that occurs with the implementation of frameworks related to commodification. Finally, the likely impact on some of the key constituent elements of higher education including the professional identities of academics, curriculum and teaching and the nature and outcomes of student learning are explored in relation to the expectations of the knowledge economy.

4.2 The Disappearing Social Compact

Consumerism may be seen to be part of a broader policy shift away from the Keynesian welfare state settlement towards a new settlement based on neo-liberalism which introduced mechanisms of the market and new managerialism into higher

education. The international literature on the restructuring of higher education reveals that there is a global trend away from the ideologies, funding and governance arrangements which were based on the 'social compact' that evolved between higher education, the state and society over the last century (Slaughter and Leslie 1997; Marginson and Considine 2000; Nowotny et al. 2001). The perceptions of higher education as an industry for enhancing national competitiveness and as a lucrative service that can be sold in the global marketplace has begun to eclipse the social and cultural objectives of higher education generally encompassed in the conception of higher education as a 'public good'. Gumport (2000) in the context of the United States of America, for example, has developed theoretical and empirical approaches to argue that in the last decades the dominant legitimating motif has shifted from the idea of higher education as a social institution to higher education as an industry. Marginson, too has suggested that one of the main feature of change is a preoccupation with economic objectives, so that education 'becomes a branch of economic policy rather than a mix of social, economic and cultural policy' (Marginson 1995, p. 56). In related vein, the belief that universities require a relative independence from political and corporate influence to function optimally, which was in turn linked to the need for guaranteed state funding and professional autonomy, has been eroded. These developments, together with more general retractions away from frameworks based on Keynesian welfare state settlements, have resulted in the implementation of new funding and regulatory frameworks based on neo-liberal market mechanisms and new managerialist principles (Dill 1997; Williams 1997; Deem 1998). Such frameworks are based on the assumption that the contemporary higher education system has become too large and complex for the state to sustain its position as sole regulator and funder, that market competition within and between universities will create more efficient and effective institutions and that management principles derived from the private sector which monitor, measure, compare and judge professional activities will enhance higher education functioning. This increase in the scrutiny, measurement and assessment of higher education is evident in the USA (Gumport 2000) as well as in Europe (Neave and van Vught 1991; Dill and Sporn 1995). In this context, the student-consumer emerges as the focus of competition and a modernising force that will bring about increased efficiency, diversity and flexibility to the higher education sector. Consumerism can also be seen to be related to new managerialism through the deployment of performance indicators and league tables which strengthen the hand of consumers by providing information to aid choice. These mechanisms can also provide students with the means to evaluate teaching and learning. The outcomes of such measures, when made public, are highly influential since they result in both symbolic and material rewards and sanctions. Rather than merely stipulating new procedures to enhance the functioning of higher education, consumerism may therefore be seen as an attempt to change more traditional cultures in higher education by introducing new modes of rationality and value systems in order to reconfigure higher education as a global service operating mainly on the basis of economic considerations.

4.3 From Academic Capital to Commodification

In this section a conceptual exploration of how student consumerism is likely to lead to changes in organisational culture and impact on teaching and learning is presented. While the significance of culture in organisational life is widely acknowledged, the difficulties of defining the concept of culture and its operation in research has been well documented (see, for example, Välimaa 1998). In general, Pettigrew's early definition of organisational culture as the system of publicly and collectively accepted meanings operating for a given group at a given time (Pettigrew 1979, p. 574) has been widely developed and utilised. Researchers working in higher education have also sought to differentiate higher education from other organisations by noting that academic institutions possess distinctive cultures which are developed and sustained by the actions of community members (Dill 1982), that academic institutions are more complex than other organisations since activities occur at the level of the enterprise, the academic profession and the discipline (Clark 1981 quoted in Dill 1982). In addition Välimaa (1998) has noted the existence of subcultures, for example the culture of students which may be different from the culture of Faculty.

The work of the French social theorist, Pierre Bourdieu, who has attempted to analyse the 'inner' life of universities makes an important contribution to understandings of culture in higher education and the likely impact of consumerism. Although Bourdieu's work has been developed in the context of France, the application of his concepts to other national contexts (see, for example, Tomusk 2000 and Naidoo 2004) indicates the significant contribution his work can make to the study of higher education in general. According to Bourdieu, social formations are structured around a complex ensemble of social fields in which various forms of power circulate. The relative autonomy of fields varies from one period to another, from one field to another and from one national tradition to another (Bourdieu 1988). In much of Bourdieu's research and the work of others drawing on his framework (see, for example, Grenfell and James 1998; Robbins 1993; Delanty 2001), the field of university education is conceptualised as a field with a high degree of autonomy in that it generates its own organisational culture consisting of values and behavioural imperatives which are relatively independent from forces emerging from the economic and political fields. The activities in each field revolve around the acquisition and development of different species of capital, which may be defined as particular resources that are invested with value (Bourdieu 1986). The 'capital' invested with value in the field of higher education is termed 'academic capital' and consists in the first instance of intellectual or cultural, rather than economic or political assets. According to Bourdieu, acts of cognition are implemented to select and consecrate what is classified as 'academic' and therefore what counts as valid criteria for entry and success in higher education. He labels these categories of perception 'academic taxonomies' (Bourdieu 1996, pp. 17–19) and defines them as 'principles of vision and division' that structure academic judgements. The culture underlying practice in the field of higher education is

therefore shaped by deeply ingrained rules, values and professional protocols that revolve around a belief in, the struggle for, and the acquisition of academic capital (Bourdieu 1988, 1996).

A major insight in Bourdieu's work is that even though the location of agents and institutions within the field presupposes a minimum level of agreement around basic principles, the field of higher education is in fact not a product of total consensus but the product of a permanent conflict. Agents and institutions individually or collectively implement strategies in order to improve or defend their positions in relation to other occupants. The importance of this theoretical framework allows Bourdieu to develop what he calls a 'general science of the economy of practices' within which university practices that purport to be 'disinterested' and hence non-competitive, can be analysed as highly competitive practices that are directed towards the maximising of symbolic gain (see, for example, Bourdieu 1988). These struggles cannot be reduced to the logic of economism.

The argument of this chapter is that contemporary policies have led to the erosion of the boundary between higher education and society. In particular, economic forces are beginning to impact more powerfully on universities than in previous decades. In addition, changes in funding policy which require institutions to generate surplus income have led to the undermining of academic capital. The concept 'commodification', which refers to the development of a product or process specifically for exchange on the market rather than for its intrinsic 'use' value, captures the shift from activities aimed at the acquisition of academic capital to activities intended for income generation. Forces for commodification therefore impact on universities by altering the nature of rewards and sanctions operating in higher education. Academic success shifts from being measured according to academic principles to being measured according to narrow criteria relating to income generation such as the number of student customers–captured, the number of courses sold, extent of involvement with commercial interests and the degree of financial surplus created. Clearly, in the past educational credentials have had an exchange-value but, arguably, this has been a by-product of the values, processes and ethos of universities. The 'devalorisation' of academic capital is likely to shift the underlying logic and values shaping academic practices.

Under these conditions, the pedagogic relationship is likely to be transformed. Education is likely to be re-conceptualised as a commercial transaction, the lecturer as the 'commodity producer' and the student as the 'consumer'. In this way, previously integrated relationships between academics and students are likely to become dis-aggregated with each party invested with distinct, if not opposing, interests. In other words, rather than merely stipulating new procedures to enhance the functioning of higher education, consumerist mechanisms may be seen as a device to reform academic culture and pedagogic relationships to comply with market frameworks.

In the next section, I highlight various areas of concern in relation to changes in pedagogic relationships and academic identities, the erosion of trust and risk in teaching and the changing structure of knowledge which are likely to have negative impact on the transition to a high skills society.

4.4 Instrumental Learning

One of the most important consequences of the grafting of a framework derived from the commercial sector onto an institutional sector driven by a different set of values and rewards is that the pedagogic relationship between teacher and learner may be compromised. While there has been little in-depth analysis of consumerism on student learning, the limited findings arising from various national contexts has indicated that the re-conceptualisation of the complex relationship between students and teachers to that of 'service provider' and 'customer' is likely to contain elements that are corrosive.

In relation to students, the North American literature in particular has indicated that a market rationality is likely to overtake other considerations and students are more likely to view the act of learning as a commercial transaction. Students who internalise a consumer identity in effect place themselves outside the intellectual community and perceive themselves as passive consumers of education (Reading 1996). Sacks (1996) points to a growing culture of 'entitlement' through which students perceive educational success as a right. Consistent with this mentality is a loss of responsibility for their learning and a resistance to engaging in education as a process rather than a purchaseable product that is simply appropriated. In addition, more instrumental attitudes are exhibited through increasing demands for short pre-packaged courses (Shumar 1997). Gumport (2000) writing in the context of North America has indicated that the potential richness of learning and teaching relationships between students and their peers and students and faculty including mentoring has been reduced. An extreme version of instrumental learning may be signalled by the growth of plagiarism and rote-learning.These new identities and rationalities assumed by students have the potential to transform learning into a process of picking up, digesting and reproducing what students perceive of as an unconnected series of short, neatly packaged bytes of information. Under these conditions, the student disposition generated may have negative ramifications for the development of higher order skills and more importantly, for the dispositions and attitudes required for autonomous, lifelong learning.

4.5 Trust, Risk and Academic Professionalism

The assumption underlying consumerist mechanisms is that the actions of students as consumers will impact on the professional practices of lecturers in such a way that the process and content of teaching will be improved. High quality will be rewarded and low quality penalised, and consumer choice will foster competition between universities to result in more responsive, flexible, efficient and better quality teaching. However, studies in other public sector organisations have indicated that the grafting of a framework derived from the private sector onto the public sector, which is driven by an organisation culture underlain by different values and relationships, may be problematic. Evers (1996) has indicated that factors such as

the helping and caring roles which are the essence of the work of social services often play a very limited role in the private sector and that this may in turn result in fundamental conflict between the relations that occur in the marketplace and those that prevail in the social services sector. Flynn (1999) in the context of the health service has indicated that the introduction of market based criteria may result in the tendency for 'cream-skimming', in other words, the tendency for providers to select the most valuable or least costly clients. Given the above, the potential undercutting of professional knowledge and virtues by consumer demand and satisfaction in higher education may, perversely, have the effect of undermining some of the essential attributes related to high quality teaching and learning.

The point that has been made by many commentators in rather different ways is that high quality learning requires relations of trust. One of the key requisites of autonomous learners is that they can think through ill-structured problems and use research and scholarship to sharpen the definition of problems in order to address them (Haig 1987; Seltzer and Bentley 1999). Such advanced forms of learning require risk taking on the part of learners because there is no guarantee of success. Learning therefore requires trust, or more precisely an act of faith, by learners that they can address, if not solve problems successfully and that their teachers will act as reliable guides in this process of discovery. Faith, trust and risk taking do not sit easily with the commodification of the learning relationship in which there may be an assumption that qualifications will follow in return for a fee and a specified level of work on behalf of both teachers and taught,.

High quality learning may also depend on institutional relations of trust. However, the contractual model of human relations governed by market incentives and sanctions, itself dependent on a one dimensional low trust view of human nature may erode intrinsic, 'hard to measure' emotional attributes such as commitment to the pedagogic process, enthusiasm for the subject and flexibility in dealing with different needs of students, all of which are essential for high quality learning (see Ball 2003). Indeed, the micro-auditing of professional activities may damage the very activity which it intends to enhance. One of the ways in which this could happen is through organisational resources shifting from what Power (1999) has termed 'first order' to 'second order' functions. In the context of higher education, there are likely to be tensions in the extent to which valuable resources such as time and energy are invested in second order functions, such as documenting and accounting for professional activity, rather than in first order functions such as developing innovative academic programmes and working directly with students. Indeed, the constant threat of student litigation and complaints, together with requirements to comply with extensive external monitoring procedures may encourage academics to opt for 'safe teaching' which is locked into a transmission mode where pre-specified content can be passed on to the student and assessed in a conventional manner.

In addition, performance indicators and league tables, which have become part of the higher education landscape to give students information and choice, may also invoke a particular pathology since they function as powerful market currencies. First, rather than investing in achieving missions, universities invest valuable

resources in attempting to move up rankings. These rankings may become so crucial that universities are put under pressure to 'manage' data, or even in extreme cases to falsify it. Whilst there is little direct evidence of this happening in higher education to date, there is evidence of this happening in comparable public sector organisations like hospitals. In 2002, for example, the Commons Public Account Committee in the United Kingdom reported the manipulation of waiting lists by at least ten hospitals to meet government targets. Such actions included simply removing patients' names from the waiting lists to reduce numbers of offering appointments to patients or booking operations in weeks on which patients were known to be on holiday so as to give them an excuse to suspend them from the list when they could not attend (British Broad Casting News, 18 September 2002, 06.58 Greenwich Mean Time).

4.6 Reorganising Knowledge around Market Criteria

There have been indications from educators in the context of South Africa that close and sustained engagement with a discipline may be crucial in enabling students to master complex conceptual structures and modes of analysis for purposes of knowledge creation (Muller 2001). It has also been argued that this form of disciplinary induction creates both the skills and critical orientation, as well as the relevant dispositions for independent lifelong learning and innovation. However, the learning of this form of disciplinary knowledge is under threat from mechanisms of choice which have introduced modularisation and which have privileged movement across departments, disciplines and institutions. While there are many important arguments for the division and re-ordering of knowledge through modularisation including arguments related to widening participation and the emergence of new knowledge areas, it is an open question as to whether the reordering of knowledge around market mechanisms accords with high quality learning or the discourse surrounding the notion of a knowledge economy. The combination of modules primarily around market incentives may lead to a loss of coherence and induction mechanisms traditionally associated with disciplinary study. Indeed, course development and teaching may become an example of a 'just-in-time' production process, whereby flexibility in response to rapidly changing specifications and consumer expectations is valued above the quality of the process or product. According to Trowler (1998), such a framework facilitates the quantification of student hours while course objectives and teaching methods are shaped to suit management objectives of administratively neat units of knowledge which emphasise form rather than content and privileges. In post-apartheid South Africa, an argument has been advanced that a modular structure, with its lack of coherence and induction mechanisms, as well as its reliance on students' resources to make coherent choices, places students at a grave disadvantage as such learning does not provide students with the conceptual skills relating to extension and innovation (Muller 2000, 2001). In addition, the development of programmes which attract students by linking in a

direct manner to their everyday lives, may also pose particular dangers. Sociologists of education including Young (2003) have warned that such approaches to the curriculum, which erode the distinction between the type of knowledge acquired in universities and experiential knowledge acquired in everyday life, may not have the capacity to enhance students' existing capabilities or induct students into complex intellectual work.

4.7 New Inequalities

In discussing the impact of commodification on inequality, it is crucial to remember that in the period when the modern university was shielded from the direct impact of market forces, it nevertheless played an important role in the reproduction and legitimation of privilege and social position. Bourdieu for example has described higher education as a 'relay' and a 'screen' and has illustrated how the relative autonomy of higher education enabled it to play an important role in social reproduction while at the same time rendering this function invisible (Bourdieu 1996, p. 36) The contribution of higher education to social reproduction also occurs through the hierarchical structuring of the field of higher education. Through acts of subjective and objective selection, a high proportion of students originating from different regions of power in society are selected by the institutions which traditionally supply the very same regions of power. The elite institutions, for example, select those students richest in inherited cultural capital who originate from dominant positions in social space and enable them, upon graduating, to return to dominant positions in social space (Bourdieu 1996, p. 139). The consequence of this is that in each institution the great majority of the student and staff intake originate from the same sector in society (Bourdieu 1996, p. 141), and consequently are endowed with similar dispositions. The structuring of the field of higher education, whilst establishing internal homogeneity in terms of social origin and disposition *within* each institution, establishes stark differences in social origin and therefore disposition *between* the student populations in institutions positioned at different levels of relative hierarchy within the institutional field. In this way, higher education *as a system* contributes to reproducing and legitimating the 'ensemble of distances' that constitute social structure (Bourdieu 1996, p. 141).

Advocates present a vision of the market as a corrective to the elitist and highly unequal nature of higher education discussed above and as a benign deliverer of educational provision. The harnessing of the student as 'autonomous chooser' (Peters and Marshall 1996) is positioned as a pivotal mechanism to improve educational outcomes for all. However, evidence suggests that students and their families have been shaped as particular kinds of subjects who choose in certain general ways. Empirical research conducted in schools for example indicates that students and families who are well resourced are able to reproduce their cultural, economic and social advantage in the hierarchical market of educational institutions (Gewirtz et al. 1995). Research focussing on families and students making higher education

choices has also illustrated stark differences. Pugsy (1998) has indicated that families and students with a heritage of cultural capital possess an understanding of the implicit and explicit rules which accompany the process of choice and can negotiate through these procedures to their advantage. Middle class parents and students are also able to identify the hierarchy of higher education institutions and deconstruct the implications of the structural differentiation in higher education and the likely social, economic and professional consequences (Pugsy 1998; Brown and Scase 1994). In stark contrast, working class families exhibited an inability to engage with the process or to negotiate the implicit and explicit criteria of hierarchy involving institutional choice. The co-existence of traditional forms of selection with market values colludes with social class dispositions to entrench social inequality in higher education.

The penetration of market forces in higher education, and the nature of higher education as a 'positional good' (Hirsch 1977; Brown and Lauder 2003) in the context of Australia and the United Kingdom has resulted in general in the institutions at the apex of the hierarchy strengthening their historical positions of dominance. Meadmore (1998) in the context of Australia has illustrated that the elite universities do not need to vie for 'positional goods' as they are able to capitalise on the 'cachet of the past'. This includes strong track records in research, intergenerational social capital through their alumni, reserves of wealth and oligarchic traditions. Universities low in the hierarchical structure find themselves in a precarious position and face the full onslaught of the market. Such universities deploy drastic measures to survive, including shortened postgraduate qualifications and market led courses with little pedagogical or professional value (Marginson 1997).

The implication of the above is that the most corrosive effects of the commodification of higher education are likely to be felt more strongly in vulnerable institutions which admit students from disadvantaged backgrounds. If the concerns expressed about changes in knowledge content and structure are valid, then rather than gaining access to powerful forms of knowledge, the majority of disadvantaged students will receive an education that has been reduced to narrowly defined core competencies which have been legitimated on the bandwagon of consumer choice. The result may be a higher education system that produces what Castells (2001) has termed a small elite of 'self programmable' workers who have learnt how to learn and are occupationally mobile, together with a large mass of 'generic workers' who are exchangeable and disposable and unable to adapt to a changing and volatile labour market.

4.8 Conclusion

One of the reasons for the introduction of consumerism may have been related to the problems of translating an elite system into a mass system of higher education. To do so, governments in many countries have sought to change the organisational culture and incentives for academic work and have assumed a different model of the motivation of academics and students.

While there have been some benefits, there is a danger that attempts to restructure professional cultures and learner identities to comply with consumerist frameworks may unintentionally deter innovation, promote passive and instrumental attitudes to learning and further entrench academic privilege. Drawing on notions of asymmetries of power amongst institutions and students, this chapter has indicated that institutions with high levels of academic and other forms of cultural capital will be more impervious to consumerist forces than other institutions. The most corrosive effects of consumerism on the acquisition of intellectual capital are therefore likely to take place in institutions with less cultural capital and which recruit students from the more disadvantaged sectors of society. In this sense therefore, ironically, although the outcomes of consumerism may not meet the rhetoric of the knowledge economy, it may in fact correspond with practice. Sceptical analyses (Lloyd and Payne 2003) which have focussed on the uneven nature of capitalist development and the availability of both high and low skills routes to competitive success, have cast doubt on the view that the knowledge economy automatically gives rise to the demand for a high level of skills amongst significant proportions of the workforce. In the view of Brown and Lauder (2003) such learning is only required for an elite group in the current knowledge economy, since many 'knowledge' jobs are now being routinised. These views are consistent with the analysis of consumerism developed in this paper and its consequences for the types of learning generated in mass higher education systems.

References

Ball, S. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, *18*(2), 215–228.

Bourdieu, P. (1986). The forms of capital. In G.R. Richardson (ed.), *Handbook of theory and research for the sociology of education*. New York: Greenwood Press.

Bourdieu, P. (1988). *Homo academicus*. Cambridge: Polity Press.

Bourdieu, P. (1996). *The state nobility*. Cambridge: Polity Press.

British Broad Casting News *Thousands hit by waiting list fiddles*, 18 September, 2002, 06.58 Greenwich Mean Time. http://news.bbc.co.uk/1/hi/health/2263998.stm. Accessed on 16 April 2007.

Brown, P., Green, A., and Lauder, H. (2001). *High skills: Globalisation, competitiveness, and skill*. Oxford: Oxford University Press.

Brown, P. and Lauder, H. (2003). *Globalisation and the knowledge economy: Some observations on recent trends in employment, education and the labour market*. (Working Paper no. 43). Cardiff School of Social Science.

Brown, P. and Scase, R. (1994). *Higher education and corporate realities*. London: UCL Press.

Castells, M. (2001). Information technology and global development. In Muller J., Cloete N., and Badat S. (eds) *Challenges of globalisation: South African debates with Manuel Castells*. Cape Town: Maskew Miller/ Longman.

Clarke, B.R. (1981). Belief. (Unpublished paper).

Deem, R. (2001). Globalisation, new managerialism, academic capitalism and entrepreneuralism in universities: Is the local dimension still important? *Comparative Education*, *37*(1), 7–20.

Delanty, G. (2001). *Challenging knowledge: The university in the knowledge society*. Buckingham: SRHE and OUP.

Dill, D.D. (1982). The management of academic culture. Notes on the management of meaning and social integration. *Higher Education*, *11*(3), 303–320

Dill, D.D. (1997). Higher education markets and public policy. *Higher Education Policy*, *10*, 167–185.

Dill, D.D., and Sporn, B. (1995). University 2001: What will the university of the twenty-first century look like? In Dill, D.D. and Sporn, B. (eds.) *Emerging patterns of social demand and university reform: Through a glass darkly*, pp. 212–236. Oxford: Pergamon.

Evers, A. (1996). *Quality development: Part of a changing culture of care in personal social services 2*. Lecture delivered at the international seminar Developing Quality in Personal social Services, Helsinki, April 12–14, 1996.

Fabos, B. and Young, M. (1999). Telecommunications in the classroom: Rhetoric versus reality. *Review of Educational Research*, *69*(3), 217–260.

Flynn, R. (1999). Managerialism, professionalism and quasi markets. In Exworthy M. and Halford S. (eds) *Professionalism and the new public Managerialism in the public sector*. Buckingham: Open University Press.

Gerwitz, S., Ball, S.J., and Bowe, R. (1995). *Markets, choice and equity in education*. Buckingham, England: Open University Press.

Gibbons, M., Limoges, C., Newtony, H., Schwartsman, S., Scott, P., and Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. California: Sage Publications.

Grenfell, M. and James, D. (eds.) (1998). *Bourdieu and education: Acts of practical theory*. London: Falmer Press.

Gumport, P.J. (2000). Academic restructuring: Organisational change and institutional imperatives. *Higher Education*, *39*(1), 67–91.

Haig, B. (1987). Scientific problems and the conduct of research. *Educational Philosophy and Theory*, *19*(2), 22–32.

Hirsch, F. (1977). *Social limits to Growth*. London: Routledge & Kegan Paul.

Lloyd, C. and Payne, J. (2003). What is the 'high skills society'? Some reflections on current academic and policy debates in the UK. *Policy Studies*, *24*(2/3), 115–133.

Marginson, S. (1995). Markets in education: A theoretical note. *Australian Journal of Education*, *39*, 294–312.

Marginson, S. (1997). *Competition in higher education: Intended and unintended effects*. Australian Institute of Tertiary Education Administration (AITEA). Queensland Branch 12th Annual Conference, Surfers' Paradise, May 22–23, 1997.

Marginson, S. and Considine, M. (2000). *The enterprise university: Power, governance and reinvention in Australia*. Cambridge: Cambridge University Press.

Meadmore, D. (1998). Changing the culture: The governance of the Australian pre-millennial university. *International Studies in Sociology of Education*, *8*(1).

Middleton, C. (2000). Models of state and market in the modernisation of higher education. *British Journal of Sociology of Education*, *21*(4), 537–554.

Muller, J. (2000). *Reclaiming knowledge: Social theory, curriculum and education policy*. London: Routledge/Falmer.

Muller, J. (2001). *Return to user: Responsivity and innovation in higher education*. Commissioned paper for N. Cloete, R. Fehnel, P. Maassen, T. Moja, H. Perold, and T.

Naidoo, R. (2003). Repositioning higher education as a global commodity: Opportunities and challenges for future sociology of education work. *British Journal of Sociology of Education, 24*(2), 249–259.

Naidoo, R. (2004). Fields and institutional strategy: Bourdieu on the relationship between higher education, inequality and society. *British Journal of Sociology of Education*.

Neave, G., and Van Vught, Fr. A. (eds.) (1991). *Prometheus bound. The changing relationship between government and higher education in Western Europe*. Oxford: Pergamon Press.

Nowotny, H., Gibbons, M., and Scott, P. (2001). *Rethinking science: Policy and the public*. Cambridge: Polity Press.

Peters, M. and Marshall, J. (1996). *Individualism and community: Education and social policy in the postmodern condition*. London: Falmer Press.
Pettigrew, A.M. (1979). On studying organisational cultures. *Administrative Science Quarterly*, *24*, 570–581
Power, M. (1999). *The audit society: Rituals of verification*. Oxford: Oxford University Press.
Pugsy, L. (1998). Throwing your brains at it: Higher education, markets and choice. *International Studies in Sociology of Education*, *8*(1).
Reading, B. (1996). *The University in ruins*. Cambridge, MA.: Harvard University Press.
Robbins, D. (1993). The practical importance of Bourdieu's analyses of higher education. *Studies in Higher Education, 18*(2), 151–163.
Sacks, P. (1996). *Generation X goes to college: An eye opening account of teaching in postmodern America*. Chicago: Open Court.
Seltzer, K. and Bentley, T. (1999). *The creative age: Knowledge and skills for the new economy*. London: Demos.
Shumar, W. (1997). *College for sale: A critique of the commodification of higher education*. London: Falmer Press.
Slaughter, S. and Leslie, L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Baltimore/London: Johns Hopkins University Press.
Tomusk, V. (2000). Reproduction of the 'state nobility' in Eastern Europe: Past patterns and new practices. *British Journal of Sociology of Education*, *21*(2), 269–282.
Trowler, P.R. (1998). *Academics responding to change: New higher education frameworks and academic cultures*. Buckingham UK: The Society for Research into Higher Education and Open University Press.
Välimaa, J. (1998). Culture and identity in higher education research. *Higher Education*, *36*(2), 119–138.
Williams, G. (1997). The market route to mass higher education: British experience 1979–1996. *Higher Education Policy*, *10*, 275–289.
Young, M. (2003). *Curriculum studies and the problem of knowledge: Updating the enlightenment?* Paper presented to the Education, Policy, Innovation and Change Research Group (EPIC), Education Department, University of Bath, 14 March 2003.

Chapter 5
The Moral Order of Business Studying

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5.1 Introduction

Business schools provide an interesting context for studies from cultural perspectives. Both outsiders and insiders to these universities maintain distinctive stereotypes that are supposed to describe business students' and teachers' orientations and values. This chapter looks back and reflects on a narrative study on business-school culture (Leppälä and Päiviö 2001). In the end, the study in question became an intervention into the local culture of a business school.[2] My account of the project will present an example of how university studying, and more particularly, business studying, can be approached both culturally and in the spirit of participative research.

There are no generally accepted criteria for what can be considered a cultural approach to higher education or university studying (Välimaa 1995; see also Mäntylä 2007). In this project, cultural approach has meant mainly two things. Firstly, we proceeded from the studies of disciplinary cultures, and conceptualized business education itself as a process in which the students become socialized into different disciplinary and work cultures (e.g., Becher 1989; Clark 1987; Ylijoki 1998). We focused not only on how this process actually becomes realized in business education, but also on what kind of cultures and communities are actually meaningful in the everyday life of the business students.

Secondly, in this project cultural approach meant that we were studying our own university, that is, we were doing research "from within". We have participated in this study first as students, and later on as teachers at this university. As we were

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[1] The other members of the MERI researcher group at HSE have influenced this story in various positive ways: Thank you to Keijo Räsänen for editing the text and helping me to formulate my ideas into this shape. Thank you also to Anne Herbert, Kirsi Korpiaho and Hans Mäntylä for the debates around the subject matter.

[2] Katja Leppälä and I wrote our master's thesis in 2001. An English translation of its title could be "The moral order among business students: A narrative approach to studying in three different business disciplines in the HSE".

J. Välimaa and O.-H. Ylijoki (eds.), *Cultural Perspectives on Higher Education*.

participants in this project prior to, during, and after our thesis project[3], it is difficult to put a clear end to it (cf. Swepson 1999; Katila and Meriläinen 2002). In fact, its aftermath still continues. Our research strategy can be called participatory in the sense that we intervened into the local, social process of cultural knowledge production (Maguire 1987). We constructed reality as we went along with the students that we lived and worked with. In this approach culture is thus not only something that the researcher describes or something that the students need to learn and become socialized to, but it is something we continuously do.

Narrating, be it oral or written, is a basic and an ancient form of participation in "cultural affairs". At least in our case, a research report written by the insiders generated responses from many other people working or studying at the university.

5.2 A Narrative Study in Business-School Culture and Moral Order

What is good business education? What is virtuous and vicious about studying business? In our thesis project we were interested in these questions from the students' point of view. As we were business students ourselves, our motivation sprang from our own experiences. During our studies in the HSE we had often felt like being outsiders among the business students. Although we were enthusiastic about our own discipline, organization and management, we felt that we were not allowed to show it publicly. Furthermore, when we confronted students from other business disciplines in the corridors of our business school, the others often commented that there is no substance or relevance in the subject organization and management.[4] Afterwards we understood that our experiences were not only ours, but shared with many other students as well.

We felt frustrated, because of many contradictory demands and possibilities embedded in our studying. On the one hand, studying business seemed to call for very competitive and technically orientated ways of working and being. As business students we had adapted the prevailing expectation that we should develop strong commitment to instrumental rationality: the main question is how to achieve certain ends as effectively as possible (Grey and Mitev 1995). On the other hand, we had found some spaces for more reflective ways of working and being in the business

[3] Nowadays Katja Leppälä works in a business company outside the HSE. I have stayed in the HSE and work as a researcher and a doctoral student in the discipline unit of organization and management.

[4] The disciplines or sub-disciplines the students could study as a major subject in the HSE were at that time the following: accounting, business law, economics, entrepreneurship, finance, Finnish language and communication, English business communication, information systems science, international business, logistics, management science, marketing, organization and management, quantitative methods of economics and management science, technology management and policy.

school. This encouraged us to ask how we should – and could – study business, for what purposes we should study, and why we should study business at all.

During our studies we had noticed that we were not alone with our thoughts; some other students were struggling with the same questions. We had learnt that business students do not necessarily form a homogenous group with a strong consensus on the purposes and ethos of studying. However, business students anyway and inevitably get together, and share their experiences of many different studying activities and practices. Some of the practices intertwine with the official business curricula, whereas some other practices are based on hidden curricula – the unofficial aspects of education in the everyday life of business students. By participating in these different practices students get together, and continuously negotiate the meanings of their studying. On these grounds, we decided to ask what kind of studying is considered good and worthy of doing among the business students during their studies, and how these moral stances become adopted or shaped?

5.2.1 Drawing from the Studies of Disciplinary Cultures

While reflecting on our thesis project now, I could say that one of our central aims was to make the internal diversity of business studying somehow visible. We wanted to question the prevailing understanding that there is – or should be – only one conception of what is business studying, or what is virtuous and vicious in studying at the business school. In order to articulate the variety we turned to the studies of disciplinary cultures. We attempted to show that at least on the level of different business disciplines there are very different understandings of good business education.

According to the studies of disciplinary cultures we could conceptualize the business school as an institution which consists of many different small worlds and work cultures, instead of taking it as a unitary, monolithic whole (e.g., Becher 1989; Clark 1987; Ylijoki 1998). We adopted an "anthropological framework" (Becher 1989), which opened up a new and fresh way for us to conceptualize our experiences of studying in the business school. We learnt that business disciplines about which and in which we had been studying for years, could be approached as academic "tribes" inhabiting different "territories" in business education.

In his famous book "Academic tribes and territories" Tony Becher (1989) argues that territories can differ in two cognitive dimensions: hard-soft and pure-applied (see also Biglan 1973). In hard-pure territory knowledge is cumulative and atomistic, and it aims at discovering universals and explaining phenomena. In contrast, hard-applied territory is pragmatic in nature, and its goal is the mastery of physical environment through new products and techniques. In soft-pure territory knowledge is considered with particularities, and it aims at understanding and interpreting phenomena. And finally, in soft-applied territory researchers deal with functional knowledge, and aim at enhancing and improving professional practices with protocols and procedures. Most importantly, the location in these cognitive territories also

forms the basis for the social mode of everyday life and work cultures in a tribe or discipline. (Becher 1989; Ylijoki 2000).

However, as business students ourselves we quickly noticed that the small worlds of our business school and the students' experiences of studying and living in them can not, or even should not, simply be forced into the four categories. We thought that it was important not to consider business disciplines as static groups settled in certain territories, but rather as social projects or movements that are continuously in motion and crossing the borders of different territories. That is to say, they are work organizations in which knowledge, research, teaching, and learning are continuously negotiated and reorganized. The established categories of disciplinary cultures are, however, needed. For us they were useful, as they helped us to grasp some differences between business disciplines and the different modes of social life in them. They guided us in understanding how the business disciplines cross borders in the landscape of territories, and how the work of students, teachers, and researches may be interdisciplinary. Moreover, they helped us in locating business disciplines in relation to each other in the business school.

The tribe metaphor suggests that students in the business school need to learn more than the mere knowledge base, and the competencies of a certain subject field. They also need to get a grip of the local disciplinary communities in order to gain access to the membership of the social group in question (Ylijoki 1998, 2000). Thus, studying is first and foremost an issue of situated participation (cf. Lave and Wenger 1991; Brown and Duguid 1991), and learning happens by taking part in the social life of a local disciplinary community. To become a competent member in a tribe a student needs to, in Contu and Willmott's (2003, p. 6) words, "demonstrate ability to "read" the local context and act in ways that are recognized and valued by other members" of the disciplinary community or tribe. From the students' point of view, the process of socialization also gives rise to special problems, because the cultural heritage of the disciplinary community consists of tacit elements that belong to the "implicit curriculum" (Bergenhenegouwen 1987; see also Korpiaho 2005).

5.2.2 Distinguishing between Disciplinary and Studying Cultures

As much as the tribe metaphor and the socialization process into the business tribes helped us in making sense of our experiences of business studying, we still thought that we were not able to grasp the everyday experiences of the business students well enough. In particular, the process of socialization into a certain tribe may be problematic, because the business students do not necessarily participate in the practices rehearsed in any discipline-based unit, and by the elders of a tribe. We knew from experience that the daily life of the academic elders mostly remains quite distant and strange to the students in the business school. This made us ask: if the business students are not primarily socialized into academic work practices

in disciplines, what, then, is the community or culture in which the students acquire their membership in order to become competent and respected business students?

During our studies we had also become aware of the possibility that the students may have different understandings of good education compared to those of their teachers. Thus, even if the students become socialized into the business disciplines, socialization does not necessarily mean that the students would simply adopt the ways of thinking and acting the elders of a tribe would hope them to, or simply live up to the demands of the official or even hidden curricula. Instead, the students have power to construct and negotiate on the meanings of studying (Korpiaho and Päiviö 2004). Therefore, the process of socialization into a tribe does not necessarily subordinate the students completely. It does not make them mere passive carriers of a disciplinary tradition, but rather gives rise to certain tensions. Sensitivity in respect to these tensions required that we distinguished between "the studying culture" and "the disciplinary culture". Consequently, we needed an analytical tool for approaching and describing the former, too.

With the help of the writings by Rom Harré (1983) and Oili-Helena Ylijoki (1998) we found the concept of moral order. In our study, moral order was first an analytical, and "empty", concept. It became relevant only after we were able to "fill it in" empirically. In this task it is important to recognize that moral order can not be considered or understood as something separate from the actual practice it relates to. It is in the practice (Hansen 1998). This means that when we are trying to search for the moral order of business studying, we should not turn to some external moral sources, such as personal values, moral philosophy, or political ideology, outside the very local and contextual situations of studying. Moral order does not refer to any universal values or a set of moral norms that could simply be adopted into business studying. Therefore, participating in and experiencing the daily life of the business students is important, if one is to appreciate their moral order.

During the thesis process we decided to describe the student's moral order in terms of distinctions concerning vices and virtues in studying business. In this view, when the students engage in moral reflections on studying, they consider what is good, right, desirable, and valued as opposed to what is bad, wrong, avoidable, and despised in their studying (Harré 1983). As it is embedded in the everyday practices, the moral order reveals what the students are aiming at, and what they are avoiding, what they consider crucial and valuable, what they regard as unimportant and of no value (Ylijoki 1998), why they are studying in the first place, and in a certain ways (Räsänen and Korpiaho 2007; Korpiaho et al. 2007).

I take the moral order of studying as a loose and continuously evolving frame, within which the students develop and reflect upon their decisions, actions, tactics, and strategies of studying in their daily lives. It surely does not determine the actions and thoughts of individual students causally. The meanings of good and bad, right and wrong, responsibilities and rights are not given, but they are re-created and negotiated in the course of studying. Although the moral order has normative power, the business students still have freedom to act within it, and even to question and deviate from it, if they can provide adequate justifications.

5.2.3 Articulating the Prevailing Moral Order by Constructing Narratives

For the project we interviewed HSE students majoring in three different business disciplines: finance, economics, and organization and management. On the basis of the interviews, and our own experiences we constructed six narratives of studying business. These narratives offered us a method for describing the moral order, in a way that is sensitive to the context in which the business students study, work, and learn. With the narratives it was also possible to capture some tensions of studying business, as well as to give space to the students for voicing their experiences and emotions.

The crucial point in a narrative approach is to assume that the practitioners, also in business education, rather think and act in terms of stories than argumentatively. Narratives are not a mere legitimate form of description and explanation in general, but also an appropriate tool for representing and understanding actions, events, experiences, and practices of business studying (cf. Van Maanen 1998; Hänninen 1999; Somers 1994). This kind of a narrative approach suggests that narratives provide the students devices that guide their acting and being.

Creating, telling, negotiating, and living different narratives are important ways of constructing and renewing the moral order of business studying. The narratives and narrators are, however, bound to local power relations. Some – let us say hegemonic – stories are therefore more easily told and accepted than some others. Narrating is socially constrained, and the students need to learn the proper and possible narratives that are available for them in the context of business education. It is not enough to learn and tell the appropriate stories, but one has to live the stories, too (Van Manen 1994). The set of possible, acceptable narratives both evolves as a product of the hegemonic moral order and reproduces or modifies it (cf. Mumby 1993). By doing their studying differently and by crafting new narratives business students may, in principle, question and revise the hegemonic moral order.

The key task of our study was to construct six narratives, one master narrative and five modified narratives, of studying business. With the term "master" we wanted to emphasize the normatively binding and hegemonic nature of the narrative. Some of the modified narratives are like counter narratives, whereas some of them hardly deviate from the hegemonic order. Rather than understanding narratives as stories that are told by the students as such, we considered them as "metaphors" of real life situations or studying events. We constructed the narratives from the students' diverse interview statements, and without any specific structure in them. Our interview material did not consist of narratives that could have been categorized and analyzed as such.

In constructing and telling the narratives our original aim was to present a description of the studying culture of business students. In addition to this, we gradually began to interpret our study as an attempt at intervening into the local, social process in which the students re-create and negotiate on the meanings of their studying. It eventually turned out that many people took our report seriously. The narratives evoked debates on the morals of studying at HSE.

What follows next is my current interpretation of the key storylines in each of the six narratives, and I will also explain why we came to emphasize these specific aspects. The original narratives are available in our thesis (Leppälä and Päiviö 2001, Chapter 3).

5.3 Six Narratives of Being a Good Student in the Business School

5.3.1 Master Narrative

In the first narrative we captured the general aspects and elements of business studying. Thus, we left the internal diversity of business studying aside for a moment, and concentrated on what is considered virtuous and vicious, good and bad among the business students in the HSE in general. This kind of general master narrative has crucial meaning, for example, in the lives of the first year students, the newcomers and the novices of business studying, who try to get a grip on the local social reality and learn how to speak, act, and think as a competent and respected business student. Thus, telling and living, – i.e., practicing – this kind of master narrative could be seen as one way of participating in business studying "in the right way", and of demonstrating one's ability to act in the ways that is recognized and valued by other business students.

At HSE the basis of the existence of the widely shared master narrative was in the arrangements of the studies. All the students, then about 500 students a year, first went through a set of basic courses together. This phase of the studies took officially a year and a half. After this phase students chose their majors, while still taking courses in several disciplines. Socialization into being a HSE student came first, and socialization into respecting a specific discipline later on – if at all.

In the master narrative we sketched an "ideal business student", who deals with the juxtapositions of certain virtuous and vicious elements, and the good and the bad of business studying in the right way. By constructing a story of the ideal student we wanted to emphasize the normative power of this story, and to present a "dramatized" description of the problems that business students confront in their everyday lives, and thus to make an intervention without blaming or naming certain individuals or groups of students. On the other hand, we contextualized the narrative carefully, and based it on the interview material. It presents studying as something that touches individual students in the HSE – not as something that happens somewhere else.

The key to the master narrative lies in the relationship between business education and the labor market. The better this relationship functions, the more virtuous the studying of the ideal business student is. The ideal student judges every decision and act against the expectations of "the real, practical business life", and not against the standards of the university world. The ideal student expects and is expected to

draw his or her passions and pearls of wisdom mainly from the corporate managers, and not from the teachers and researchers of the business school.

The rationale of studying boils down to being able to exchange the master's degree in the labor market for as good an occupation as possible. Studying is justified first and foremost as an investment in the future. Correspondingly, slow progress, self-reflection, and waste of time on studying needles things without some guarantee of future job opportunities are seen as vicious and something that needs to be avoided.

The master narrative emphasizes that the student also needs to acquire something from his or her investment. Besides the master's certificate this means practical skills and tools. Theoretical thinking is useless and out of touch with the real life. In order to become a competent and competitive employee the student must constantly be alert to what is happening in real working life.

5.3.2 Studying Finance or Economics

In the second and third narratives we described what students majoring in finance and economics aim at, and how they justify their ways of studying. In these narratives we concentrated on how the students balance between the demands of the master narrative, and the somewhat different demands of their disciplinary studies.

There are no significant contradictions between the finance narrative and the master narrative. The ideal business student studies finance. The narrative embodies virtuous elements of business studying in general. For example, in this narrative it is important to think that *"dealing with numerical data is very essential in business, and I think that numbers and calculations are in my hands quite well, thanks to the finance studying"*.[5]

The plot of the finance narrative represents a "success story", and it is future oriented. At the beginning of his or her studies the student does not experience great doubts or tensions, but after a while the pressure to succeed and the intense call for competitiveness and performance eventually set him or her in front of a tricky dilemma. On the one hand, *"the good position and high salaries in the heart of finance markets are so tempting"* that the faster the student graduates, the better. This culminates in *"a kind of pressure where I just do not have time to stop my progress or think twice"*. On the other hand, it is not enough to be merely efficient and result oriented, but one also has to be truly dedicated to one's studies and way of life. *"I mean the portfolios, stock markets, mergers, and acquisitions keep going through my mind so that the events of my daily life start to look like different investments and trade-offs."*

The dilemma between pace and dedication makes the life of the finance student quite stressing from time to time. Therefore, the student is after a certain balance in

[5] Quotations taken from the students' comments in the interviews are marked in italics.

studying: *"I just need to find a kind of harmony, where I can adopt new, difficult things very fast, but at the same time learn them profoundly. It is a very intensive dose, and to be able to receive it I need lots of drive"*. In this narrative stress should not be avoided as *"it is a mark of success and it carries you further"*.

In the economics narrative the central message is that the discipline actually represents the *"only true old science"* in the business school. Therefore, the student of economics makes certain modifications to the master narrative's conception of virtuous studying. Yet, the student has a kind of special and steady position among other students. In this narrative the main goal of studying does not culminate in acquiring mere practical tools, but the mastery of economic thinking and abstract, theoretical knowledge. The talented student is ready for *"lonely and hard toil"*, and wants to work with rigorous science: *"I need to scratch my head and figure out what it all is about. And that is the case in economics. I don't see the point in disciplines such as marketing or management, where I should only learn by route the four P's or something similar"*.

The economics narrative justifies studying in a different manner compared to that of the master narrative or the finance narrative. Instead of emphasizing the exchange value of studying, this narrative suggests that it is more important to learn to understand the economy and society in a wider sense: *"By studying economics you'll get a wider view on economy and society as well"*. And *"by studying economics I just understand better the models and theories that have been used for the whole life and history of the mankind. Welfare economics, for example, deals with very important issues that would be useful for business students in general. I mean that all of us should, for example, understand what parts of the business models are natural laws and what parts only politics or debates about values"*.

5.3.3 Three Narratives of Studying Organization and Management

We authors were both majoring in organization and management, and therefore it was easier for us to recognize diversity in the accounts of studies in this discipline. We constructed three different narratives of studying organization and management. Each of these narratives described a certain way of doing business studies differently, in a "soft and vicious"[6] discipline.

[6] In our interviews the business students used the term "soft" to describe the disciplines in which studying, learning, and work concern human beings and emotions instead of "breathless" things. Organization and management was usually mentioned as an example of a soft discipline, and it was admitted that studying soft things in the business school is not valued or considered particularly useful among business students. The term "hard" was used to describe disciplines in which students need to learn and work with numbers and facts, and in which they can easily say what they have learnt or what they are about to learn. (Leppälä and Päiviö 2001)

The first O&M narrative revolves around the contradiction that arises when the disciplinary studies in organization and management call for giving up the most central virtues of business studying. When studies progress, the student actually drifts quite far from being an ideal business student, and turns to the vicious side of business studying. In the end, many central vices, such as studying only for the sake of it, serious thinking and reflection, and contextual and soft knowledge – all things that the master narrative warns us about, are turned into "vicious virtues". They become something to be pursued, rather than avoided.

The main character of the narrative feels anxious and even ashamed because of the vicious and highly risky way of studying. At the same time, the student feels proud of having the courage to search for his or her own individual life project, and of having developed throughout the studies and thereafter. *"In organization and management I have a space to look for my own way, and at the same time to bring out myself as a person, to be present the way I am."* Studying is justified by the possibility of making one's own personal curriculum and by the opportunity to get rid of the common aims and tactics of business studying.

Personal self-development and true studying demand dedication in this narrative. However, this form and object of dedication is not similar to dedication in finance. It is reprehensible to try to proceed from one achievement to another, or to take the pressures towards effectiveness and individual performance too seriously.

The second O&M narrative tells of a kind of love-hate relationship with business studying. Business studies can be completed in different ways by combining *"humanist values"* and *"the softer side of life"* with *"the hard business"*. The student develops a more caring and humane approach to life in general. However, unlike the student of the first O&M narrative, this student does not turn completely away from the core virtues of business studying. He or she tries to justify his or her more caring approach by presenting herself as a tough and competent human resource professional, whose skills will be needed in the future.

The student thinks that everybody will eventually work at the heart of business. Yet, it is acceptable for him or her to be worried about the nature of the current business life. *"If we talk about business, it just is quite hard life and it is wretched and I'm afraid that people think that in the end it is always a matter of money"*. The student justifies the aim of becoming a human resource professional by emphasizing the importance of people in business: *"There are real people in the business as well. That is, business life is not only about money, but about people who may think about and make that money, but anyway they are people"*. In this narrative, the basic rationale of studying does not lie in getting a high-salary job and making money, which is a clear deviation from the master narrative.

The major theme of the third O&M narrative is to complete one's studies as easily and effortlessly as possible. The student chooses organization and management because of its soft knowledge base and teaching methods. It is among the easiest subjects in the business school, and thereby a good possibility of avoiding hard work. *"I admit that studying has always been a bit rocky path for me." "I have decided that if there is a possibility that I do not have to suffer, I won't! Writing*

essays and dealing with wider issues of life is so much easier than trying to understand abstract models and numbers."

Course contents or business tools are not the most relevant things to learn in business education in the third O&M narrative. Interacting, connecting, and networking with other students and relevant communities of practice are much more important. Participation in extracurricular and student union activities, like events organized by subject-specific clubs, play a crucial role in this narrative.

5.4 Responses to the Researchers' Intervention

Our master's thesis, reporting the narratives, was accepted and then published in the HSE's publication series. To our surprise it evoked a host of responses, and we realized that we had intervened into conversations and debates in which the local moral order was constantly constructed. The responses appeared in various forms: The external newsletter of the HSE published a summary of the findings (Avista 2/2001) – with the Rector's approval; a journalist of an afternoon magazine interviewed three students, the Rector and us, and announced the moral order in the paper (*Kauppalehti* January 16, 2002); the chair of the student union expressed his concern about the findings in a speech he gave in the official opening ceremony of the HSE's semester (September 9, 2002); a plan for organizing an occasion called "value evening" was made by the student union activists in 2003. Moreover, every once in a while students have debated (and still are debating) about the values and morals of studying, and referred to the thesis on the student union's web pages, in their own internal magazine (e.g., *Punakulma* 16/2002, 23/2004) and in the external newsletter of the student union (e.g., *Kylteri* 04/2001, 02/2003).

What was the nature of the responses? The following text represents typical responses. A student majoring in finance wrote the piece, and it was published in a students' magazine (*Punakulma* 23/2004).

> Thirst for power and ambition or love and peace.
>
> Business students have business suits, portfolios and they talk about stock rates. Efficiency and money are their mantras. We want to graduate fast and get pocketing a lot of money. Anybody is nobody without Mercedes-Benz, luxurious apartment or a golf share. Glorious career is everything, and to gain one we have to be ready to make capital out of our friends. If you do not bear up, don't hide behind the copy machine with tears in your eyes. Instead, hide your failure, because the smell of the loser reveals you, and you will loose your networks right away.
>
> These images about the students' hard values, thirst for power, and ambition have been tightly rooted both inside and outside of our business school. Couple of years ago a master's thesis of organization and management was carried out, and it verified the existence of the above values. My claim is that although this thesis was graded excellent, it was almost completely bullshit.
>
> I noticed already during my fist year at the HSE, in 1999, that only a few pals wore business suits. Later I got to know people better, and realized that besides me many other students questioned the hard values. I thought that inside the school I have my own little gang of the goodies. Last spring I realized that for five years I had been like a blind chicken

> in the corridors of the school. In the student union's strategy work group we started to survey students' values. We asked the students what kinds of values they think there are in their community and what kinds of values they themselves consider important. It surprised me that for example a pal I considered a real roughneck returned the question sheet to me, an in it he explained that the community values include "thirst for power and ambition" and he himself would hope more "love and peace". We became buddies immediately. 90 percent of the answers were alike: The community does not accept failure or weakness; still the students themselves hoped for less hard values, and more solidarity, soft values, and shared welfare.
>
> The thesis mentioned above was graded with 100 points only for clarifying the image we have on our community values, not for discovering our real values. The scale of the grades will be exceeded in the department of organization and management when somebody understands to examine what kinds of values individuals have in reality, and furthermore, carries out a comparative study between the recognized individual values and imagined community values.
>
> If we had courage to show our softness, to ask for help when needed, and to offer a helpful hand to other students, we would notice that people in the HSE are not as tough as we believe: At the moment we all are prisoners of an illusion. The hiding place behind the copy machine could be occupied by the students, or not, if we had a friend to lean on.

Many students took our report as an accusation, against which they needed to defend themselves. These students wanted to disassociate themselves from the moral order and argued that they themselves, and their fellow students, are different and thus not guilty of appreciating the moral order described in the report.

One feature of the responses is especially interesting method-wise. Systematically, all the responses expressed a misunderstanding of the nature of narrative research, and the way in which we had constructed the six narratives. The respondents either assumed that we had carried out a usual survey of student values, or were reporting on how individual or average students value studies in the HSE. It seemed impossible for them to comprehend that we were reporting on cultural stories that the HSE students hear, know of, and maintain among themselves.

It seems to me that it is very difficult for the students to start to reflect upon their own doings and sayings. Even if some students consider the hegemonic moral order – or the "community values" as the student puts it – problematic, it is difficult to continue the discussions about the moral order in the first place. When the issues of the values, purposes, and morals of studying are dealt with, they are discussed at a policy level, suggesting what the school or the teachers should do. Thereby it is possible to treat the moral order as a distanced concept (cf. Coleman and Rippin 2000).

Distancing also took place when plans for organizing an occasion called "the value evening" were made. A group of student-union activists started to plan this event after our report had generated debates in different fora. Contrary to our expectations, it was not the students themselves that were invited to discuss and present their conceptions of business student's values, but mainly the teachers from different business disciplines. As long as the moral order and the problems of everyday studying are not admitted, and "happen" somewhere else, conversations do not touch individuals and they can abstain from reflecting on their own studying practices (cf. Räsänen and Korpiaho 2007). From this perspective, the student's piece above can be regarded as an effort to provoke other students to reflect on their own acting and being in business school.

In several cases our narratives have been used only to reinforce stereotypic and hegemonic conceptions of business studying. For example, a journalist did this in her article published in an afternoon magazine (*Kauppalehti* January 16, 2002). She used the narratives for describing the ideal types of business students majoring in different business disciplines.

Nevertheless, I think that our project has been useful. At least, it has opened our eyes to the possibility that the moral order of business studying needs not, or should not, be taken as a monolithic and static, pre-given and untouchable system. It does not inevitably determine business students' possibilities of acting and being. Indeed, there are spaces for doing business studies in a different way, and the report in its part made the moral order discussable – especially for those students that cannot identify themselves with the stereotypes. This opportunity was realized, for instance, during a course on professional development (Räsänen and Korpiaho 2007; Korpiaho forthcoming). The teachers designed a space for reflective accounts on studying and its moral dimension, and our report in part inspired their efforts.

5.5 Discussion: Reproduction and Modification of the Moral Order

A moral order cannot, and should not, be reduced into any single narrative or list of virtues and vices. The short, simplified summaries of the original narratives not only loose contextual elements and flavors, but they may also appear to provide a static description of the moral order. This is not my current understanding. In my view, the local moral order emerges in dialectic relationships between the six narratives – and other possible narratives. Its reproduction and revision is embedded in the local relations of power, and it is continuously in motion.

In crafting the comprehensive description of the moral order, we used narratives as tools for making the dialectic nature of the moral order visible. We also engaged in the processes, in which the moral order is constructed. By writing the thesis and re-presenting the local stories as narratives we challenged and confronted the local culture. What did we learn about the reproduction and renewal of the moral order?

The moral order shapes students' assessments, ratings, and valuations of the different business disciplines. It shapes students' experiences of their studying in different disciplines, and their desires or worries in respect to the subjects. In this way the moral order of business studying supports existing relations of power in the business school in general. By making certain normalized, safe choices the students renew the moral order, legitimate the existence of certain business disciplines, and their status in a ranking order. However, by developing modifications to the general beliefs, or by making vices into virtues, some students can also question and resist the particular hierarchical order among the disciplines. In this case, they have to confront, in various everyday settings, those who prefer the standard accounts. As the disciplines and departments are funded on the basis of the number of graduating students, the moral order is relevant in the internal, political games of the business school.

The moral order can, indeed, work for or against specific disciplinary cultures and "tribes". It can have destructive or supportive impacts on the reception of planned and implicit curricula in different disciplines (see also Korpiaho 2005). From the students' point of view, studying in a certain discipline may lead to the contradictory situation with a double standard: Teachers' expectations differ from what it means to be a respected and competent business student among other students. This situation may increase distrust between the novices and the elders of the tribe. In order to survive under the double, divergent expectations, a student or a group of students can opt to develop modifications to the general beliefs. The narratives that we reported articulated some such modifications.

Relating to the deviant accounts is more difficult for a newcomer, because she or he first faces the challenge of gaining a full membership in the business students' circles (Ylijoki 1998). In fact, morally striking, especially condemning, or questioning commentary is permitted only to students who have redeemed a full membership among the other business (see Harré 1983).

Students, who commit to the moral order exceedingly strongly very early in their studies, may find it hard to accommodate modifications to the general beliefs – even if studies in a specific major would require this later on. In particular, students who wish to study softer disciplines or develop theoretical and reflective thinking and research-oriented working practices are in a difficult situation at the HSE. It is not realistic to expect that even the most reflective and rebellious students could just disregard the moral order.

Socialization into certain business tribes thus starts by "learning away" from the commitments of the moral order that the commencing business students has just internalized. From the educator' point of view it is challenging to take this into account. The moral order of studying is not something that is drawn on by and that affects students only in the official educational situations such as classroom work. Instead, it is something that the students continuously produce between themselves and also outside the classrooms. Therefore, teachers should find it important to develop teaching and learning practices that take the students' own experiences and frames of interpretation seriously (see Räsänen and Korpiaho 2007; Korpiaho forthcoming). Teachers cannot merely rely on introducing deviant and contesting knowledge.

5.6 Conclusions

In this chapter I have used our master's thesis project as an example of how university studies and more particularly, studying in the business school, can be approached from a cultural and participatory perspective. We drew on the studies of disciplinary cultures, and conceptualized education as enculturation into certain work communities. By articulating and publishing stories of what is morally valued among the students, we intervened into the production and circulation of these stories.

It is crucial to notice that students should not be understood in liberal humanist terms, that is, as autonomous individuals with varying degrees of freedom to choose what kind of students and persons to be (Davies 2006). Instead, students should be seen as novice or senior members in the students' own networks. These collective circles are capable of producing their own studying culture and moral order. Moreover, researcher should not assume that such a culture and moral order is determined by established disciplinary cultures. Universities and university faculties may be different in this respect.

Our study suggests that the students' moral order is important, because it affects the students' way of relating to other students and teachers, and how they act in the classrooms and other educational situations. In cases like the HSE, where students first and foremost become socialized into a university-specific student culture, and the moral order of studying, it can be hard for the students to handle the later process of socialization into certain academic tribe. Therefore, it is important to take the dynamics of moral order into account, when planning and organizing educational practices in different disciplines.

Culturally oriented research can also be intentionally participative – and reflected on as such. We used the narratives as tools with which we intervened into the local, social processes in which the moral order of business studying is constructed. Carefully constructed and contextualized narratives, including those that are less seldom publicly voiced, made the internal diversity of the moral valuations discussable for the students themselves. This strategy expands the space and increases the opportunities for students to reconsider their conceptions of studying. Narrating is participating.

References

Becher, T. (1989). *Academic tribes and territories*. Milton Keynes: The Society for Research into Higher Education and Open University Press.

Bergenhenegouwen, G. (1987). Hidden curriculum in the university. *Higher Education*, *16*, 535–543.

Biglan, A. (1973). The characteristics of subject matter in different academic areas. *Journal of Applied Psychology*, 57, 192–203.

Brown, J. and Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning and innovation. *Organization Science*, *1*, 40–57.

Clark, B. (1987). *The academic life*. Princeton: The Carnegie Foundation for the Advancement of Teaching.

Coleman, G. and Rippin, A. (2000). Putting feminist theory to work: Collaboration as a means towards organizational change. *Organization*, *7*, 589–587.

Contu, A. and Willmott, H. (2003). Re-embedding situatedness: The importance of power relations in learning theory. *Organization Science*, *14*, 283–296.

Davies, B. (2006). Subjectification: The relevance of Butler's analysis for education. *British Journal of Sociology of Education*, *27*, 425–438.

Grey, C. and Mitev, N. (1995). Management education: A polemic. *Management Learning*, *1*, 73–90.

Hansen, D.T. (1998). The moral is in practice. *Teaching and Teacher Education*, *14*, 643–655.

Harré, R. (1983). *Personal being*. Oxford: Basil Blackwell.
Hänninen, V. (1999). *Sisäinen tarina, elämä ja muutos*. Dissertation: University of Tampere.
Katila, S. and Meriläinen, S. (2002). Metamorphosis: From 'nice girls to nice bitches'. Resisting patriarchal articulations of professional identity. *Gender, Work and Organization*, *9*, 336–354.
Korpiaho, K. (2005). Students' curriculum: What do the students learn in the business school? In: S. Gherardi and D. Nicolini (eds.), *The Passion for Learning and Knowing*. Trento: University of Trento e-books 221–241 (Vol. I). Retrieved from http://eprints.biblio.unitn.it/archive/00000828/02/Volume_I_02.pdf
Korpiaho, K. (forthcoming). Students as practitioners in academia – Proficiency and reflectivity in study practices. *Journal of Organisational Transformation and Social Change*.
Korpiaho, K. and Päiviö, H. (2004, July). *Negotiating for relevant business knowledge in classroom discussions*. Paper presented at the EGOS conference, Ljubljana.
Korpiaho, K., Päiviö, H., and Räsänen, K. (2007). Anglo-American forms of management education: A practice-theoretical perspective. *Scandinavian Journal of Management*, *23*, 36–65.
Lave, J. and Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
Leppälä, K. and Päiviö, H. (2001). *Kauppatieteiden opiskelijoiden moraalijärjestys. Narratiivinen tutkimus kolmen pääaineen opiskelusta Helsingin kauppakorkeakoulussa*. [Moral order among business students: A narrative approach to studying in three disciplines at the HSE]. Master's thesis, Helsinki School of Economics. (Publications B-34). Helsinki: The Helsinki School of Economics.
Maguire, P. (1987). *Doing participatory research: A feminist approach*. Boston: University of Massachusetts.
Mumby, D.K. (1993). *Narrative and social control: Critical perspective*. California: Sage Publications.
Mäntylä, H. (2007). *On "good" academic work – Practicing respect at close range*. Dissertation, Helsinki School of Economics. Publications A-306. Helsinki: Helsinki School of Economics.
Räsänen, K. and Korpiaho, K. (2007). Experiential learning without work experience: Reflecting on studying as "practical activity". In Reynolds M. and Vince R. (eds.), *Handbook of experiential learning in management education*, Oxford: Oxford University Press. (in press)
Somers, M.R. (1994). The narrative construction of identity: A relational and network approach. *Theory and Society*, *23*, 605–649.
Swepson, P. (1999). *Doing action research in my own organization: Ethical dilemmas, hopes and triumphs*. Action Research International, paper 3. Retrieved April 16, 2007 from: http://www.scu.edu.au/schools/gcm/ar/ari/ari-papers.html
Van Manen, M. (1994). Pedagogy, virtue, and narrative identity in teaching. *Curriculum Inquiry*, *4*, 135–170.
Van Maanen, J. (1998). *Tales of the field: On writing ethnography*. Chicago: University of Chicago Press.
Välimaa, J. (1995). *Higher education. Cultural approach*. Dissertation: University of Jyväskylä.
Ylijoki, O.-H. (1998). *Akateemiset heimokulttuurit ja noviisien sosialisaatio*. Tampere: Vastapaino.
Ylijoki, O.-H. (2000). Disciplinary cultures and the moral order of studying – A case study of four Finnish university departments. *Higher Education*, 39, 339–362.

Chapter 6
A Clash of Academic Cultures: The Case of Dr. X

Oili-Helena Ylijoki

6.1 Introduction

In recent years higher education institutions in Finland, as in most western countries, have undergone profound changes. With the rise of a so-called knowledge-based economy, higher education policy and science policy have begun to stress universities' role as crucial players in the national innovation system and as instruments for economic competitiveness in global markets. This means that university education and academic research are increasingly viewed and evaluated from an economic perspective. In accordance with this policy change, universities' funding patterns and management styles have witnessed profound transformations. The general trend has been a decline of budget funding, for which reason universities and departments have been compelled to seek external income and to engage in entrepreneurial activities (e.g., Slaughter and Leslie 1997; Nieminen 2005). This trend has intertwined with the adoption of the doctrine of the new public management, which brings the values and practices of the private sector to public administration, including higher education institutions (e.g., Chandler et al. 2000; Deem 2003).

Martin and Etzkowitz (2000) regard this change as so radical that they call it the second academic revolution. The first academic revolution, taking place in the end of the 19th century, introduced research into the previously teaching-oriented higher education institutions. Now, according to Martin and Etzkowitz, a so-called third function, contribution to the economy, has been added to the core duties of universities. This new emphasis has been conceptualized by a variety of terms: "academic capitalism" (Slaughter and Leslie 1997), "entrepreneurial university" (Clark 1998), "the triple helix of university-industry-government" (Etzkowitz and Leydesdorff 2000), "post-academic science" (Ziman 1996) and "new managerialism" (Deem 1998), among others. They all point to an increasing market-orientation accompanied by the advancement of such virtues as accountability, efficiency, cost-effectiveness and productivity.

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The macro-level changes in the institutional context of higher education no doubt affect the internal functioning of academia, that is, the ideals and practices at the basic unit and individual levels (see Becher and Kogan 1992). In this article the focus is on individual academics. My aim is to explore critical elements in the social construction of academic identities in the present-day university from a cultural perspective. I ask, how do academics themselves perceive and interpret changes in their work environments and how do they experience growing managerialistic demands? The empirical basis of the article consists of a fine-grained qualitative analysis of a single case, the case of Dr. X. It is argued that, although personal and unique, the work experiences of Dr. X shed light on more general tensions between traditional academic and increasing managerialistic values and ideals.

The exploration of academics' experiences is important, since the individual level tends to be ignored both in higher education policy and higher education research: individual academics are mostly perceived as mere passive targets of policy implementation and external steering, not as active subjects who monitor their own behaviour. As a result, the forms the policy measures actually take in daily practices within academia and how they shape the lives and identities of academics remain largely uncharted territory.

In order to offer a context in which academic identity-building takes place, I first discuss in more detail the changing nature of academic cultures. Then, I introduce Dr. X, the protagonist of the article, whose work experiences are analysed by drawing upon the concepts of identity project and moral order elaborated by Rom Harré (1983). Finally, I return to a more general discussion and ponder current dilemmas and conflicts in academic work and in the formation of academic identities.

6.2 Academic Cultures in Transition

The research into the cultural dimension in higher education has shown that universities are not homogenous entities but internally differentiated into distinct "small worlds" (Clark 1987). According to this research tradition, universities are primarily composed of a diversity of "academic territories" inhabited by "academic tribes" with their own epistemological and social forms (Becher 1989). Although the local institutional and organizational cultures of a given university and the professional cultures of the different categories of academic staff are important in shaping academic life (e.g., Välimaa 1995), disciplinary differences have proven to be the most influential with regard, for instance, to modes of interaction, lifestyles, career paths, publishing patterns, pedagogical codes, etc. (e.g., Becher and Trowler 2001; Boys et al. 1988; Clark 1987; Ylijoki 2000). There are moreover some empirical findings showing that disciplinary differences also outweigh gender differences (e.g., Thomas 1990). Thus, from the cultural perspective, the main pillars of academic identity are constructed through socialization into the values, norms, basic assumptions and practices of one's own disciplinary community.

However, the recent changes in the university environment prompt the question to what extent the growing managerialistic pressures push disciplinary cultures in the same direction and standardize them. Are disciplinary differences fading away while all academics, regardless of their disciplinary background, are encountered with the same externally imposed demands to attract external money, to publish in international journals, to create large networks across and outside academia, to commercialize research results and so on? Are universities transforming from a colourful mixture of tribal cultures into a "McUniversity" (Parker and Jary 1995) characterized by homogenous and standardized managerialistic culture?

Some authors answer these questions in the affirmative. For instance, Ziman (1996) claims that due to increasing market-orientation, a new post-academic culture is replacing the traditional academic norms formulated by Merton and that the differences between academic science and industrial science carried out in companies are disappearing. Contrary arguments have been presented, too. Calvert (2000), for instance, maintains that what is changing is only the rhetoric used by academics. Faced with new demands, academics quickly learn the right way to present their work and to write their applications, but in practice they continue to work as they are used to working. In this view, then, disciplinary cultures continue to flourish but somewhat disguised by managerialistic rhetoric.

It seems that most researchers in higher education avoid these extremes, seeing academic work neither as totally colonized by managerististic forces nor as totally independent of external steering (e.g., Clark 1998; Prichard and Willmott 1997; Slaughter and Leslie 1997). Such a moderate view regards academic work and identities as affected by growing external pressures but not subordinated to them. For instance, drawing on empirical studies made in the UK, Henkel (2005) concludes that although academic autonomy and the primacy of the discipline in academic working lives have been strongly challenged, they are still the most important sources of meaning and self-esteem in academic work.

It can be summarized that the impacts of external steering on the internal life within academia are not mechanical or straightforward. Instead, local cultures filter external influences and shape the ways in which different university units and individual academics respond to them. In other words, the changes in the higher education environment are interpreted and responded to differently in distinct disciplinary and organizational cultures (e.g., Trowler 1998; Ylijoki 2003).

It is also important to take into account that the distinction between disciplinary cultures and managerialistic culture is far from clear-cut. Again, disciplinary differences are of crucial importance. Several fields, especially in hard-applied domains such as engineering, have always valued close connections to industry, commercialization of results and economic utility both in teaching and research. Seen from the perspective of these fields, the market-oriented values pushed by the current policy resonate well with the disciplinary values and practices. Therefore, it is somewhat misleading to speak about traditional academic and new market-oriented values, since both sets of value have a long history within academia. It follows that the current change does not mean an emergence of something totally new, but rather a shift in balance (Martin and Etzkowitz 2000). If compared to Snow's (1959)

classical thesis of a split between literary intellectuals and applied sciences, it might be summarized that it is the power relations between the two cultures that are changing: the former are losing their elite position in defining the core academic values and the latter are gaining a more dominant role.

All in all, changes in the higher education environment transform disciplinary cultures and academic values, at least to some extent. Academics in every field encounter increasing – and often conflicting – external demands and pressures. In the name of the entrepreneurial university, academics are expected, among other things, to contribute to economic growth, to advance national competitiveness and to promote societal welfare as well as to carry out the traditional core academic duties, that is, high-quality teaching and research (see Henkel 2000). Several studies have pointed out that the growing external pressures have resulted in the deterioration of academic work in terms of autonomy, workload, time management, societal status and salary (e.g., Chandler et al. 2000; Currie and Vidovich 1998; Enders and Teichler 1997; Ylijoki and Mäntylä 2003). Besides, there are clear signs of internal stratification of academics into two tiers, "have and have-not groups", the former consisting of academics with tenure and a secure future and the latter of an increasing number of project workers with limited-term contracts and poor prospects for career advancement (e.g., Henkel 2000; Kogan et al. 1994; Slaugher and Leslie 1997). Thus, for many academics the changing context of higher education means a deterioration of work. Yet there are also winners, who benefit from the changes, who are willing and able to make good use of the new opportunities and who manage to improve their professional status (e.g., Barry et al. 2006; Henkel 2000; Trowler 1998).

In the following, I move from the cultural level to the individual level. By exploring the work experiences of one individual academic, Dr. X, my aim is to encourage reflection on the human consequences of a cultural clash between traditional academic and growing managerialistic values.

6.3 The Case of Dr. X

The case of Dr. X is based on a focused interview conducted as a part of a series of interviews with Finnish academics working in a variety of disciplines and university settings. The objective of the study was to trace the ways in which academic work and identities have changed in recent years. The interviews were open in nature, allowing academics to freely speak about their work experiences. The themes covered a wide range of issues, including questions concerning the interviewees' personal work history, current work practices, communication networks, collaboration patterns, modes of publication and the personal meaning of working as an academic.

The rationale for examining only a single interview instead of the totality of the available interview material is that it allows a more subtle, vivid and contextual analysis of individual experiences, thereby offering means for a better and more profound understanding of the current nature of academic work and the conflicting

elements in identity building. The criterion for selecting the interview with Dr. X for closer scrutiny, in turn, is that it reveals especially clearly those tensions and dilemmas that are common in the interview material as a whole. In this sense, it might be claimed that the case of Dr. X presents not only his unique work experiences but raises issues with wider resonance in present-day academia. In particular, the case illustrates the human consequences of a clash between the traditional academic values embedded in the disciplinary culture of Dr. X and the growing managerialistic values imposed by the higher education system.

Dr. X is a male Finnish scholar working in a soft-pure field at a large university. He began his academic career at the end of the 1970s and since then has worked continuously within academia. At the time of the interview he was in his late 1940s. He has a well-established position in his department which, in turn, has a good standing in its field. Dr. X has publications that are widely read and valued within his disciplinary community. He has been successful in fund raising, too. He has managed to obtain funding for his own work from the Academy of Finland (Finnish research councils) several times and recently he has also succeeded in establishing projects for his doctoral students. In addition to his research merits, he has been active in teaching and administrative duties. In order to ensure his anonymity, no further information can be presented.

Although the academic career and the current position of Dr. X seem to be very successful, he accounts of his work in a negative tone. The following three quotes illustrate how he describes his work experiences:

> I really think that all kinds of jobs should be satisfying in some respects (…) or conversely at least, they should not be awfully stressful. They should be stressful only in a positive sense. At the moment this is not stressful in a positive sense, it is only exhausting. It makes me tired so that I have no energy to do anything.
>
> Recently I have felt that I should somehow pull myself together or at least to try to see whether I am able to pull myself together any more. If I put this really dramatically, I could say that I feel that my creativity has run out. I should check whether this really has happened. I should somehow organise my time in such a way that I could concentrate on one project only, or two at the most. It has sometimes happened to me, even recently, that I have suddenly become absorbed in studying something or in reading something. And I have realised that this is really rather pleasant, that I really enjoy it. Recently such experiences have occurred too rarely, experiences of success. These are, of course, totally subjective matters, that is, how I experience things, whether they are successes or failures.
>
> I have thought that just because this does not seem to go very well I should change my occupation. But there is a problem. I mean I have fallen into a kind of tube which has become narrower and narrower. The opportunities to do something else have decreased the longer I have stayed here. It seems to me that (…) it is all the more difficult here but there is no other option than to stay here. Because of this I really have to pull myself together. Since now and then I still realise that I enjoy this work. I really should observe those situations in which I enjoy it. It is very important that I should focus more vigorously on some issues. I really can't blame the circumstances, at least principally, only myself.

The quotes tell about severe problems in work. In spite of his achievements, Dr. X feels powerless and exhausted. He is disappointed with himself and with his work situation – even to the extent that he feels he is caught in a trap: the work at the university is full of problems but he sees no way out of academia.

My argument is that the problems Dr. X describes can be regarded as a crisis in his professional identity as a university researcher and teacher. But how should this identity crisis be interpreted? How are these personal feelings and worries related to the changing social and societal context of higher education institutions? In order to answer these questions I will utilize a theoretical framework provided by a social psychologist and philosopher, Harré, in his theory of identity projects.

6.4 Theoretical Tools

According to Harré (1983), the construction of identity involves two interrelated projects: a social and a personal identity project. In a social identity project an individual tries to attain and maintain an acknowledged and respected position as a member of the community to which she or he wants to belong. This requires appropriation of the cultural heritage of the group in question and the ability to convince other members of one's commitment to the values and norms of the prevailing culture. Thus, the core element in the social identity project is socialization into the local moral order. The moral order refers to collectively shared taken-for-granted beliefs, assumptions and values. Basically, the moral order defines what in a given community is regarded as good, right and respectful, and conversely, what is seen as bad, wrong and despicable. In so doing, it functions as a sort of compass helping individuals to orient and to find their direction in the social world. By socializing into the local moral order, individuals are able to construct their social identity as members of the community.

In the personal identity project, by contrast, individuals construct their own unique way to relate to the community. In other words, individuals do not merely appropriate the cultural heritage of the community, but, because of the unique life situation and perspective of each person, individuals also transform it in idiosyncratic ways. The transformation process is a source of new ideas and practices and by doing this, it creates a sense of personal identity in a thoroughly social world. An individual constructs – in interaction with others – her or his specific, personal manner of being a full member of a given community, thus leaving her or his own mark and "handwriting" on the culture. Individuals are therefore not only products of the prevailing culture but also its co-producers.

From this point of view, an identity crisis is basically a result of tensions and conflicts between moral commitments. Without the help of socially shared, yet constantly renegotiated moral orders, individuals are left drifting in identity crises unable to direct themselves properly (see Greenwood 1994). The crisis in social identity arises when individuals are unable to adhere to the local moral order and/or to convince others of their commitment to it, leading to a marginal position or even to a denial of membership of the community. A personal identity crisis, in turn, means that individuals do not find their particular, personally fitting way to adhere to the morals of their community. Consequently their personal identity remains weak and fragile, since they are unable to gain a sense of really being at home in the community.

6.5 Personal Identity in Crisis

From the perspective of identity projects it can be argued that the work problems Dr. X describes are a result of a crisis in his personal identity. Dr. X has a well-established and valued social position both in his department and in the wider academic community, so there is no crisis in his social identity. Instead, the problem lies in his inability to find personal sense and worth in his current work. Although outwardly everything seems to be in order, Dr. X himself seems to be at loss in his professional life and in building his personal identity.

A key question now is how to interpret Dr. X's identity crisis. Following Harré's notion of identity projects, I will not search for the explanation for Dr X's identity problems in internal causes – such as his innate personality traits or a midlife crisis in an academic career. Instead, in accordance with Harré's ideas, I will focus on the social and societal context in which Dr. X is situated and try to see how his problems are related to the wider processes currently taking place in higher education institutions.

Dr. X accounts for his work in a regressive tone, following almost a plot of tragedy. Dr. X says that before he was pleased with his work and confident of himself, but for some time he has not been able to live up to the morals which he regards as essential in the academic career and which he sees as personally most satisfying. Moreover, he anticipates that his professional future in academia will continue along the declining trend and that the end will not be a happy one. However, he still has some hope, as he emphasises that he should put himself into a final test in order to find out whether he could "recover" and be able to act as a scholar, in his opinion, should. The tone of his account is therefore decidedly negative, the main reason for this stemming from his feeling that he does not reach the standards and moral commitments he has internalized as cornerstones in his profession.

Hence, Dr. X's account rests upon a moral order that defines the basic pillars as to what it is to be a respected member of the disciplinary community in question. The disciplinary culture in the field of Dr. X represents a typical soft and pure discipline (see Becher 1989). It is based on traditional academic values as crystallized, for instance, in the Humboldtian ideals of university. The moral commitments include such virtues as individualistic pursuit of knowledge, freedom to follow one's own research interests, unity of research and teaching, profound devotion to research without external constraints, originality in thinking and making an enduring contribution to one's field. Accordingly, the most-valued activities in the account of Dr. X are reading, studying and writing in peace and quiet, and consequently producing original ideas and fresh, interesting interpretations which are recognized and respected by his colleagues in Finland and abroad. The reference group of his work is thus his disciplinary community, including students, whom he perceives as junior members of his academic community.

Dr. X emphasizes that before he acted in accordance with these high principles and managed to achieve outcomes he was satisfied with. In this respect his account can be interpreted as a hero story in which an individual hero is totally dedicated to her or his research topic and struggles uncompromisingly against all obstacles in

order to reach significant outcomes. For instance, Dr. X emphasises that his research topic, which he has also dealt with in his teaching, is very personal and intimate for him: he says he has "a sort of burning need" for it. Therefore his work is something which he "just cannot take as a mere job." In a similar tone, he reports that he devoted himself for more than 20 years to one topic he considered personally the most significant and interesting and during that time he published only when he had something really important to say – when he had "texts really worth publishing".

In recent years things have changed. He has had fewer and fewer possibilities to concentrate on his own scholarly pursuits. Instead he has been involved, among other things, in writing research proposals for junior researchers, in attracting external money to the department and in carrying out all kinds of administrative tasks. He says, for instance:

> During the last one and a half years my work has been particularly fragmented. During this time I have not been able to further my own research projects at all. My projects have been pushed totally into the background.

In the midst of growing external demands and constraints he feels he no longer works in a proper manner. Relying on the moral order which he has internalized as the basis of his profession, he makes a distinction between "necessary" and "unnecessary" work, the former referring to research and research-based teaching, the latter to all other duties – writing applications, filling in all sorts of forms, answering enquiries, attending administrative meetings, etc. Although he understands that "unnecessary work" has to be done by someone since it is necessary for the functioning of the department, it is something which he cannot find personally meaningful and rewarding.

> In this position one constantly has to do work that seems unnecessary to me, although it is not perhaps unnecessary. I have to spread my patience and energy too much. It is a question of time consumption, I really cannot do many things at the same time.

Due to the constant increase of "unnecessary" work, Dr. X has to work hard for long hours to get all the tasks accomplished. Although he has carried out the "unnecessary" duties successfully, he feels he has not managed to get anything done and that he has failed in his work. This is due to the fact that he has not been able to further what he regards as "necessary" work, that is, his own scholarly writings. Thus, "necessary work" and "unnecessary work" are embedded in conflicting moral orders which are mutually exclusive. In daily life amidst increasing externally imposed requirements, the competition between the moral orders seems to be constantly resolved in favour of "unnecessary work", for which reason Dr. X cannot adhere to the moral commitments he sees as crucial in his work. As a consequence, he feels exhausted and his motivation for work "threatens to fade away":

> I just do not find energy to carry on these duties. I am not able to get motivation anywhere.

Furthermore, his perception of his work as a failure creates anxiety and feelings of guilt. This is manifest, for instance, in his account of how he used to have some

important contacts with colleagues in other universities both in Finland and abroad but recently he has withdrawn from them:

> I have a rather bad conscience because of this. I really appreciate genuine no-nonsense contacts but I do not have them since at the moment I don't have anything original to say to anybody.

What is crucial is that Dr. X regards himself as responsible for his failures. He blames himself for incompetence and lack of creativity and is driven into self-accusation. Although it seems quite justified to argue that the increasing requirements imposed on Dr. X by the department and the institution would make it extremely hard for anybody in his situation to find time and energy for one's own scholarly activities, he attributes the shortcomings solely to himself, not to the structural and institutional conditions in which he finds himself.

The overall result is a personal identity crisis. Because of his incapability to work according to the high and demanding standards of his disciplinary community, Dr. X cannot find personal meaning in his work and feels he no longer acts as an academic should. Thus, he does not adjust his values and ideals to better fit the current work requirements but remains deeply committed to them. As a consequence, the university appears as an alien and suffocating environment in which he cannot feel at home. In this his experiences resemble what Henkel discerned in her study among academics in the UK. According to Henkel (2000, p. 208), many academics tried to hold on to their traditional academic values but "they were doing so within a hostile culture, which in some cases challenged their sense of self-esteem".

Finally, it is important to note that personal identity is inherently related to social identity. A sense of uniqueness and a personally meaningful way to belong to a given community are intertwined with a person's social identity; that is how other members of the community see her or his position. From this it might be anticipated that although at the moment the problems of Dr. X concern his personal identity, his social identity, too, might be in danger if the dilemmatic situation continues for long.

6.6 Alternative Identity Constructions

It can be claimed that the strong individualistic emphasis in the disciplinary culture of Dr. X aggravates the clash between the moral orders. The disciplinary culture is crystallized in a sort of hero story which acts as a frame of reference through which Dr. X interprets his work-related problems. According to a hero story, a scholar is a lonely seeker of truth who should succeed in overcoming all obstacles and in managing to achieve outstanding results no matter how hard the external conditions are. In point of fact, the more difficult the circumstances are, the greater is the victory the hero gains. In other words, my argument is that the utmost individualistic elements of the disciplinary culture into which Dr. X has been socialized hinder him from recognizing the impact of the wider university context on his problems.

As a result of this, he hardly has other options than to attribute the problems to himself. It follows that Dr X is caught in a sort of trap, leaving him with few opportunities to find better strategies to cope with the problematic situation.

It could be anticipated that if Dr. X continues to adhere to this kind of hero story, his work problems most probably will not diminish. On the contrary, there is a real possibility of "sinking", a term by which Trowler (1998) describes academics who, in spite of profound changes in the higher education context, try to hold on to the old values and modes of behaviour. It might not be too far-fetched to guess that by committing to the moral order of the individualistic hero story, Dr. X might quite easily end up with burnout and totally lose his motivation for and enjoyment in his work.

The question arises, therefore, what Dr. X – and others in similar circumstances – could do to avoid this kind of "sinking". From a perspective of the identity projects, it would be important for Dr. X to redefine the core elements of the moral order, leading to a change in the construction of his academic identity and correspondingly, to a new and more fitting way to make sense of his work.

One possibility could be "swimming" (Trowler 1998) with the current changes. This requires a complete reversal of the moral order so that former "unnecessary" work becomes "necessary" work. Thus, instead of the story of a lonely seeker after truth, Dr. X could attach himself to the managerialistic story form which represents a totally different kind of understanding of what academic work is all about. The managerialistic culture glorifies such virtues as efficiency, accountability, productivity and effectiveness, as well as skills to attract external money, to get partners in industry, to establish big projects and large networks within and across academia and so forth. Since these virtues stand in sharp contrast to the virtues of the disciplinary culture into which Dr. X has been socialized, a profound change in the identity construction would be needed. For instance, while Dr. X wants to publish and communicate with colleagues only when he has something really significant to say, according to the managerialistic morals, it is crucial to publish as much as possible in order to extend one's CV and consequently, to be classified as a productive, high-profile academic.

Another alternative form of identity building could be an adoption of a tendency to avoid all "unnecessary work" and to concentrate only on those tasks which match one's own values and preferences – that is scholarly work in the case of Dr. X (cf. Trowler 1998). By avoiding meetings, refusing to take any extra duties, neglecting his students, etc., Dr. X might be able to find time and space for his own pursuits and leave "unnecessary" work to others. The weakness of this strategy is obvious. If everybody acts according to it, nobody will do the required tasks, which in the end would lead to chaos and severe problems in the survival of the department, also resulting in serious threats among individual academics. Hence, in order to function, this logic requires that there are others who will do the "unnecessary work" and bear the negative consequences related to it. However, this sort of rationality is basically not in harmony with the morals of Dr. X's disciplinary culture which, in spite of its individualistic undertone, gives much weight to mutual respect and collegiality among the members of the scientific community.

Following Trowler's (1998) argumentation there is still another possible strategy for Dr. X to adopt, namely collective policy reconstruction. Instead of "swimming" with the current trends as an academic high-flyer or of maximizing one's own success irrespective of others, there is also an option to engage in collective action to change the policy trends in such a way that work conditions in academia would allow more opportunities to concentrate on those tasks which Dr. X perceives as "necessary". However, this requires giving up the individualistic nature of the disciplinary culture and a redefinition of the moral order in a more collective way. In doing this, Dr. X would also be able to attribute the causes of his problems differently. Instead of blaming himself, he could recognize the larger societal roots of his problems, thereby breaking away from self-accusations and finding common ground for sharing experiences and work-related problems with others.

6.7 Discussion

The changing higher education environment has a great impact on academic cultures and daily practices within academia, thereby often challenging the traditional core elements of academic identity formation. However, the effects of the macro-level changes on micro-level functioning are not mechanical or straightforward. Therefore the case of Dr. X offers just one example of the potential human consequences when traditional academic values encounter growing managerialistic pressures. Other responses to the changes are to be found (e.g., Barry et al. 2006). Becher and Trowler (2001, p. 16) summarize the current situation by stating: "We can expect to see a variety of reactions from different groups of staff, and even from the same individuals and groups at different times. These will include not only negativity and resistance, or a burying of the academic head in the sand in the hope that things will change for the better but the enthusiastic adoption of change in some cases and the strategic undermining and reworking of it in others."

Disciplinary cultures are of importance in shaping the responses of individual academics. Disciplinary cultures differ in their moral orders, meaning that not all cultures are equally committed to traditional academic values. For instance, an individualistic hero is not a prominent manner to perceive academics in all organizational settings. In my interview data with Finnish academics, interviewees in a technical field describe their work in a very different way. Instead of a lonely hero, they tend to identify with their research group and to emphasize the importance of group work. Likewise, it seems that in their case close contacts and collaboration with industry and other external agencies constitute an important element in the construction of their academic identities. Thus, the growth of the managerialistic culture does not lead to severe cultural conflicts and identity crises in all academic units, even if there appear to be some tensions in the most market-oriented environments too (e.g., Ylijoki 2003).

However, although the case of Dr. X by no means represents the whole picture of the nature of academic work in the present-day university, Dr. X is not alone with

his problems. In my interviews with Finnish academics this sort of identity crisis and feelings of anxiety and exhaustion constitute a rather general phenomenon (Ylijoki 2005). In this the Finnish academics seem to have much in common with their colleagues in other countries (e.g., Chandler et al. 2000; Currie and Vidovich 1998; Enders and Teichler 1997; Henkel 2000; Kogan et al. 1994).

By exploring one case in detail, my aim has been to shed light on more general dilemmas and problems the current changes in the higher education environment may create at the level of individual academics. The individual level, although often ignored in higher education policy and research, is of vital importance, since it is at this level that externally imposed reforms and policy measures actually are carried out. Hence, it is not insignificant how academics interpret the steering coming from the upper levels (see Becher and Kogan 1992) and what kinds of actions and experiences it invokes. If the problems encountered by Dr. X become increasingly common among academics, it surely has negative consequences for the quality of academic work and the attractiveness of an academic career. Taking into account the individual level is therefore vital not only for individual academics and their well-being, but also for the functioning of the department, the university, and ultimately, the whole higher education system.

Likewise, I have tried to show how the individualistic nature of the traditional academic culture (academic freedom, autonomy, seeking for individual reputation, etc.) may act as a repressive form restricting well-being and producing human suffering within the present-day university. Although not universally adopted, the ideal of a lonely hero is widely spread and deep-rooted within academia. For instance, Henkel (2000, p. 195) concludes that in spite of all the changes in the working environment, the image of an "individual scholar pursuing his or her interests according to his or her own rhythms" still remains an ideal, particularly in the humanities and the social sciences. Ziman (1998, p. 164) sees "the romantic stereotype of the pure scientist as a lonely seeker after truth" to be embedded in sciences, too. According to him, this ideal entails "an ethic of self imposed dedication, a participant in the quest for the Holy Grail, a person committed to a cause that transcends all other interests and considerations." No doubt, this ideal may act as a motivating and inspiring force in academic work. Yet, it can be claimed that this kind of hero image accompanied by growing external pressures and harsh competition is a powerful combination which suppresses collective resistance and makes it difficult to build more collaborative ways to organize academic work.

An interesting empirical question in this context is how junior academics experience their work and the changes in university environment (see Hakala 2005). It could be suggested that from the beginning they are socialized into a rather different moral order than Dr. X – presumably not so closely tied to the ideal of a lonely hero and a virtue of total commitment. In "the two-tier university" (Kogan et al. 1994) junior academics tend to belong to "have-not groups" situated on the lower tier of the academic profession with fixed-period contracts and uncertain career prospects. For them, a long-term dedication to a specific research topic and institutional commitment could easily be a trap to be avoided – instead, flexibility and capability to move smoothly from one project to the next would be much more

profitable qualifications (see Sennett 1998). This view gets some support from Henkel's (2000) study in the UK. Her findings clearly show that academics, who started their academic careers in the 1980s and 1990s, entered a very different profession and were faced with different expectations compared to senior academics who joined university in the 1960s and 1970s.

In addition to age, gender may also be crucial in shaping experiences in academic work. It could be suggested that female academics are not necessarily so deeply committed to the individualistic hero story requiring profound devotion, since they still often have more family obligations than men. Therefore women academics have to balance their time and energy more strictly between work and home. Furthermore, Gergen (1992) claims that as a narrative pattern, the hero story is not equally available to women since cultural expectations about how men and women should express their heroism are divergent. She argues that the hero myth, glorifying individual quest and achievement, is a typical manstory while womanstories about heroism tend to emphasize the importance of social embeddedness. Moreover, there is some empirical indication that the rise of managerialism in academia is far from gender-neutral. Barry et al. (2006), for instance, suggest that in comparison with men, women academics seem to respond to the increasing managerialistic pressures in ways that are more unfavourable to their careers.

It is important to underline that this study offers only a sort of snapshot of Dr. X. It presents a rather stable and coherent picture of his academic identity, which does not tell the whole story of his work experiences. Following Harré's (1983) argumentation, identities are not fixed, essential entities, but temporally and spatially embedded constructions which are renegotiated in social interaction with others. The investigation into the case of Dr. X is based on one interview situation, which represents a specific context for identity building by allowing the interviewee to freely vent feelings to a sympathetic listener. It is most probable that in a different situation at a different time Dr. X would give at least a somewhat different account of his work, thereby also constructing his identity in a different way. This does not mean that the identity formation in the interview situation is less true or less real than in some other context. By contrast, identities are always context-dependent and each of the identity constructions is true, presenting some aspects of the person and her or his experiences.

Finally, it needs to be emphasized that although in this article the focus in exploring work-related identity crisis is on the social and societal context, I do not want to deny the importance of intra-individual psychological factors. Surely, they have a role to play, too – individual academics interpret and experience the same external conditions to some extent differently, and may attribute the cause of their problems in various ways. Rather, my objective is to offer an alternative approach to the mainstream psychological explanations and to demonstrate that problems in academic identities cannot be fully explained by psychological factors alone. In other words, identity crises are not solely private problems to be solved by adopting suitable personal coping strategies. From a social-psychological perspective, it is crucial to take into account the societal and cultural context in which the problems arise and to trace their roots in the wider environment, thereby avoiding the psychologization of all identity-related problems.

Through making visible the cultural underpinnings and taken-for-granted assumptions, research into higher education – and into the cultural dimension in particular – could promote human well-being. Moreover, it might also serve as an instrument for resisting the prevailing dominant discourses and ideological "truths" if they are restrictive or repressive from individuals' point of view. In this sense higher education research may even have emancipatory power.

References

Barry, J., Berg, E., and Chandler, J. (2006). Academic shape shifting: Gender, management and identities in Sweden and England. *Organization*, *13*(2), 275–298.

Becher, T. (1989). *Academic tribes and territories*. Milton Keynes: The Society for Research for Higher Education & Open University Press.

Becher, T. and Kogan, M. (1992). *Process and structure in higher education*. London: Routledge.

Becher, T. and Trowler, P.T. (2001). *Academic tribes and territories*, 2nd edn. Buckingham: The Society for Research for Higher Education & Open University Press.

Boys, C.J., Brennan, J., Henkel, M., Kirkland, J., Kogan, M., and Youll, P. (1988). *Higher education and the preparation for work*. London: Jessica Kingsley.

Calvert, J. (2000). Is there a role for "basic research" in Mode 2? *Vest*, *13*(3–4), 35–51.

Chandler, J., Barry, J., and Clarke, H. (2000). Stressing academe: The wear and tear of the new public management. *Human Relations*, *55*(9), 1051–1069.

Clark, B.R. (1987). *The academic life*. Princeton, NJ: Carnegie Foundation for Advancement of Teaching.

Clark, B.R. (1998). *Creating entrepreneurial universities*. Guildford: Pergamon.

Currie, J., and Vidovich, L. (1998). Micro-economical reform through managerialism in American and Australian universities. In Currie, J. and Newson, J. (eds.) *Universities and globalization. Critical perspectives*. Thousand Oaks, CA: Sage, pp. 153–172.

Deem, R. (1998). New managerialism and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, *8*(1), 47–70.

Deem, R. (2003). Gender, organizational cultures and the practices of manager-academics in UK universities, *Gender, Work and Organization*, *10*(2), 239–259.

Enders, J. and Teichler, U. (1997). A victim of their own success? Employment and working conditions of academic staff in comparative perspective. *Higher Education*, *34*(3), 347–372.

Etzkowitz, H. and Leydesdorff, L. (2000). The dynamics of innovation: From national systems and "mode" 2 to a triple helix of university – industry – government relations. *Research Policy*, *29*(2), 109–123.

Gergen, M. (1992). Life stories: Pieces of a dream. In Rosenwald, G.C. and Ochberg, R.L. (eds) *Storied lives. The cultural politics of self-understanding*. New Haven, CT/London: Yale University Press, pp. 127–144.

Greenwood, J.D. (1994). *Realism, identity and emotion*. London: Sage.

Hakala, J. (2005). Nuoret tutkijat akateemisissa tutkimusyhteisöissä [Young researchers in academic research communities]. In Aittola, H. and Ylijoki, O.-H. (eds) *Tulosohjattua autonomiaa. Akateemisen työn muuttuvat käytännöt*. [Results-directed autonomy. The changing practices of academic work]. Helsinki: Gaudeamus, pp. 109–129.

Harré, R. (1983). *Personal being*. Oxford: Basil Blackwell.

Henkel, M. (2000). *Academic identities and policy change in higher education*. London: Jessica Kingsley.

Henkel, M. (2005). Academic identity and autonomy in a changing policy environment. *Higher Education*, *49*(1/2), 155–176.

Kogan, M., Moses, I., and El-Khawas, E. (1994). *Staffing higher education*. London: Jessica Kingsley.
Martin, B.R. and Etzkowitz, H. (2000). The origin and evolution of the university species'. *Vest*, *13*(3–4), 9–34.
Nieminen, M. (2005). *Academic research in change*. Helsinki: The Finnish Society of Sciences and Letters.
Parker, M. and Jary, D. (1995). The McUniversity: Organization, management and academic subjectivity. *Organization*, *2*(2), 319–338.
Prichard, C. and Willmott, H. (1997). Just how managed is the McUniversity? *Organization Studies*, *18*(2), 287–316.
Sennett, R. (1998). *The corrosion of the character*. New York: W.W. Norton.
Slaughter, S. and Leslie, L. L. (1997). *Academic capitalism*. Baltimore, MD: Johns Hopkins University Press.
Snow, C.P. (1959). *The two cultures*. Cambridge: Cambridge University Press.
Thomas, K. (1990). *Gender and subject in higher education*. Buckingham: The Society for Research into Higher Education & Open University Press.
Trowler, P.R. (1998). *Academics responding to change*. Buckingham: The Society for Research for Higher Education & Open University Press.
Välimaa, J. (1995). *Higher education cultural approach*. (Jyväskylä Studies in Education, Psychology and Social Research 113). Jyväskylä: University of Jyväskylä.
Ylijoki, O.-H. (2000). Disciplinary cultures and the moral order of studying – a case-study of four Finnish university departments. *Higher Education*, *39*, 339–362.
Ylijoki, O.-H. (2003). Entangled in academic capitalism? A case-study on changing ideals and practices of university research. *Higher Education*, *45*(3), 307–335.
Ylijoki, O.-H. (2005). Academic nostalgia: A narrative approach to academic work. *Human Relations*, *58*(5), 555–576.
Ylijoki, O.-H. and Mäntylä, H. (2003). Conflicting time perspectives in academic work. *Time & Society*, *12*(1), 55–78.
Ziman, J. (1996). "Post-academic science": Constructing knowledge with networks and norms. *Science Studies*, *9*, 67–80.
Ziman, J. (1998). Basically, it's purely academic. *Interdisciplinary Science Reviews*, *23*(2), 161–168.

Chapter 7
Academic Work and Academic Identities: A Comparison between Four Disciplines

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7.1 Introduction

The study of disciplines has a long tradition, but it has often mainly focused on scientific activities.[1] With a few exceptions (Clark 1987; Bertrand 1993; Bertrand et al. 1994; Schimank 1995), the interplay between different tasks is ignored and when it is not, attention has generally focused on the teaching-research divide. In the research presented here, we decided to take a look at "academic work" in all its various dimensions, i.e., at all the activities faculty members are involved in: teaching, research, administrative tasks, consultancy, doctoral training, professional training, etc. Four disciplines were explored for this purpose in French universities: history, business studies, biology, and physics.

The following main questions oriented our research (Becquet and Musselin 2004): What is the content of these activities for each discipline, and the variation among them or within each of them? How do academics feel about these various tasks? How do academics allocate their time and attention to each of these activities? How autonomous are they in making these kinds of decisions?

The study was carried out in 2003, and it is based on about 100 interviews (see appendix for details by discipline and status). It only deals with tenured faculty members (representing about 64% of all French university teachers), a group which consists of people with two statuses (or career steps): the *maîtres de conférences*[2]

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[1] In his remarkable book on *Academic Tribes And Territories*, T. Becher (1989), for instance, notices that "[teaching obligation] will often be quite substantial in the period before tenure is granted", but this remark only leads to assuming that this renders "harder than it might otherwise be to make a major research contribution in early academic life" (Becher 1989, p. 111). Becher announces from the beginning that "the interviews were designed to encourage reasonably open-ended discussion about professional issues, but not specifically about the academic's role as a teacher (…) in consequence there is relatively little in this book about the transmission of knowledge" (Becher 1989, p. 3).

[2] Many *maîtres de conférences* may become professors, but some never succeed or try and remain professors until they retire.

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(or tenured assistant professors) and the professors. For each discipline, three departments were chosen to test the role played by institutional factors, and to confront the discourses maintained by different academics, who were supposed to develop or coordinate activities with one another. Intermediary monographs were written about the four disciplines, and this led to the writing of a comparative report (Becquet and Musselin 2004). In this paper, each department will be identified by its discipline and by its geographical location (Paris, Paris-Suburb or Province), or by some structural features (a small size university will be referred to as SmallUni and a recently funded university as NewUni).

The main results of this study consist of a vast variety of academic situations and identities, despite the fact that faculty members in France are managed by a unique status, paid according to a bureaucratic salary scale, which is identical in each discipline, and all faculty members depend on a fixed teaching load of 128 h lecture courses (*cours magistraux)* or its equivalent (192 h section meetings (*Travaux dirigés*), or 256 h lab sections *(travaux pratiques)*.[3] This variety within a common bureaucratic framework results from the strength of disciplinary identities: the first part of this paper will therefore show that the traditional divide underscored by previous works on scientific activities remains relevant, when one considers teaching- and administration-related tasks as well. However, we will also show that sometimes discrepancies exist between the prevalent ideal identities and the current situations at work.

The second part of the paper will demonstrate that these rather coherent disciplinary identities are not sufficient enough for explaining how academics behave and for understanding their individual identities. We will therefore look at factors explaining the wide variety of work content from one individual to another.

7.2 Disciplines and Identities

It is well-known and documented (e.g., Becher 1989; Knorr-Cetina 1996, 1999) that the nature of scientific work is not the same from one discipline to another, and that its content may vary throughout the career of every academic (Zetlaoui 1999). Following M. Henkel's precursory work (2000), we propose looking in more detail at these differences, and their impact not only on research, but also on teaching and administration.

7.2.1 Some Common Characteristics about Administration-related Tasks

If there are variations among disciplines concerning these tasks, they nevertheless appear to be less important than the convergences. What academics define as

[3] In France a distinction is established between lecture courses, section meetings, and lab sections of various sorts, and teaching load is calculated based on this distinction according to the following formula: 1 h of CM = 1.5 h of TD = 2 h of TP.

administrative tasks covers in all four disciplines a broad range of different activities that can be regrouped into four main categories: management of teaching (development of a new curricula, responsibility of a team of teachers, etc.), management of research (being in charge of a research team, a research programme, of research contracts, etc.), academic leadership (chairing a department, leading a research lab, etc.), and participating in deliberative bodies (hiring committees, faculty or university councils). Administrative responsibilities and tasks are therefore far from being a coherent and homogenous activity.

Within each category, some tasks are less appreciated, while others are often considered worth gaining. Managing undergraduates' curricula, for instance, is not a task everybody wants to assume: it is often left to the *maîtres de conférences* or to seniors less involved in research. On the contrary, professors are interested in the direction of doctoral or graduate programmes. Being elected to hiring committees is also more valued than seating in faculty or university boards: most academics think the former may have an impact on the development of their department, while the latter are described as positions, in which it is necessary, but not interesting to be.

Nevertheless, everybody denounces the increasing weight of administrative tasks due to lack of administrative and technical staff. Physicists and biologists are by far more critical than historians and business studies specialists. They need more technical staff than the other two (e.g., for preparing the experiments for the section meetings or lab sections), and seem to have less staff than the other two disciplines, while their needs increase as fund raising and contractual partnerships develop.

But overall, academics in the four disciplines have rather similar attitudes towards administration-related tasks. In comparison, their discourses on teaching and research are far more differentiated, and therefore each discipline has to be handled separately.

7.2.2 Physics and Biology: A Strong Attachment to a Research-based Identity

For biologists and physicists,[4] research is a core activity even when they are no more research active, or when they appreciate teaching. In both disciplines, research is associated with the following list[5]: constructing experiments, analysing data, reading literature, writing papers, elaborating research programmes, writing projects, answering calls for proposals, participating in conferences, etc. But they

[4] In this section, we shall consider only the two departments which are involved in experimental physics, the third being specialised in theoretical physics, and having rather different constraints and conceptions as well.

[5] This convergence on tasks does not mean that the precise content of the tasks is the same. As shown by Knorr-Cetina (1996), there are clear differences in what "analysing data" or "constructing experiments", for instance, include in both disciplines. But this was not the level of our analysis.

also clearly establish a distinction between what research activities in their opinion should be, and what they increasingly are. Thus, they face a gap between their desired identity and their practices. Like the British scholars studied by M. Henkel (2000), they are generally attached to a traditional conception of scientific activities, according to which academics should spend as much time as possible on the "bench", prepare experimentations, write papers, and define their own research agenda. But in the two disciplines, the pursuit of these tasks is described as highly dependent on the capacity of academics to obtain extra-funding and diversify their resources. Raising funds is always more crucial, and it is no longer restricted to late career academics: everybody is more or less involved in such tasks. As a result, these tasks are described as part of the research activities, but most of the interviewees consider they should not be that. Biologists and physicists all complain about spending hours on answering regional, national, or European calls for proposals, writing research projects, developing partnerships with private organisations. They also observe and often denounce a stronger demand for applied research, expressed not only by the private firms, but pushed also by the national and European public funding mechanisms. They see this as inevitable, but also boring, and time consuming.

> We must find resources. If we just have our public money, it is as if we only earned the minimal salary. I was lucky to get a contract with a private society and a post-doc for three years. It helped launching further contracts (…) There are also the European contracts. We have to ask for money and write a report every 6 months. It means a lot of meetings. (Professor – Biology-Paris)
>
> I try to collaborate with industry. I look for interesting relevant projects in the industry sphere. It is difficult and takes a lot of time. You must have contracts, identify subjects, answer calls for proposals, write reports at the end of the contract (…) It took a month to prepare these contracts. It means meetings and travels. About 240 hours. I have to organise the meetings, go there and write the minutes. (Professor – Physics-Province)

Most of the interviewees feel that this quest for funding influences their research agenda, and limits their pursuit of topics they consider interesting and/or important. They feel constrained by instruments such as project schedules, because they oblige them to plan their activity, fix in advance the number of manipulations, and respect delays, while their activity, according to them, should first of all be steered by the uncertainty of the success of experimentations, as well as of their number, length, and potential to produce relevant results. Working with firms can also have further consequences, such as having to delay academic publications, when writers have to wait for the validation of their results by their contractual partners or for patenting. As a whole, biologists seem less critical than physicists about these evolutions.

> We will start working on yeast in order to improve its metabolic function for this or that concrete use. This does not exclude more fundamental issues. It is not only about favouring production, but also about understanding how it works. But the advantage of applied research is that it brings money. (*Maître de conférences* – Biology-Paris)
>
> Now, I work with the industry, five or six firms interested in building motors and producing materials. I do not accept everything that they ask for. It is not easy to gain their confidence. For them to express demands, they first have to trust us. This is not easy to build (…). Once it is there, fidelity follows. (Professors – Physics-Province)

In the two disciplines, research is always described as a set of specialised tasks carried out under the direction of a project leader (generally a professor), managing some *maîtres de conférences* who themselves control the experimentations carried out by postdocs or doctoral students. Therefore, the competition for human resources is a crucial issue. The more the tenured staff is engaged in fund raising, the more they need technicians, doctoral students, or postdocs to achieve the experimentation tasks. Due to the declining number of students in sciences, biologists, and also physicists to a greater extent than before lack workforces. They thus develop strategies for attracting students: they teach graduate courses to gain their interest; they negotiate supplementary retributions for their doctoral students, when they get a contract with a firm, etc. But it is not sufficient enough.

> If we do not have doctoral students, our research activity slows down, because we have no assistants. We have master's degree students working for three months, and doing experimentations. We try to attract them. But they prefer leaving for the industry and for a CIFRE fellowship.[6] It is twice what they get from a ministerial fellowship. They leave for the industry. We lost two of them. I agree that it is better for them. (*Maître de conférences* – Physics-Paris)
>
> Doctoral students work in a programme. If I have no doctoral students, I can still continue for three or four years with the existing data, but there will be a decline in my scientific production. They are crucial for us. You can work without them, but not at the same level. (Professor – Biology-Province)

French faculty members in physics and biology thus, first of all, identify themselves as researchers. It even applies to those, who recognise they are no more research active, because they always present their situation as atypical, not in conformity with the "right" model. Most physicists and biologists also share a traditional conception of research, close to what M. Gibbons and his co-authors (Gibbons et al. 1994) would describe as Mode 1, even if their current practices are not in agreement with the latter. With research at the core, training, and administration tasks are considered as time away from research. Even among physicists, who are experiencing a large decrease in the number of students, teaching is described as time consuming, but inevitable for getting top students to their labs. This position is, again, stronger among physicists than among biologists. Although they faced considerable decline in the number of undergraduates, and experienced disaffection for doctoral studies, the curricula in the physics departments under study remained supply-driven and strongly oriented towards training future researchers.

Nevertheless, biologists and physicists both consider they do not have enough time for research, whatever the time they succeed spending on it, while they never express such feelings about teaching. They often regret that newly recruited *maîtres de conférences* have as much teaching as professors. This is closely linked to the understanding they have of a "normal" career. It is, first of all, research-based, and the first years on a permanent position should allow young academics to prepare their *habilitation* (kind of second Ph.D.), when they are around 35, to become professors before their forties.

[6] These fellowships consist of a tripartite partnership between a firm, a lab, and the French ministry. They have mostly applied orientations, and are equally funded by the firm and the ministry.

7.2.3 Historians

French historians experience a completely different situation. Teaching and research are perceived as far more imbricate: historians often teach a period or an area of specialisation, which is close to their research topics and they do not regard these two as separate activities. Even if what is taught to undergraduates is of course less specialised and research related than that taught to graduates, they often use the same literature for their classes and their research. As a result, historians often have difficulties in clearly identifying the time they spend on research and the time they spend on teaching.

Although the French higher education policies are pushing for the creation of research centres in human and social sciences, the notion of labs still has no meaning for historians. They, not surprisingly, remain attached to the highly individual character of their research activity. The relationships they have with their doctoral students are, for instance, far from teamwork: the latter are often not present in the lab or in the department, and their Ph.D. work is not part of the research programme of their supervisor.

> The theses are related to my research domain, but not to my own research, which is too difficult. Students should not be included into research programmes. I think it is bad for them. (…) I never proposed a subject with the thought that it could be useful for my own research. (Professor – History-Paris-Suburb)

The same holds true for teaching. Even in the department where lecture courses can only be given by the professors, and section meetings related to the lecture courses are left to the *maîtres de conferences*, collective work between the professor in charge of the lecture courses, and the *maîtres de conférences* is most of the time quite reduced: the professor just gives the outlines of his/her course to the *maîtres de conférences*.

> I have the outlines of his course and the bibliography. I look for texts and documents related to the course. (…) I give him the list, but I do what I want. (…) If I want to know how far he is in his course, I can ask him. I ask the students. I only meet him by chance. (*Maître de conférences* – History-Province)

Their autonomy concerning their research agenda is even larger, and in this sense their expectations meet their practices. Historians say they are free to decide on the research they will develop, and feel independent from any economical or institutional environment. Their department as well as the local or national public authorities provide them with some minimal support, but they mostly finance their research by themselves, and many use "tricks" to subsidise their work, such as choosing conferences in places where archives are located, confusing holidays and research locations, etc.

> I pay my research with my salary. When I go to Roma, I pay for it. My institute helps me: It pays for the flight. Unlike scientists, we do not normally look for other resources. A book by a historian does not earn money. With the thematic I am working on, I can not expect a lot of support. (*Maître de conférences* – History-Province)
>
> Archives are crucial for us. Before I was selected to the Institut Universitaire de France, I financed my research myself. I bought my computer. I pay for the photocopies of my documents or papers. I have been able to find plenty of things in Paris, but when I worked on monuments I went on vacations to places where they are located. My holiday budget is my research budget. (*Maître de conférences* – History-Paris)

Their main constraints and claims are material (concerning access to sources, for instance). But within these constraints they consider they have real latitude in conducting their research. They can work at their own rhythm, and they do not have to respect contractual delays. This is reflected in the conception they have of what a career in history is. It is a long-term perspective in which *habilitation* is not only a necessary step to professorship, but a chef d'oeuvre resulting from many years of research. It is therefore exceptional to become a professor before forty, and gaining this promotion around fifty is considered normal.

7.2.4 Business Studies

The rather strong internal coherence in conceptions and representations observed among the three first disciplines does not apply to business studies. They are characterised by some divergences and ambiguities.

The main line of conflicts deals with the definition of what research is. This rather recent discipline has not developed on a strong unified paradigm and common methodologies: as a result, the data analysis and mathematical models used by academics in finance have little to do with the qualitative methods used by some of their colleagues in marketing. But on top of that, there exists a debate linked to the nature of the relationships this discipline entertains with its environment. For historical reasons (Pavis 2003) these relationships have always been very imbricate, and it is not rare to meet faculty members who have worked in firms before becoming academics. In contrast to the isolation of historians, and the quest for funds led by physicists and biologists, business studies are confronted with a strong demand from public and private firms, professional associations, local authorities, and consultancy firms looking for competences in the different domains covered by this discipline (finance, marketing, accounting). While some of the interviewees consider this belongs to their academic identity, others plea for a more distant and "academic-driven" positioning.

For the first group, the intertwined relationships with private partners are a fundamental pattern of research in business studies. Developing research contracts and even perceiving personal revenues is part of their work, and part of what singularises this discipline from others. As a result, their research agenda is and must be strongly influenced by external demands, which have an impact on research issues, methodology, and products. These academics consider they have to be responsive to the problems expressed by their contractual partners, and produce useful results. For some, this is as important as publishing papers in well-known journals. Others are less radical, and think that the satisfaction of their clients (in a kind of consultancy relationships) should be conciliated with the production of academic results. They recognise that the thin line between consultancy and research is difficult to manage. Different behaviours are observable: young *maîtres de conférences* generally value the research side, and think of the transformation of results into academic publications in order to satisfy the criteria of a career, while those who have abandoned career ambitions lean more towards

consultancy and in some cases, their revenue as faculty members represents a small part of their income.

> The research on this firm is very close to consulting. The report we gave to the firm, is consultancy. It is action-research. It is consultancy or so, but with production of knowledge. The consultancy mission is simultaneously a research. It is very interesting for us. When we have to come up with a field study, the data are more difficult to get than when a firm asks us to carry out a study, and gives us all the data. We therefore practice consultancy, find solutions, and transform this into academic work through publications. (*Maître de conférences* – Management NewUniversity)

For the second group, a very different conception of the discipline should be adopted. They militate for a "scientific turn" (as they say) leading to a disconnection between research and external demand, the sole publication of theory-based papers, and the introduction of what they call "pure academic criteria" close to those used in natural sciences (impact factors, citation index, etc.). Recruitment of academics, who previously worked in firms, should also be limited. This position is of course criticised by those, who consider that their discipline should not be cut off from the stakeholders, for which it produces knowledge (i.e., firms). But many think that the "scientific" conception is gaining more and more support in the research assessment bodies or in search committees. They fear their discipline is becoming more academic.

Disagreements about teaching are not as strong, but can nevertheless be traced back to the willingness with which they respond to the high demand for training. Business departments are overwhelmed by teaching requests: an increasing number of students want to study management, there is also a strong claim for further education in management, and other disciplines (engineer schools, STAPS, etc.) express demand for management courses for their students.

> We teach management everywhere. We have more than 800 supplementary hours to give. It is so big that we can't. (…) We told them we can't. There are – and will be – no new positions in management. It is worth looking for outside instructors. (professors – Management-NewUni)

At Management-NewUni, the pressure is so high that a faculty member is in charge of coordinating the demands, allocating them, and managing the derived supplementary hours to be given. In the three departments, most teachers accept a lot of supplementary hours, which provides them with some extra-revenues. Some business studies specialists recognise they reach 200–600 supplementary hours[7] a year! Despite this heavy workload, faculty members in business studies nevertheless complain less about the time involved in teaching than physicists and biologists. They often present teaching as a rather technical activity: the content of their classes is rather standardised, and does not need heavy adaptation, when they have different publics (initial training versus further education, for instance) or require collective work and coordination. Also, they more rarely change their courses compared to their colleagues in the three other disciplines.

[7] When the number of permanent teachers is too small in relation to the number of students, the department receives a budget to pay supplementary hours, which can be given to the permanent staff (and paid extra) or to the contractual teachers.

> The course "introduction to management", once prepared merely requires adjustments. It works by itself. I have given it for four or five years now. I know it by heart. I change the examples. For this course, on top of the hours spent in front of the students, I just have to complete the preparation of the exam and the corrections. (*Maître de conférences* – Management-NewUni)

This heavy teaching load is rather well accepted, and teaching can easily become the principal activity of many academics. In fact, this reflects the coexistence of two different career trajectories in this discipline. The first one, which is also the more prestigious, includes passing the highly selective *agrégation du supérieur en gestion*[8] to become a professor (often before 35): this implies, for the candidates pursuing this career, a strong emphasis on research, no (or few) supplementary hours in teaching, high investment in preparing the exam.[9] The second one consists of refusing to pass the aggregation, and developing specific competences either in consultancy or in training. We do not have data stating how many business academics are not research-active, and whether this percentage is higher than in other disciplines, but it is important to notice that those who took this path do not feel like being "deviant" or different from those choosing the "normal" trajectory. They might even be rather negative about the more academic, research-oriented model some of their colleagues are trying to impose.

To sum up, the aim of this first section was to identify the specificities of each of the four disciplines under study, concerning their perception of the three main domains of activity academics have to achieve. We thus showed that the disciplines do not have the same conceptions about research and teaching, or administration, to a lesser extend. Scientific identities, therefore, do not only rely on epistemic or cognitive elements linked to the scientific activities, but also have an impact on conceptions about the interplay between the different sets of tasks academics are involved in. Furthermore, these conceptions are also linked, within each discipline, to a shared definition of what an objective career (Hughes 1958; Becker 1963) should be.

7.3 Variations within Disciplines and Some Factors Explaining Them

Despite these discipline-specific discourses and representations, other important results of the study include the gap between the relatively coherent conceptions and attitudes attached to a discipline, and the high variety of work practices. Two physicists claiming that research is the core activity may spend their time and organise their

[8] The *agrégation du supérieur* is a national, very selective exam that academics in business studies have to pass after they presented their *habilitation*. Only a small number of the examinees (determined by the number of professor positions opened by the ministry), i.e., those with the best rankings, can become professors.

[9] The candidates must acquire wide knowledge of the whole discipline, but also incorporate the formal and informal rules of the successive tests, which this *agrégation* consists of.

work in very different ways. Variations in the time dedicated to research, teaching, administration, variations in the number of hours worked, variations in the precise tasks involved in research (or teaching), or variations in the ways different tasks are allocated, are more than frequent within a specific discipline. Different factors can explain this variety despite the (rather) coherent identity, which can be attached to each discipline.

7.3.1 Institutional and Contextual Factors

A first set of factors is linked to the existence of two groups of tenured staff in France: the *maîtres de conférences* and the professors. The latter represent the ultimate stage of the career, which some of the former will never reach. In theory there are no hierarchical links between the two groups, and the professors are not the supervisors of the *maîtres de conférences*. But they are not equal either: according to the texts regulating the two groups, some tasks (such as lecture courses, for instance) should primarily be achieved by professors. Primarily, but not exclusively. Thus, very different arrangements may exist from one department to another.

We in fact met three different groups of departments crossing the four disciplines. In the first group (History-Paris-Suburb and Physics-Paris), there is a long tradition of no formal division of work according to the status. Polyvalence prevails. The *maîtres de conférences* and the professors teach undergraduates as well as graduates, have the same administrative responsibilities, and are engaged in the same research activities, including the management of research contracts and calls for proposals for young *maîtres de conférences* at Physics-Paris. This is well accepted in the two departments, and the organisation of work mostly relies on personal preferences, leading everyone to work with the persons they prefer.

> We prefer everybody teaching undergraduates. Professors could have decided to specialise in graduate studies, but we decided that everyone should teach the first year students and the CAPES. Those who want to organize a seminar can teach one, if there are enough students. It is a tradition. We all accept it. (*Maître de conférences* – History – Paris-Suburb)

In contrast, another group of departments (Biology-Paris, Biology-NewUni, History-Province and History-Paris, Physics-Province and Management-Province) practice a formalised division of work which concerns teaching, management of the department, responsibility in study programmes, and leadership of research activities (*Maîtres de conférences* being placed under the control of professors in biology and in physics).

> Hierarchy does not come as a boomerang here. There is etiquette, a protocol. There are professors and non professors. We do not mix. It is restful. You have to integrate the rules. It surprised me, when I arrived, but I received an education that helped me to adapt (…) I am completely used to this. It is very efficient. (*Maître de conférences* – History-Paris)

The third and the last group (Physics-NewUni, Biology-NewUni, Management-NewUni, and Management-SmallUni) have a strong preference for division of work

based on status: professors should teach lecture courses and *maîtres de conférences* section meetings; department chairs should be chosen among the professors, etc. But exceptions to this rule have been introduced, because these departments generally have a small number of professors, but a large number of *maîtres de conferences*. The former thus have to delegate some of their tasks to the latter. At Management-NewUni, there is, for instance, only one professor, and *maîtres de conférences* were asked to take the responsibility of some study programmes.

It should be stressed that according to the disciplines, the domains on which a division of work can be introduced and specific tasks allocated to specific groups, differ. In history, it only concerns teaching, the supervision of students, and administrative activities. At History-Province and History-Paris, for instance, the *maîtres de conférences* do not teach lecture courses, and what they teach in section meetings is defined by the professors. In the three departments, they can not supervise doctoral students, and if they may supervise students preparing a *maîtrise* at History-Province and History-Paris-Suburb, it is not possible at History-Paris.

> For the courses, we meet by historical periods at the end of the year. The professor responsible for the period proposes a teaching service that we more or less accept. He defines the broad lines. We may discuss the matter with him and adjust. It generally works well. (*Maître de conférences* – History-Province)

The same holds for pedagogical and management responsibilities. They are all completely assumed by the professors at History-Paris. In the two other departments a *maître de conférences* can become a department chair, because this function is not valorised, but all other functions are in the hands of professors. But in none of the three departments, does this division of work concern research. Because it is an individual activity, it is not affected by the status, and it is left under the responsibility of each faculty member, be it a *maître de conférences* or a professor.

In physics and biology, the division of work among professors and *maîtres de conférences* also affects teaching and administrative tasks. Professors are most of the time in charge of the coordination of the study programmes (especially for the *maîtrise* and the graduates and doctoral programmes), and chair the departments and the research labs. But, unlike with historians, research activities are also affected by this division of work. The *maîtres de conférences* work with the doctoral students, and follow their work under the supervision of a professor, who is in charge of raising funds and writing projects. As mentioned above, this traditional model nevertheless experiences transformations. The increasing need for external money leads to the *maîtres de conférences* being more and more frequently asked to participate in this task, too. As a result, the latter tend to practice manipulations less and less, to leave them to the doctoral students, and to concentrate on analysing data and writing papers. This delegation of work is generally well accepted by the *maîtres de conférences*, because they gain autonomy vis-à-vis the professors. The distinction between *maîtres de conférences* and professors thus tends to blur in research activities in these two disciplines.

In the business studies departments, as with historians, the individual character of the research leads to no clear division of work according to status. But this is also true for teaching because, according to our interviewees, the difference between

lecture courses and section meetings is not clear. Moreover, the small size of the two studied departments (Management-NewUni and Management-SmallUni) provokes an increased polyvalence for the purpose of coping with the lack of professors, even if administrative, scientific, and pedagogical responsibilities are mostly assumed by the professors. The same holds true for the supervision of students: professors supervise the Ph.D.'s, and the *maîtres de conférences* may supervise the *maîtrise* thesis.

The comparison between the four disciplines thus shows that a strict division of work according to status is more frequent concerning administrative activities than in teaching, and more frequent in teaching than in research. When the latter is carried out individually, there is no clear allocation of research tasks according to status. Nevertheless, the specific culture of each department, whatever the discipline concerned, and the specific situation it is confronted with, also has an impact on the way tasks are allocated, and on the level of polyvalence or the degree of division of work which prevails. Institutional and contextual factors counterbalance the discipline-based specificities.

7.3.2 Variations Linked to Individual Trajectories

Despite the structuring influence of these different factors, the division of work remains rather informal and not very strict in French universities. Within the same department, two individuals of the same status may carry out rather different tasks because they can choose their tasks. As a matter of fact, the allocation of work and the way each academic will arbitrate among his/her different tasks also depends on individual orientations or personal projects.[10]

First, some academics are involved in a career project, which is in conformity with the perceived "normal" objective career. This is, for instance, the case with young faculty members in business sciences, who want to pass the *agrégation du supérieur en gestion*, or physicists and biologists preparing their *habilitation* in their mid-thirties. In French universities there are no strong collective or managerial incentives to do so, and such orientations rely mostly on individual will. Nevertheless, such projects are often supported by collective arrangements which are, most of the time, accepted by the academic community of the department.[11] In business sciences, for instance, despite the strong demand for teaching in management, one agrees to protect the young colleagues, who prepare the *agrégation du supérieur en gestion*, by discharging them from supplementary teaching hours as well as from administrative tasks, even if it means a heavier work-load for the

[10] We will not try to identify here, when such orientations occurred or why they happened. This would require more biographical kinds of interviews, while the interviews conducted for this study essentially centred on work practices.

[11] When such agreements do not exist, academics may, providing they can stand the inherent tensions linked to such a choice, refuse supplementary hours or administrative tasks.

others. The same can be observed among physicists and biologists, when they have to prepare their *habilitation*. Their colleagues accept to find arrangements leaving them time to focus on their research activities, and to write their *habilitation*. Such collective agreements are more or less formalised from one department to another. For instance, it is accepted (even if illegal) at the Biology-Paris that newly recruited *maîtres de conférences* shall teach only 150 h per year during 3 years in order to have enough time for their research.

A second case concerns academics, who are not research-active, who do not expect further career developments (although many of them are *maîtres de conférences*), but are strongly committed to collective tasks within their departments. They are generally more involved in teaching activities (including teaching coordination), technical, or administrative tasks than others. Most of them consider this a result of a voluntary personal choice, or the consequence of a specific situation they have faced and accepted to manage. In other words, nobody really asked them to choose this; they just did it, or found it interesting. Such "choices" are of course very convenient for the other colleagues in the department, who do not have to assume such tasks. In such cases there is also a form of collective agreement in the group for this "voluntarily chosen" repartition of work.

> I am in charge of the undergraduates for the university branch.[12] It was a call. I wanted to do it. I was a school teacher previously. I was interested in working with small groups. I find it interesting. I can organise things, influence them. I can carry out more personal supervision of the students. (*Maître de conférences* – History-Province)

Among this group, some say they deliberately decided not to become professors, because they did not want to experience the responsibilities and more administrative and managerial tasks assigned to professors.

> I do not know, if I want to become a professor. I would like to be more independent, but being a professor … They do not do research anymore. I am interested in research. I like doing experiments. There are many things I like in research that I am not sure I could do as a professor. I therefore hesitate. (*Maître de conférences* – Biology-Paris)
> To become a professor you have to be mobile I guess? It is difficult for me. We just bought a house. We have three children going to school. We feel great there. My husband works in Paris. I can't move. Therefore, becoming a professor is not my priority. What is important for me is to do some research. Working with people I like is more important to me. (*Maître de conférences* – Physics-NewUni)

Among those who are not (no more) striving for a "normal" career, and who invest in less rewarded activities, some do not think it was a voluntary orientation. They regret spending (or having spent) so much time on these tasks, and having missed the right moment to prepare their *habilitation*, and to apply for a professorship. They did certain tasks, because they felt it was necessary, but do not find this optimal for them in retrospect. They feel this way, when they think they have finally been trapped in this situation, and that nobody made them aware of its

[12] In some universities, some undergraduates courses are delivered in cities which are some kilometres away (sometimes a hundred) from the city in which the main part of the university is located. They are called "antennes universitaires" (university branches).

consequences. From this point of view, there is certain inequality between the departments, where the chair or some professors pay attention to their *maîtres de conferences*, warn them not spend too much time on tasks not valuable for their career, and recall them when it is time to prepare the *habilitation*, and the departments where nobody cares.

> I was lost. I write manuals, but I do not do research in the academic assumption of this term. (…) It is linked to the increased workload. That is what killed me. It is also linked to the development of research in finance. It became heavily mathematical. I quickly became lost. When you get lost, it happens very quickly. It happened when my workload increased. (*Maître de conférences* – Management-Province)

The last group consists of a few academics, who at one point of their professional life decided to restrict their engagement within their institution. They do the minimum (teaching in classes), but decided to limit their research activity or even, to completely abandon it.

> I should already have my *habilitation*. That is what my colleagues say. Some of them know that a position will be opened, and they hurry to finish their *habilitation*. I do not want to hurry. I would like to have *habilitation*. But doing another 300-page-book, I can't anymore. You have to prove again that you can do it. But I already carried out research. Why should I do it again? (*Maître de conférences* – History-Paris-Suburb)

Behind the shared representations and rather recurrent discourses attached to each discipline, we finally observe different ways of articulating the different tasks. In this section, we argued that these variations are linked, on the one hand, to some principles guiding the allocation of work within the department, and thus to institutional and contextual factors. But these principles are limited in scope. They are also rather weak and easily amended, if the context requires it. Therefore, we also stress the role of individual orientations. In a context, in which the allocation and division of work are not strongly defined by clear rules, there is plenty of room for individual strategies and self-definition of the content of work. In other words, even if there are objective careers, the trajectories of French academics, first of all, result from the subjective careers they (more or less voluntarily) develop.

The previous two sections lead us to conclude there is often a gap between the discipline-based identities, the individual practices, and trajectories. In other words, building on the distinction made by C. Dubar (2002), there are often tensions between the "identity for oneself" (self appreciation led on one's own trajectory) and the "identity for others" (conformity with the discipline-based identity). Some academics are satisfied with their trajectory, and show a positive "identity for oneself". It will be associated with a highly assumed "identity for others", when this path is in conformity with the objective academic career and the discipline-based dominant identities. In contrast, the trajectory will be in tension with the "identity for others", when this path is distinct from the objective one. Finally, some choose a situation of retreat and non-commitment: this is often associated with a negative "identity for oneself", as well as a negative "identity for others". Understanding academic identities thus requires understanding this mix between the discipline-based and the biographical identities.

7.4 Conclusion: Variations in Academic Work and Variations in Academic Identities

Despite the fact that the French academic profession is very weakly differentiated in terms of status, salaries, etc. (Enders 2001; Musselin 2004, 2005), it is rather remarkable to observe such a plurality of conceptions about academic activities, so many ways to manage them, such a variety in the organisation of teaching and research. As a result, academic identity is plural, and the two previous sections show that it varies according to three main structuring lines.

The first is strongly discipline-based. Biologists and physicists, for instance, share a common representation about their professional activity and, first of all, see themselves as researchers having to teach. For physicists, this dominant identity is associated with a conception of scientists as experts knowing what research is and what should be taught. Being more and more obliged to get into partnerships and contractual programmes, they deplore it modifies the content of their work, and consider it has a negative impact on their results and on the production of science. In general, they are rather close to the traditional "old-school" ideal-type described by J. Owen-Smith and W. Powell (2001) in their study of American biologists. From this point of view, they are somewhat different from the biologists, who are more open to interactions with the non-academic world in their research activity as well as to teaching. They mostly correspond to the "engaged traditionalists" of Owen and Powell (2001), who consider that academy and industry are distinct, but that academy is not threatened by commercialisation.

Historians also share a rather cohesive and dominant identity, but they consider themselves both teachers and researchers, not putting emphasis on a strict distinction between these activities. Furthermore, they mostly share the rather isolationist conception of physicists, but unlike the latter they can act in accordance with this conception, as they are not obliged to become attentive to external pressures, and can ignore them in their research activity, as well as in teaching.

In business studies, different identities are competing. They mostly differ in their definition of research, and in the nature of the relationships that academics in this discipline should develop with their environment. Thus, various definitions of what being a faculty member in business studies is about exist side by side.

A second structuring line is drawn by institutional factors. This refers, of course, to the process of work allocation in academia, and to the distinction introduced in the content of work, when one is *maître de conférences* or professor. Nevertheless, we observed that this process is not very strict, and it only concerns activities involving collective work. When a task can be developed independent from colleagues, status does not make a difference anymore. It is, for instance, the case with research activities in history and business studies, or with teaching in business studies.

A third structuring line consists of "biographical identities", i.e., career projects. The conducted interviews revealed that all the disciplines maintain a representation of what an objective career within each discipline is or should be. These conceptions have been interiorised by the interviewees, and they position themselves vis-à-vis

this objective career: they describe their own career path according to it, and develop a representation of themselves, which may be in contradiction with it. Nevertheless, the weight of subjective careers, and the influence of each individual construction of one's own trajectory seem stronger than the ones of the objective careers, thus demonstrating that academic careers have for long shared the characteristics of what some call boundaryless careers (Arthur 1994), and from this point of view, they may be a model for other types of activities (Baruch and Hall 2004).

Appendix Sample of the academics interviewed for the study

	History-Paris	History-Paris-Suburb	History-Province	
Professors	3	5	2	10
Maîtres de conférences	8	3	6	17
Total	11	8	8	27
	Physics-Paris	Physics-NewUni	Physics-Province	
Professors	6	2	5	13
Maîtres de conférences	5	3	3	11
Total	11	5	8	24
	Biology-Paris	Biology-NewUni	Biology-Province	
Professors	4	2	3	9
Maîtres de conférences	5	4	5	14
Total	9	6	8	23
	Management-NewUni	Management-SmallUni	Management-Province	
Professors	1	1	3	4
Maîtres de conférences	5	4	6	15
Total	6	5	9	20
TOTAL (including four further interviews in another Department of business studies)				98

References

Arthur, M.B. (1994). The boundaryless career: A new perspective for organizational inquiry. *Journal of Organizational Behavior*, *15*, 295–306.

Baruch, Y. and Hall, D.T. (2004). The academic career: A model for future careers in other sectors ? *Journal of Vocational Behavior*, *64*, 241–262.

Becker, H. (1963). *Outsiders. Studies in the sociology of deviance*. London: Free Press of Glencoe.

Becher, T. (1989). *Tribes and territories – Intellectual enquiry and the culture of disciplines*. Philadelphia, PA: Open University Press.

Becquet, V. and Musselin, C. (2004). *Variations autour du travail des universitaires*. Convention MENRT 20022007, ACI: Travail, CSO report, Paris.

Bertrand, D. (1993). *Le travail professoral reconstruit: au-delà de la modulation*. Ste Foy-Québec: Presses de l'Université de Québec.

Bertrand, D., Foucher, R., Jacob, R., Fabi, B., and Beaulieu P. (1994). *Le travail professoral remesuré: Unité et diversité*. Ste Foy-Québec: Presses de l'Université de Québec.

Clark, B.R. (1987). *Academic life, small worlds, different worlds*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching; Lawrenceville, NJ: Princeton University Press.

Dubar, C. (2002). La socialisation: construction des identités sociales et professionnelles. Paris: Armand Colin.

Enders, J. (ed.) (2001). *Academic staff in Europe*. Princeton, NJ: Greenwood Press.

Gibbons, M., Limoges, C., Novotny, H., Schwartzman, S., Scott, P., and Trow, M. (1994). *The new production of knowledge*. London: Sage.

Henkel, M. (2000). *Academic identities*. London: Jessica Kingsley.

Hughes, E. (1958). *Men and their work*. Glencoe, IL: Free Press.

Knorr-Cetina, K. (1996). Le "souci de soi" ou les "tâtonnements": ethnographie de l'empirie dans deux disciplines scientifiques. *Sociologie du travail*, *38*(3), 311–330.

Knorr-Cetina, K. (1999). *Epistemic cultures: How the sciences make knowledge*. Cambridge, MA: Harvard University Press.

Musselin, C. (2004). The academic workplace: Up to Now, It Is Not As Bad … But!. In Enders, J. and de Weert, E. (eds) *The international attractiveness of the academic workplace in Europe*. Francfort on Main: GEW, Materialen und Dokumente, Hochschule und Forschung, pp. 141–159.

Musselin, C. (2005). European academic labor markets in transition. *Higher Education*, *49*, 135–154.

Owen-Smith, J. and Powell, W. (2001). Careers and contradictions: Faculty responses to the transformation of knowledge and its uses in the life sciences. *Research in the Sociology of Work*, 10. Vallas, S. (ed.) *The transformation of work*. Greenwich, CT: JAI Press, pp. 109–140.

Pavis, F. (2003). *Sociologie d'une discipline hétéronome. Le monde des formations en gestion entre universités et entreprises en France. Années 1960–1990*. Dissertation, University Panthéon-Sorbonne.

Schimank, U. (1995). *Hochschulforschung inm Schatten der Lehre*. Frankfurt am Main: Campus Verlag.

Zetlaoui, J. (1999). *L'universitaire et ses métiers, Contribution à l'analyse des espaces de travail*. Paris: L'Harmattan.

Chapter 8
Culture in Interaction: Academic Identities in Laboratory Work

Martin Benninghoff and Philippe Sormani

8.1 Introduction

The present contribution is based on an ongoing ethnography of laboratory work in a physics and a genetics laboratory, respectively. The proposed ethnographic account addresses "academic identities" as a sociological issue by turning it into the following empirical question: *how, if at all, are academic identities relevant issues for laboratory work?* The curious neglect of that question in both higher education and ethnographic studies provides the reason for doing so.

The contribution, then, provides the building blocks of an appropriate answer to the raised question. Firstly, it discusses, from the ethnographic perspective of laboratory studies, the recent literature in higher education studies on the topic of academic identities. The reliance of that literature on interview accounts will be of particular interest. Secondly, the detailed analysis of differently situated activities will allow us to examine how laboratory members themselves achieve and exhibit the social organization of their laboratory, their working activities and respective identities. For instance, laboratory members' use of membership categorizations and their formulation of ordinary rules of conduct will be examined as two related ways of exhibiting the social organization of scientific practice. In conclusion, we will discuss the analysis with respect to the methodological issues it solves and the empirical results it provides.

A preliminary remark as to our methodology may be nevertheless suitable. Certainly, it will prove to be difficult to describe scientific practice from within its disciplinary relevancies via participant observation (especially if one lacks adequate training, as we do). That difficulty as such, however, does not challenge participant observation as a working solution to figure out what an appropriate answer to the stated question may look like: an answer that is detailed so as to recover laboratory work in its practitioners' relevancies, among which, perhaps, their respective identities of academic membership.

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8.2 Higher Education and Ethnographic Studies

Over the last decade, there has been a growing interest in academic identities as a topic of empirical inquiry in the field of *Higher Education Studies*, especially in relationship to research policy. By and large, however, that field of studies has neglected the investigation of research practices in the canonical sites of their ordinary achievement (e.g., laboratories). On the other hand, ethnographic studies have not considered in much detail either academic identities or research policy, at least not within the field of laboratory studies. Hence, this contribution examines that double gap in the literature, to start with.

8.2.1 From Interview Accounts to Field Studies Without Losing the Former

Recent studies in higher education have stressed the relationship between research policy and academic identities (Enders 2002; Henkel 2000, 2004; Kogan et al. 2000). In doing so, however, they leave out of the picture the actual locus of scientific practices, from bench work to the writing up of research reports and journal articles.

Based as they are on interview accounts, the studies in question exhibit what we may call a "methodological circularity": they start with operational definitions of academic identities and, then, seek and find them, at least purportedly so, as members' own interpretive devices in the considered accounts. This standard procedure, and the "documentary method of interpretation" it relies upon (Garfinkel 1967), allows the studies to confer an empirical status to their conceptual typologies (cf. Henkel 2000, as she distinguishes between "teachers", "researchers" and "managers" in academia). The procedure, taken for granted as it is continues to operate tacitly, that is, without any analytic specification of the actual practices which provide the possibility to identify the consulted practitioners in terms of the outlined typologies in the first place. Indeed, neither an analysis of the interview as a special kind of interaction nor a description of the mundane routine of laboratory work is offered. Therefore, the relationship between the two cannot be specified either.[1]

Addressing the foregoing shortcomings, our contribution does not restrict the descriptive analysis of "identity work" to interview accounts alone (Gubrium and Holstein 2001). Note, however, that identity work is only a *provisional gloss* for the various ways in which collaborating participants may have to display an organizational,

[1] One may object that the considered studies' aim is to investigate the relationship between research policy and academic identities, and not between research practices and academic identities. If that is the actual focus of the studies, the prize to pay seems rather high; all the more so as one *presupposes* research policy to determine academic identities, whatever the situated practices that constitute them (cf. Kogan et al. 2000). Is that to say you can or should be an academic without doing any work in particular?

occupational, or other type of identity to each other (e.g., an "academic identity"). Our analytic interest, then, is not so much in attempting to provide a uniform, a priori and purportedly omni-relevant definition of identity but rather to describe just how participants themselves display particular identities, locally relevant in and for the distinctive achievement of specific activities (e.g., in an "interview"). As any definition of identity may be considered to hinge upon the participants' work necessary to constitute it as a recognizable matter in the first place, such a definition cannot (and should not) be given prior to the analysis of that work. Conversely, the proposed descriptive analysis clarifies the practical logic of mutual identification – for instance, in terms of a "membership category" (see below, section 8.3.2).

In short, the contribution re-specifies and extends the analysis, insofar as it describes everyday laboratory activities in relationship to their conversational formulation in interview accounts. On the one hand, interviews provide access to certain characteristics of displayed identities, that is, those and only those which are exhibited in the course of an interview – with a little help from the interviewer, one may add. On the other hand, presumably, if "academic identities" are related to otherwise practical activities, interview accounts should be analyzed with respect to the practical field of scientific investigation under scrutiny. More specifically, interview accounts may be considered as a particular type of formulative activity among others within that field (such as providing a novice with instructions, or showing visitors around the laboratory). As such, interview accounts provide "embedded instructions" to a provisional understanding of the practices they formulate (Wieder 1974).

To avoid abstraction, as it were, any research interview has to be grounded in, related to and compared with ethnographic evidence on the laboratory work it formulates. Otherwise, an adequate understanding of "academic identities in laboratory work" may not be reached.[2]

8.2.2 The Ethnographic Focus of Laboratory Studies: Culture in Interaction

Diverse in outlook and orientation, laboratory studies have mostly, if not altogether, been based on ethnographic evidence (Knorr-Cetina 1994; Lynch 1993). The ethnographic focus, however stringent, witnesses the programmatic break with epistemological and philosophical perspectives on science, on the one hand, and the detailed study of research as a practical activity, on the other.[3]

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[2] Doing interviews alone, without any ethnographic grounding, brings with it not only the danger of conceptual abstraction but also that of empirical reification. That is not to say, of course, that ethnography per se is immune to this double problem, as both H. Sacks (1963) and K. Knorr (1981) pointed out a long time ago.

[3] B. Latour (1995), for instance, distinguishes between the study of science and the study of research – "science in action", as he puts it.

Studying research as a practical activity, moreover, does not mean to relate it to external factors from the outset (be they identified as "social", "economic", "cultural" or "political") but to describe and demonstrate how these factors may become relevant, in terms of typical resources and idiosyncratic methods, to collaborating researchers in the course of their specific investigations and local circumstances (that is, how they are identified, if they are, and oriented to, by the involved researchers themselves). Scientific research, in this view, may thus be considered as the practical management of "multiple constraints" in situ, for example, from within any actual, experimental practice under way (cf. also Pomerantz 1978). The same point is valid for laboratory members' following or subverting different, and sometimes conflicting, rules of conduct (related to, for instance, the timing versus the accuracy of a given measurement).

As K. Knorr-Cetina (1994, p. 147) phrased it, with respect to the political dimension of research, "laboratory studies show how the "constructors" themselves are reconfigured, not as a result of the political strategies of specific agents but as the outgrowth of specific forms of practice". Hence, laboratory studies stand in rather sharp contrast to the topical studies of higher education, briefly discussed above. Indeed, where the latter presuppose a relationship, however, plausible or dubious, between the changes in research policy and the formation of academic identities, the former turn that relationship into an empirical topic of ethnographic investigation "on the ground", that is, by examining situated knowledge production in particular laboratories. Focused on research as a practical activity, laboratory studies have however neglected the academic identities it may shape, question, or constitute.

The present focus on "culture in interaction" intends thus to remedy that neglect. Indeed, it concentrates not only on the cultural dimension of actual research, in terms of a tacit background of practical skills (as to "how to do X or Y"), but also on the interactional occasions of its situated use, and the "academic identities" they exhibit (as to "who is who", competent in, and entitled to, a given activity) – in short, the analytic focus is on the situations where the involved participants' membership categories become an issue for their ongoing activities. Membership categories, as the very expression suggests, point to participants' categories for displaying their membership in an organization or institution (e.g., a "laboratory") or, one may add, their participation in an ongoing activity (an "interview", "lab visit", etc.). In that sense, membership categories may provide laboratory members with typical resources for achieving and exhibiting, inter alia, the social organization of scientific practice in situ.[4]

[4] Another method for exhibiting the social organization of scientific practice is provided by lab members' formulations of rules of conduct. Its combination with membership categorization provides an important topic of investigation (see below). For a cogent technical introduction to membership categorization analysis, cf. Hester and Eglin (1997).

8.3 The Social Organization of Scientific Practice: A Laboratory Members' Contingent Achievement

One of the advantages of participant observation over interview accounts is that it gives "direct" access to the ordinary situations of everyday life in the investigated site; in the present case, the research laboratory.

In the following, our analysis will be restricted to the detailed examination of three types of interactional situations, as encountered in the course of our ongoing ethnography. Firstly, a laboratory visit will be examined for how the involved participants achieve and exhibit a meaningful social organization of the presented laboratory. Secondly, the laboratory members' conversational formulations of ordinary rules of conduct, among which interview accounts of such rules, will be considered as typical ways of instructing the participant observer to see and understand the social organization of scientific practice in a particular way. The analysis of those formulations will allow us to investigate their relationship to membership categories in perspicuous detail. Finally, the interaction between a "technician" and "physicist" at work will allow us to examine an important reason why and when formulations and categorizations become relevant for members at all – that is, when problems arise and responsibilities need to be established for their solution.

However different the examined situations may be, they all exhibit the social organization of scientific practice as a laboratory members' contingent achievement – an achievement that is contingent upon laboratory members' situated orientation to practical purposes at hand (e.g., "conducting a lab visit", "commenting upon a colleague", "doing an experiment").

8.3.1 The Laboratory Visit and the Organization It Accounts for

To start off his fieldwork, one of the authors of the present paper attended a public "lab visit" of the research laboratory to which he had been granted ethnographic access. The visit was organized by the local Department of animal biology ("local" referring to the specific, unnamed university at which the visited laboratory is based). For the organizers, the purpose of that manifestation was to present the laboratory and its research activities in genetics to interested members of the general public. At this occasion, conversational formulations of research practices must typically be provided by laboratory members, in response to a unique purpose: a comprehensive presentation of the specialized activities at the genetics laboratory. Therefore, the laboratory visit may be usefully investigated with respect to the stated interest: the social

organization of scientific practice, as exhibited and accounted for by laboratory members in situ.[5]

8.3.1.1 The Opening of the Laboratory Visit

An ethnographic description of the initial encounter may be offered in the first person singular, even though the sense-making practices to be studied rely upon *impersonal procedures of membership categorization*. The first person account, then, is a way of exhibiting all the better the impersonal character of these procedures.

Before attending the laboratory visit, I check the note addressed to members of the public potentially interested by the visit. The note states the disciplinary orientation of the laboratory ("molecular embryology"), the common techniques used and the research topics ("the role of specific genes in the mice embryo-development"). And, for practical purposes, the notice indicates the location of the visit: laboratory 2243 at the Department of animal biology.

Upon joining the assembled group at the meeting point, I notice a person who has already started to speak:

> "My name is Smith, but that's not important. You are at Brown's, in Brown's lab".[6]

Though only the names have been provided by the speaker, the members of the assembled group, including myself, as well as readers of the present text may have readily identified the speaker, Mr. Smith, as the "tour guide" and the other person referred to, Mr. Brown, as the "lab director". Why is that? For a start, the spatial disposition of the group members (forming a half-circle around the speaker), their observable activity (listening, not talking) as well as the initial utterance of the speaker (presenting himself to the audience) allow me to identify Mr. Smith as the "tour guide". However, I do not seem to be the only one having identified him under the auspices of that category. Indeed, the very fact that the other participants to the scheduled encounter have gathered silently around him displays a similar membership categorization analysis (which may, in turn, be reproduced by the reader, on the basis of the outlined description).

As E. A. Schegloff (1986) notes, *interactional openings* allow participants routinely to establish their entitlements and involvements in any projected encounter – in the present case, the laboratory visit. Bearing this remark in mind, we may ask why Mr. Smith, the speaking guide, downgrades the relevance of his

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[5] The other laboratory, located in the same university, had run a stand at the annual book fair. As none of us were available to attend to that event, we will focus on the lab visit. In both respects, it may be worthwhile emphasizing that the respective laboratories are obliged by the funding agency to organize public events of the mentioned types. Both are financed by a program, stressing (among other things) the importance of public understanding and social relevance of scientific research.

[6] In line with standard practice, and to respect the anonymity of the participants involved, we have changed their names, and we have not indicated the actual location of the investigated laboratories.

name, while upgrading that of Mr. Brown, who presumably is the laboratory director. The answer to that question may be found in the situation itself, that is, in the way the involved participants organize their activities so as to achieve their mutual understanding then and there. As indicated, there are visual grounds for categorization work to be done; the category "tour guide" may be inferred by the participants from their respective positions (the former facing the latter, assembled in a half-circle). The relevance of *that* category may thus be established, at least by and for the gathered audience, prior to its incumbent's talk (rather than any other category's relevance, e.g., "lab member" of this or that kind). The particular evaluative design of the subsequent utterance may then be understood as marking the unique relevance of category "tour guide" for the practical purposes of the visit, on the one hand, and as indicating the relevant category of member, the "lab director", for further inquiry concerning the laboratory beyond its present visit, on the other.

Instead of dismissing the episodic character of the analyzed situation, we may consider the dense ensemble of clues it provides regarding the social organization of scientific practice. To start with, it suggests that any member of the laboratory has to be able to conduct a visit – whatever his membership category in the formal organization of the laboratory ("doctoral student", "post-doc", etc.). It may well be the case that the legitimate delivery of laboratory visits is restricted to a particular category of laboratory members (e.g., "post-docs" rather than "doctoral students"). The examined situation, however, exhibits that restriction as made irrelevant by the involved participant(s), even if we found out otherwise and elsewhere about its routine operation. Further, we may note that the entitlements and involvements established in the opening sequence exhibit a social distribution of expectable knowledge, between the "tour guide" (supposed to know and explicate) and the "visitors" (supposed to be unaware of the workings of the laboratory). The participants' interactional focus and practical alignment in terms of the identities enacted in situ (e.g., "tour guide" and "visitors") can then be understood as providing them with grounds for the consistent application of further categories (e.g., "expert" and "lay persons"). The initial emphasis by Mr. Smith on his "tour guide" identity appears thus as a way of indicating the restricted scope of his entitled expertise, specifically designed for *this* laboratory visit, *its* participants and *their* purported lack of knowledge (on "recipient-design", cf. Sacks et al. 1974).

Conversely, would he identify himself as (for instance) a "post-doc student" only, this categorization might have awkward consequences for the unfolding visit: firstly, his tour could be heard as partial (e.g., "from the perspective of the post-doc, challenging the lab director"); secondly, that partial character could be seen as inconsistent with his expected expertise (in terms of an informative, concise account of the laboratory's activities). Highlighting one's situated identity as a "tour guide" is thus a way of forestalling any such consequences, while displaying respect to a social organization of scientific practice at the presented laboratory (that is, the social organization of the legitimate ways, categories, and situations through which to account for it).

8.3.1.2 The Laboratory Visit in Its Course

The subsequent visit of the laboratory is divided into three parts, three talks being presented in three specific locations inside the laboratory. The first talk is given in a small office. The second one takes place at the workbench, and the last one, downstairs, in the animal-room. The examined opening of the laboratory visit allowed us to specify the *programmatic relevance* of the membership categories "tour guide" and "visitors", as well as his expectable expertise and their presumed ignorance (cf. Sacks 1992). The following analysis of the laboratory visit exhibits how the involved participants orient to that programmatic relevance in its course.

As already noted, the first part of the visit takes place in a small office. Mr. Smith starts his talk by saying: "What we are doing is (…)". During about an hour, he explains the research done at the laboratory with the help of a power point presentation. His presentational activities appear as congruent with his initial category of self-identification, "tour guide", as well as the intended public, the "visitors" of the laboratory. Hence, he may share his recipient-designed knowledge of the laboratory without need for any further justification as to why he should do so (for instance, as to why he should simplify things).

Moving to the second part of the visit, Mr. Smith initiates it with the following sentence: "ok, now the instruments". For the purpose of their presentation, the audience has followed him from the small office to the workbench. Mr. Smith, the tour guide, gives the floor to Ms. Dorothy, for her to present her last manipulation. Visitors are then given the opportunity to inspect an "ES stem cell" with the help of binoculars. A hand-drawn sketch provides them with ad hoc instructions on how to inspect the cell. The hand-drawn instructions given by Ms. Dorothy, as to "what we should see", hints at the background skills, necessary to the relevant inspection of the cells, as well as our purported lack of these skills (as occasional laboratory visitors, not regular members, nor professional biologists, for that matter). When more general questions are asked, she hands the floor back to Mr. Smith, for him to answer them. This episode is interesting insofar as it exhibits how the involved participants flexibly draw upon their membership categories to design their respective activities. The category "tour guide" provides Mr. Smith with a resource to approach, present and asks Ms. Dorothy to briefly explain her manipulation. Conversely, Ms. Dorothy can turn the floor back to Mr. Smith, not only in his capacity as a tour guide but also as a laboratory member and competent specialist in genetics. By doing so, she provides the group of visitors with clues concerning her own position as well as the categorical membership of Mr. Smith within the laboratory (e.g., "project leader" rather than "research assistant"). Yet, the local availability of such external categories is provided only on the basis of the unfolding visit and the activity – relevant categories it generates (i.e., the paired categories of "guide" and "visitors"; cf. also Watson 1994). Another example of the local availability of external categories can be given: during the power point presentation of the laboratory's research activities (see above), Mr. Smith has a rather technical conversation with one of the visitors. After a moment he stops and asks the other members of the audience: "Do you understand what we are talking about?" By

doing so, he does not only mark the specialized nature of the inserted conversation but also the recipient-design of the presentation so far, designed as it has been for a lay audience. The specialized nature of the inserted talk allows the other members of the audience to identify the involved participant as a special member in turn (e.g., a "graduate student in biology").

Finally, Mr. Smith invites us to move on: "now, let's move down to the animal-room". Here, he presents what appear to be the key results of his ongoing research, by showing the foot of a genetically modified mouse. He closes the visit by emphasizing that the presented research is only a part of the laboratory director's overall project – thus, downgrading again his own involvement and importance, for both presentational and organizational reasons, one may add and which may be further analyzed.

8.3.2 Conversational Formulations of Ordinary Rules in Laboratory Work

The sociologist, without any disciplinary training (in biology or physics), is in a similar position to the lay person (to whom experimental practice may appear as an utterly esoteric domain). This problem, however, is not one of sociological analysis alone. Sometimes it occurs as a scientist's issue as well. How is a biologist, for instance, supposed to explain his research activities to the interested nonspecialist? The preceding section described a series of procedures for doing so (among which the suspension of one's category as a "scientist" and the activities it may be associated with). Said that, the stated problem remains intact: how is it possible to observe and describe experimental practice in laboratory work, if that very practice is not accessible, from the outset, to the professional sociologist? A practical solution to the raised problem is participant observation and, as part of it, the descriptive analysis of conversational formulations of ordinary rules of conduct.

8.3.2.1 A Practical Solution: Participant Observation as Disciplinary Socialization

Participant observation, as the one we have been involved in since the initial laboratory visit, bears the promise of disciplinary socialization with the working routines of the laboratories studied: laboratories in genetics and in physics of condensed matter, respectively. From the outset, these working routines were available to us in at least two ways; via their *constitutive activities*, on the one hand, and their *conversational formulations*, on the other (cf. Garfinkel and Sacks 1970). The former include both ordinary activities (such as "getting to work on time", "having lunch together", "having a coffee", etc.) and specialized ones (such as "proceeding with STM, scanning tunneling microscopy", etc.). The latter have the former as their talk's topic (via, for instance, oral instructions to novices on "how to proceed with STM").

In this respect, then, the interviews conducted with laboratory members provide a particular type of conversational formulation of laboratory routines and their constitutive activities (other types include laboratory visits, instructions to novices, and so on). Having said that, our ongoing ethnography has focused so far on the *mutually instructive character of participant observation* (of the routine work, done on a daily basis, in the laboratories considered) *and participants' talk* (its formulation, on different occasions, either from within its course or during the "time out" of a qualitative interview).

8.3.3 Formulation of Ordinary Rules of Conduct

A standard way for participants to formulate their daily work routine has been, and still is, in terms of ordinary rules of conduct. Among one of these formulated rules of conduct was the following one:

"(…) you know, at this lab, it's everyone for himself"

Formulated by a postdoctoral student in physics during an interview, the rule allows not only us but also the physicists themselves to recognize and express the social organization of their ongoing laboratory work, insofar as it provides them with the distinct accountability and requirements of their own experimental practice. This provision happens to be made not only in a concise form, as the above extract suggests, but it also allows the interviewee to elaborate and explicate the formulated rule. As the postdoc went on to explain, "there comes a moment when you are alone" – that is, when you will be required to solve a physical problem individually, as he further explained.

The ordinariness of the rule is exhibited, on the one hand, by the very fact that laboratory work keeps on documenting its own silent operation (that is, without any members' formulation of the rule) and, on the other hand, by the rare occasions of its members' formulation (not only in interviews but also in collegial discussion, that is, among and by other laboratory members, too). Consider the following examples, of how the rule is exhibited in the detail of the ongoing work routine, while providing a summary expression thereof (both in the physics and the biology laboratory):

Firstly, every laboratory member does his or her job at a personal work place (in the physics laboratory, this means a personal office space, as well as a privileged experimental device; in the biology laboratory, that means an individual workbench and a personal computer). Secondly, when working, laboratory members rarely talk to each other. Conversations are scarce (the focus is on the ongoing manipulation or experiment, be it in genetics or solid-state physics). If a verbal exchange occurs, it is mostly a brief one (either to be informed about a colleague's manipulation, or to ask a specific question, related to one's own experiment). Thirdly, laboratory members ask each other permission to use their respective instruments (in the biology laboratory, this concerns, for instance, the chemical materials that are placed in front of their respective workbench). Finally, laboratory meetings are so designed as to have

their members, notably doctoral students, present their *individual* research projects (whatever the administrative points raised or the casual conversations had). Having provided four examples, we may indicate that the list is virtually open-ended.

Further rules of conduct may be found in further formulations. Consider the following joke, by a laboratory member during a lunch break, at the genetics laboratory: "you see, there is Brown with his stop-watch, checking who's the fastest among us". The joke, metaphorical as it may be, expresses not only the rule "everyone for himself" (alone on the racing track), but also two other, possible rules. That is,

> "Be competitive" & "Be efficient"!

However, the stated rules are tentative formulations by ourselves as participant observers – the former may be elaborated, in line with the provided metaphor, as an instruction to "run faster, to be the best"; the second, as an instruction to "gain time" or "avoid losing it". Tentative as they are, the formulations may be and sometimes indeed *appear* in line with actual conduct. Consider how the following conversation exhibits the actual operation of the stated rules:

> John: Have you finished already? (He seems quite astonished.)
> Peter: Yes
> John: Did you do it in 30, 30, and 15 minutes?
> Peter: Yes, 30, 30, and 15
> John: I have not finished yet
> Peter: Time flies for some but not for others (laughing). I prepared the materials before the manipulation.

Again, the respective rules – "everyone for himself", "be competitive" and "be efficient" – are expressed through a joke. In the present case, two doctoral students in the genetics laboratory, John and Peter, have been doing the same "Southern Blot" manipulation, allowing them to make visible and identify a fragment of DNA (ideally so, at least, since John has not finished his manipulation). The discursive format of the rules' expression – a further joke – may again count as evidence for their ordinary character – jokes being the type of things you are supposed to understand "at a glance" (more accurately, it is their immediate understanding that witnesses your competent membership in the local culture of their interactional use). Taking a reflective stance, one of the doctoral students explained later to us that "in biology, time is key. You are constantly in the process of racking your brain to gain time on the manipulation, on how and what you can do".

The preceding examples raise the question of how formulations are involved in the constitution of the activities they summarize, that is, their recognizable character. Note, in that respect, that they hardly specify the experimental work in its identifying detail. The latter is presupposed as a tacit background of practical skills – which, in turn, may be formulated in terms of a summary account of its efficient mastery, such as "I prepared the materials beforehand".[7]

[7] An interesting comparison is to be made here with tutorials, be it in genetics or experimental physics, where "preparing the materials beforehand" may be identified as a form of cheating. W. Sherman (2007) points out an instance of such identification in a physics primer.

8.3.3.1 Category-bound Activities and Category-bound Rules of Conduct

Ordinary rules of conduct, as described in their formulation and operation so far, are often category-bound, in a similar manner as the activities they gloss (rules providing a shorthand way of referring to practical activities). This remark may prove to be helpful for investigating the practical relevance of "academic identities", as alluded to or displayed through particular membership categories (e.g., "researcher" or "teacher"). Let us start, then, with considering how laboratory members themselves formulate the internal relationship between category membership and ordinary rules of conduct.

If the rule "be efficient" is present in the genetics laboratory under study, one may ask if (and if so, how) the scope and application of the rule is differentiated according to the social category of its members (leaving aside the physics laboratory, for a moment). Consider the following interview statement by a doctoral student in biology:

> There is a difference between a post-doc and a PhD thesis, in the sense that someone who comes to do a post-doc in the lab, theoretically that's someone who wants to continue to do research. He would like his thing to work, to be published, if possible in a well-known journal and that *quite quickly*. Because you have money for a *relatively limited period of time*, if, say, you're paid by an external scholarship.

The rule "be efficient" is formulated, in the previous excerpt, as being pertinent for the category "post-doc" rather than to the category "PhD". That is, specific expectations and activities may be tied to that category, as a morally accountable, socially desirable, and/or sanctionable affair (expressible, here, in mertonian terms: "publish or perish"). Also, the internal relationship between the rule and one category of laboratory members implies a particular type of research and its planning over time, at least for the interviewed biologist. As he explains a little later in the same interview:

> It (i.e. research planning) depends on the risk factor, yes, and also on the factor related to the living organisms under study. In the case of an injection, for example, it depends on the way mice cross. If you do not recuperate enough embryos to inject, then inevitably it will be less effective than if you recuperate a lot. And that, typically, during the year mice do not cross in the same way. There is really a dead period. Or, you can get a disease in the animal-room. Well, there are thousands of things that you do not control and it is… you have to manage that. That's why, as I told you before, there are topics that are more risky for a post-doc than for a doctoral student who has more time. Not in the present lab, as most doctoral students want to start with a UK-type PhD thesis, which is shorter. In contrast to the classical thesis that we did before, that lasted five or six years. In that case, you have time to wait and see, even if you had things that didn't work out, you still have time in the end.

Rules are not only a matter of formulation, however. Quite the contrary, the primordial phenomenon is, in our view, how conduct is accountably achieved so as to become identifiable in terms of rules – that is, in a typical, habitual way of "seen but unnoticed" routine (Garfinkel 1967). In other words, technical activities in the laboratory may be achieved, by competent practitioners, without any need for spelling out or otherwise summarizing their internal organization. How to understand and describe those specialized activities remains thus a critical question, given our

lack of disciplinary training in laboratory work – we will focus on this point in conclusion to this paper.

8.3.4 Formulating an Activity in Its Course: Research Routine, Membership Categorization and Ordinary Rules of Conduct

Conversational formulations of research activities, as we have suggested, provide instructions as to "how to see them". Also, they may provide instructions as to "how to do them". In that respect, the distinction between constitutive activities and conversational formulations, drawn upon so far, is too simple for characterizing experimental research. It neglects notably the investigation of "talk in action" (Mondada 2002, p. 52): the different varieties and ways in which "shop talk" takes part in a technical activity. Let us consider a last instance of shop talk more closely to elucidate the relationship between research routine, membership categorization, and ordinary rules of conduct, as well as the particular reason why the examined routine gets spelled out then and there (in contrast, e.g., to the formulative work during a laboratory visit). The instance, taken from the physics laboratory, is the following:

1. Helen: How shall we do this? We need to discuss this very well, since the acoustic
2. noise affects the measurements.
3. Peter: But we need to drill holes to air this vacuum pump.

The involved participants, Helen and Peter, are having a discussion in front of their experimental device (a scanning tunneling microscope – in short, STM – designed to pilot measurements on supraconducting materials). Their transcribed exchange is interesting, insofar as it exhibits the particular reason for the formulation of the ongoing activity to occur, that is, the occurrence of a problem in its course. Let us compare the initial formulation of the problem by Helen and the subsequent comment made by Peter. While the formulation casts the problem as complete (lines 1–2), the comment exhibits its partial character (line 3). The connector "but" marks a disagreement on the scope and nature of the problem, that is, by agreeing with "acoustic noise" as one part of the problem and by indicating the "vacuum pump" as the other part.

Further, we may note that the involved participants adopt alternative positions regarding their ongoing collaboration. They do so by selecting different aspects in the formulation of the technical problem. That selection exhibits in what capacity the involved participants consider collaborating – that is, under the auspices of which membership categories. In the present case, the formulation delivered by Helen makes her recognizable as a "physicist", typically concerned with reducing "noise" and proceeding with "measurements" (line 2), while the subsequent comment by Peter exhibits him as a "technician", typically concerned with the equipment involved in any ongoing experiment (line 3). Hence, the connector "but" does not

mark a contradictory problem per se but the respective positioning that make it appear as such. This positioning work can be further explored by considering the sequel of the episode:

4. Helen: Okay, one hole – otherwise the acoustic noise is too big.
5. Peter: Two holes! Otherwise it's 15,000 bucks again!
6. Helen: Okay, one hole then and I will see if the noise affects my measurements or
7. not – and then perhaps we may drill a second hole.
8. Peter: Come on, I don't feel like doing the same job over and over again!
9. (Peter leaves the setting)

The extract documents the negotiation sequence that follows the prior disagreement. The sequence confirms the relevance of the initial positioning and the unilateral orientations of the involved participants for the unfolding interaction. That positioning and these orientations do not only proceed from the present state of the ongoing experiment (as it is visually available) but also on the basis of their respective membership categories ("physicist" versus "technician"). The last exchange between the participants exhibits the categorical grounds of their respective contributions particularly well. On the one hand, Helen suggests that she has not done her measurements yet (lines 6–7); hence, her initial formulation of the problem at hand – "acoustic noise (that) affects the measurements" (lines 1–2) – appears as based on her category-bound interests, as a "physicist", whatever the current experimental situation. On the other hand, Peter does not accept the collaborative sequence suggested by Helen. Quite the contrary, he leaves the setting and Helen in front of the STM (line 9), after having refused her suggestion (line 8). This refusal documents his orientation to the situation on the basis of his membership category, as a "technician" only, rather than to the experimental problem which would require a collaborative solution.

The examined episode, then, provides an instructive instance of how the rule "everyone for himself" can be drawn upon, namely on the exclusive basis of one's social identity of academic membership. Though copresent participants may design their respective activities in line with their categorical interests, it is far from evident that they can sustain the routine grounds of any further collaboration in that way. The analyzed example provides a telling case in that respect. More generally, the rule "everyone for himself" may hence become a source of members' comments, complaints and correctives, addressing the social organization of scientific practice it exhibits. In that sense, the initial question appears indeed as a critical one: how, if at all, are academic identities relevant issues for laboratory work?

Finally, we may note that the rule "everyone for himself" is made to operate on the basis of academic membership rather than gender identities (we might thus have phrased it as "everyone for herself" as well). Indeed, the interacting participants, in the examined episode, orient themselves toward each other, not as "woman" and "man" but as "physicist" and "technician" – though, of course, the involved physicist could recategorize at any moment her unwilling technician as a peculiar kind of "gentleman".

8.4 Conclusion

As stated from the outset, the materials presented and analyzed in the present contribution are taken from an ongoing ethnography. Hence, the answer outlined to the initial question of the practical relevance of academic identifications for laboratory work is still a provisional one. Nevertheless, the ethnographic account allows us to formulate a series of concluding remarks, regarding both methodological issues (A) and empirical results (B).

8.4.1 Methodological Issues

Scientific research as a practical activity revealed itself as a specialized domain of particularly difficult access. This remark may appear as utterly banal. Yet it seems important to us, especially given the methodological optimism and operational instrumentalism, involved in the decontextualized use of research interviews in higher education studies (and sometimes research policy studies, too). How is interview talk related to research practice? Without participant observation, one may wonder about a speculative answer to that question at best. That is not to say, however, that one should avoid interviews, or that participant observation is the only solution. Our point is rather to emphasize the *embedded character of interviews* in the practical domain they contribute to articulate. In that sense, we treated them as providing us with preliminary instructions on how to understand the disciplinary relevancies of the studied practices and their social organization.

This approach required us to recall the *distinction between social conduct and its conversational formulation*, as well as the occasioned character of the latter. The distinction made interviews appear as providing one type of formulation among others, while casting doubt on their descriptive adequacy. Quite the contrary, their adequacy seemed to be of a performative kind: it provided us with a way into the esoteric domain of laboratory work we continue to explore. At first sight, interviews may well equip the researcher with a valuable tool for the docile alignment of empirical data with his or her sociological agenda. This alignment, however, does not present any warrant as to how it assures the detailed recovery of members' practical relevancies in and of their everyday activities (all the less so, one may add, as the complex organization of scientific practices is concerned). Conversely, participant observation, combined with research interviews, presents a viable alternative to doing interviews alone. In addition to the mere conduct of interviews, participant observation allowed us to describe some of the disciplinary relevancies in different research contexts (a laboratory visit, two laboratories). These relevancies were made explicit and described as the participants' own relevancies, notably on the basis of the mutual elaboration of their actual conduct and their conversational formulations of that conduct. Various practical distinctions, membership categorizations, and rule formulations were described as members' methods, either to accomplish their activities or to formulate them.

8.4.2 Empirical Results

Based on interview accounts and participant observation, our ethnographic analysis has provided an articulated series of empirical results. Let us pull out the most important ones, comment upon them and indicate directions for further research.

Firstly, the sustained inquiry of scientific practice via participant observation allows us to relativize the importance of "academic identities" for the actual conduct of laboratory work. Indeed, one's social identity of academic membership or institutional status per se is not of any particular help for conducting experiments and achieving related work tasks ad hoc. Quite the contrary, the intended achievement of laboratory work in accordance with categorical interests alone provided an instructive case of "breaching experiment" (Garfinkel 1967), rendering impossible the situated collaboration that such work often requires for its successful accomplishment in real time. Certainly, an academic identity (e.g., "doctoral student") may readily be recognized as a formal condition, invoked cause or material possibility for being able and entitled to do laboratory work. Who would deny that? However, the specific requirements of laboratory work cannot be derived from academic identity but can only be discovered in actual practice. That is, the possible orientation toward categorical identities *as such* was and needed to be bracketed by the participants themselves, if only to remain focused on their research phenomena (e.g., "genetically modified mice", rather than "academic identities").

Secondly, the observed participants seemed to draw upon or invoke particular identities at special occasions and for specific purposes. Rather than stipulating one omni-relevant set of academic identities, we have described how participants happen to interact under the auspices of identities particular to a given task at hand. In the case of the laboratory visit, identities such as "guide" and "visitor" were exhibited by participants to design their respective activities. Any further categorization, where possible, was dependent upon those practice-bound identities. Such further "external" categorization allowed the involved participants to exhibit a social distribution of knowledge between "expert" and "lay persons" as well as a division of labor between "project manager" and "research assistant", for instance. Whatever particular identities are made relevant, the social organization of scientific practice appeared thus as a contingent achievement. Paradoxically, it is only the *local* recourse to external membership categorizations and rule formulations that allows laboratory members to provide for their activities as being a fundamental part of a social order "beyond the situation". In short, rule formulations and membership categorizations allow laboratory members to socialize newcomers to laboratory life as well as to instruct observers in how to understand its social order.

Thirdly, we may note that membership categorization provides a typical way of achieving *boundary-work* (Gieryn 1994), whether it is within the laboratory or with respect to it. This last remark indicates further directions of research for the detailed exploration of the local achievement of social order. As categorization is task-related, and tasks do vary, the notion of "boundary-work" glosses an as yet unexplored series of cases, some of which may be similar, others not. Consider the following activities: distancing oneself from the participant observer ("but what are

you doing here, you are not a biologist"), affirming the specificity of one's activity ("Mind you, I am not a carpet dealer!"), focusing on the gender of Ph.D. candidates ("Ok, now what about the girls?"), etc. As we cannot extend this list now, let alone provide a detailed analysis of the listed activities here, we may conclude with a general hypothesis: *boundary-work by entitled researchers is all the more prevalent when "strangers" try to deal with their laboratory work*. Such strangers, "outsiders" or "intruders", may include occasional visitors, sociologists, or administrators; their respective purposes may be similar or different (e.g., understanding, control, and/or criticism). If that hypothesis proves to be correct, that explains why it appears so easy to talk with practitioners in terms of their categorical identities (as most higher education analysts do) and why it is so difficult to understand their actual practices (in terms of participant observation, as we have just started to do).

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References

Enders, J. (2002). Academic staff in Europe: Changing employment and working conditions. In Tight, M. (ed.) *Academic work and life: What it is to be an academic, and how this is changing*. New York: JAI, Elsevier Science, pp. 341–366.

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.

Garfinkel, H. and Sacks, H. (1970). On formal structures of practical actions. In McKinney, J.C. and Tiryakian, E.A. (eds) *Theoretical sociology: Perspectives and developments*. New York: Appleton-Century-Crofts.

Gieryn, Th.F. (1994). Boundaries of science. In Jasanoff, S., Markle, G.E., Petersen, J.C., and Pinch T. (eds) *Handbook of science and technology studies*. London: Sage, pp. 393–443.

Gubrium, J.F. and Holstein, J.A. (2001). *Institutional selves. Troubled identities in a postmodern world*. New York, Oxford: Oxford University Press.

Henkel, M. (2000). *Academic identities and policy change in higher education*. London: Jessica Kingsley.

Henkel, M. (2004). Current science policies and their implications for the formation and maintenance of academic identity. *Higher Education Policy*, *17*, 167–182.

Hester, S. and Eglin, P. (eds) (1997). *Culture in action. Studies in membership categorization analysis*. Washington, DC: IIEMCA & University Press of America.

Knorr, K. (1981). Anthropologie und Ethnomethodologie: Eine theoretische und methodische Herausfordering. In Schmied-Kowarzik, W. and Stagl, J. (eds) *Grundfragen der Ethnologie. Beiträge zur gegenwärtigen Theorie-Diskussion*. Berlin: Reimer, pp. 107–123.

Knorr-Cetina, K. (1994). Laboratory studies: The cultural approach to the study of science. In Jasanoff, S., Markle, G.E., Petersen, J.C., and Pinch, T. (eds) *Handbook of science and technology studies*. London: Sage, pp. 140–66.

Kogan, M., Bauer, M., Bleiklie, I., and Henkel, M. (2000). *Transforming higher education: A comparative study*. London: Jessica Kingsley.

Latour, B. (1995). *Le métier de chercheur. Regard d'un anthropologue*. Paris: INRA.

Lynch, M. (1993). *Scientific practice and ordinary action*. Cambridge: Cambridge University Press.

Mondada, L. (2002). Interactions et pratiques professionnelles: Un regard issu des studies of work. *Studies in Communication of Sciences*, *2*(2), 47–82.

Pomerantz, A. (1978). Compliment responses: Notes on the cooperation of multiple constraints'. In Schenkein, J.N. (ed.) *Studies in the organization of conversational interaction*. New York: Academic Press, pp. 79–112.

Sacks, H. (1963). Sociological description. *Berkeley Journal of Sociology*, *8*, 1–16. Reprinted In Lynch, M. and Sharrock, W. (eds) (2003). *Harold Garfinkel*. London: Sage, pp. 203–216.

Sacks, H. (1992). Lectures on conversation. In Jefferson, G. (ed.). Oxford: Blackwell.

Sacks, H., Schegloff, E., and Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, *50*, 696–735.

Schegloff, E.A. (1986). The routine as achievement. *Human Studies*, *9*, 111–152.

Sherman, W. (2007). Educating normal scientists: Practical work. Paper presented at Scientific Practice as Ordinary Action, an International Workshop on Scientists at Work. Fribourg University, Switzerland, March 22–23, 2007.

Watson, R. (1994). Catégories, séquentialités et ordre social: Un nouveau regard sur l'oeuvre de Sacks. In Fradin, B., Quéré, L., and Widmer, J. (eds) *L'enquête sur les categories: De Durkheim à Sacks*. Paris: EHESS, pp. 151–184.

Wieder, D.L. (1974). *Language and social reality. The case of telling the convict code*. The Hague, Paris: Mouton.

Chapter 9
Caught in the Science Trap? A Case Study of the Relationship between Nurses and "Their" Science

Paula Nieminen

9.1 Introduction

Academization holds a special promise for social professions such as social workers, nurses, and teachers. At the same time, it presents a major challenge in terms of acculturation and identity formation. This article examines the tensions evoked by academization in one social profession, the Finnish nursing profession, highlighting the conflicts caused by differing expectations of and cultural approaches to academization.

The process of academization creates a further problem in fields that are culturally located in the symbolic universe of the feminine. While the features defining nursing such as caring and intuition are intrinsically connected with femininity, those of science are connected with masculinity (Bruni et al. 2004). As academization is not just an educational phenomenon, but a multidimensional cultural phenomenon as well, it challenges old myths and shared ways of knowing and calls for a closer examination in higher education studies.

For the professionals, academization represents the fulfillment of a long struggle with hopes of enhancing their social status in society and great expectations in terms of practice advancement (Becher 1990; Elzinga 1990). As for the professional disciplines, one of the crucial questions is their relationship with the related professional field. The questions of knowledge, knowledge production, and the appropriate knowledge base for a profession are crucial issues in professional disciplines. The science–practitioner relationship has often been framed in terms of the theory–practice distinction. It is an expression of the issues and problems which arise in connection with the expectations of the professional fields toward "their" sciences (Becher 1990). In health care, the requirement for a scientific knowledge core of professional practice has found formal expression in the evidence-based practice and best practices agenda, which has become the object of extensive financial effort. "Evidence" as something used in decision-making in the reality of clinical contexts, is the new slogan advocated in health care. It is assumed that care will be

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delivered neither appropriately nor efficiently without the foundation of suitable research because nonscientific information is uncontrolled, anecdotal, and subject to bias. The impetus behind the development of evidence-based care has been to shift from the nonscientific to the scientific (Rycroft-Malone et al. 2004), the scientific being equated with "efficient".

Although nursing has traditionally been viewed as a nonacademic domain where it has been thought that nurses are born, not made (Mackay 1990), the debate on the need for it to have a scientific knowledge base is not new. In Finland, the first academic chair of nursing science was established in 1979, but the idea of transferring nursing education to the university was already launched in the 1920s, soon after the first university-based schools of nursing had been founded in England, America, and Canada (Laiho 2005). Today, five universities offer degree programs in nursing science. The academic departments prepare graduates to work as nurse educators, directors of nursing services, planning officers, and researchers. The declared research interests of nursing science include human health, health promotion, clinical nursing, nursing administration, and nursing education (Academy of Finland 2003).

By contrast, initial nursing education is offered in the polytechnics, where nursing education was transferred from post-basic secondary institutions after a major higher education reform in the 1990s. In this reform, Finland adopted a dual higher education model where polytechnic education provides professionally and practically oriented education which meets the needs of working life, while universities focus on scientific teaching and research. Polytechnic-trained nurses are expected to show competence in workplace development and to act as change agents, with research utilization being a significant element of the new competencies (Ministry of Social Affairs and Health 2003). Finnish nurses are thus trained separately from nursing science departments, unlike the rest of the world. Nursing science is defined as the core of nursing education and as the basis for all nursing practice (Academy of Finland 2003).

In nursing research, the theory–practice gap has been identified as the main barrier to practice development in nursing. The discussion has been framed in terms of the "nurse's failure to implement research-based knowledge" or to read research reports. Extensive nursing research has revealed that there exists a widespread resistance against nursing research among nurses and students. It has been found that nurses are not aware of the existence of nursing research, do not understand it, do not believe it, do not know how to apply it, are not allowed to use it, and that the knowledge produced by nursing science is not transferred to practice (e.g., Allmark 1995; Ax and Kincade 2001; Björkström and Hamrin 2001; Lander 2000; Maben et al. 2006; Upton 1999).

At the same time, criticism of the theoretization of the polytechnic curriculum and its failure to educate "practice-oriented nurses" has increased both in research and among students and practitioners. Again nursing science has revealed that students' clinical skills have deteriorated and that the scientific and critical thinking emphasized in nursing education does not translate into decision-making in nursing (e.g., Academy of Finland 2003; Kilpiäinen 2003). In the current polytechnic-level nursing education, with its university-type education in nursing science, nursing

science comes across as abstract conceptual analysis (Stenfors 1999). Instead of being practice-oriented, nursing education tends to stress nursing philosophy and research, while everyday nursing still draws on old practices (Uotila 2004).

Nursing science offers an interesting starting point for the study of social professions and their expectations of "their sciences", of the division of labor in and functioning of the dual higher education model adopted in Finland, and of the specific obstacles facing women scholars in their scientific endeavors. The aim of this article is to take a look at the process of academization in Finnish nursing and at the role of nursing science in the identities and practices of rank-and-file nurses.

9.2 Theoretical Framework

The study draws on the rhetorical tradition and on the notion of rhetorical identifications in rhetorical disputes. In this article, identities are conceptualized as sources of meaning and experience; they represent who we are and what we want to be as individuals and communities (Ringmar 1996; Castells 1997). The construction of identities draws on diverse cultural and discursive resources and identities are thus political, historical, cultural, and symbolic constructions: they are the social, the cultural, and the historical with a human face (Castells 1997; Wenger 1999). In the context of professional identities, identifications embody and express interpretations of the core of one's professional activities and the positive moral values attached to them. Processes of identification define which meanings matter to us (Wenger 1990). Identifications are about categorization, the relative importance and unimportance of valued questions. The categories which frequently form the basis of rhetorical dispute are liable to have their prototypes (essences) questioned, as disputants seek to locate the essence in very different places (Billig 1996; Keränen 1993).

As suggested by Erik Ringmar (1996, pp. 83–85) identity change is propelled by "formative moments", which challenge taken-for-granted identities: in formative moments, new stories become available, new stories are being told and submitted to audiences. Formative moments are periods when meanings are contested and fought over with the help of rhetoric and propaganda. To establish a new identity and acquire agency, one must tell an appropriate and a valid story, which is recognized by the audience and meets its expectations. Identity narratives can be thought of as representing socially grounded understandings of the identity, and alternative narratives as alternative forms of knowledge that destabilize ossified truths (Mishler 2005). Identity change can thus be seen as an ongoing cultural contest where old identities and truths are challenged and replaced and new ones acquire prominence or are rejected. The crucial question with regard to an identity is who gets to define its true or imagined characteristics and whether local identities and interpretations of individuals and groups are heard or silenced.

The analysis is based on the rationale that in order to understand the problems associated with the relationship between the nursing profession and nursing science, it is important to study the logic of the construction of and change in nursing

identities. As suggested by Filander (2000; also Ylijoki 2005), in times of rapid change, microanalysis of actor-level and intersubjective interpretive processes enables the examination of structural changes as cultural transformation processes. Changes in deep cultural structures have an effect on how the purpose or ethos of action is understood and on how the employees' identities are determined.

9.3 Data and Method

The article focuses on the messages posted to an Internet discussion forum for health care professionals in Finland. The striking feature of the data set is that it was initiated and is dominated by male nurses, who launch a fierce attack on nursing science. What meanings are given to nursing science and does it, in the opinion of the participants, produce knowledge that is relevant to them professionally and symbolically? These questions will be addressed in the specific Finnish context as public expressions of personal opinions.

The Internet has become a site for social action and a political arena, a new public sphere, and a channel where individuals can have an impact on policy agendas (Wilhelm 2000, p. 9). Internet forums can be used for various purposes, one being the attempt to politicize the action under discussion by challenging taken-for-granted truths and by persuading others to adopt a new emotional attitude – increased sympathy or moral outrage – toward the action. Any text can be read as an intervention in an argument and as an attempt to create new chances for power by opening a new dimension in the debate. The attempt to cause outrage, as evidenced by the data set used in this article, can consequently be read as a rhetorical move that introduces conceptual changes (Palonen 1993; Skinner 1996).

Hoitajat.net (Nurses.net) is a Finnish Internet discussion group for health care professionals set up in 2001. From 2001 to the end of 2005, approximately 40,000 messages were posted to the forum by 1,800 members. Although only registered health care professionals or students can join the forum, all topics are accessible for nonmembers and no logging in is required of outsiders to read the messages or to post messages to the various threads. The forum has six main threads concerning nursing in general, eight threads for subspecialties of nursing and a columns thread. To prevent aggressive or abusive behavior, the forum was moderated by seven voluntary moderators (five men and two women, 2002–2005) who had the right to initiate, erase, move, and modify messages.

Most participants volunteer their age, occupational title, place of residence, and gender. The gender or other details of nonmembers are not given, whereas the gender of all the moderators has been given in a separate listing. All participants who volunteered their age were under 40 years, the majority being under 30 years.

The data were collected from messages posted to Hoitajat.net using the search word "nursing science" in the period 2002–2005. This included downloading all available electronic texts on the theme and tracing user information including the gender of the author of the posting. Each participant was coded for gender (M = male;

F = female), occupational title (Par = paramedic; P = psychiatric nurse), and status (MOD = moderator; N = nurse; S = student; V = visitor). Since the Finnish legislation on the use of media sources as research data considers material from a publicly accessible electronic forum to be equivalent to published material, I have treated this material as such. All the forum postings were done under pseudonyms.

The analysis includes seven discussion threads focusing on nursing science. The total number of postings is 328 of which 146 were by male participants. The 7% of males in the nursing profession in Finland thus accounted for nearly a half of the messages. The themes were identified using the strategy for reading introduced by Keränen (1993), searching for what is said about nursing science explicitly and what meanings and interpretations are attached to it.

The reading strategy generated three identity narratives – the science narrative, the wage-earner narrative, and the calling (vocation) narrative, embodying the rhetorical identifications found in the text. The order of the narratives in the following section is random with no precedence given to any one of them. Following Mishler (2005, p. 437), the objective of the article is to make room for unofficial voices from the practitioner level, to "interrupt" the voice of nursing science and to "give priority to the voice of the lifeworld". The narratives that follow do not represent fixed or pure narratives; rather, they are internally multivoiced. The voices of opponents and proponents intersect in each of the narratives, which proceed as interplay of arguments and counterarguments. The fact that male nurses are overrepresented in the data makes this a particularly interesting case as regards a feminine profession and a feminine science. This case study can therefore be viewed as a rare excursion into the process of academization in nursing.

9.4 Defining Nursing and Nursing Science

9.4.1 The Science Narrative

In the Internet forum, some participants identify with nursing science because it is the "science of nurses", "our own science". The academization of nursing makes it more acceptable as an occupation in the eyes of others. The science narrative consists of refuting the arguments of the opponents concerning the nature of nursing science ("formulates fake concepts and fake models"), the need for it ("utterly futile nonsense"), and its status as a science ("a joke in the opinion of other disciplines").

The main proponent of nursing science in the Internet forum is a female paramedic completing her teacher education. She identifies herself as a "nurse and a guru in nursing science" and "wants to defend nursing science". This is no accident, since paramedics represent a field of nursing which has a substantial degree of autonomy, a characteristic of nursing outside hospitals. Paramedics are criticized in the forum for being arrogant "theoreticians". This represents an internal hierarchy between hospital nursing, seen as routinized, nonautonomic work, and emergency nursing,

which includes tasks that in the hospital are the doctor's responsibility. The field of emergency nursing thus violates the traditional division of labor in the hospital.

The accusation that nursing science has failed to produce useful, practical research results drawing on common sense and on the needs of the "field" is felt acutely by the female paramedic. For her, nursing science is precisely what the opponents say it is not: it is a science among sciences and *the* science for nursing. It represents progress and modern times and is a tool for "acquiring visibility", echoing the rhetoric of nursing science that stresses visibility through measured performance to convince decision-makers of the worth of nursing:

> It is impossible for me to understand why nurses fail to appreciate their own science. I used to think that nursing science is nonsense, but now I've seen that it is a chance to make a difference in nursing practice. Nursing science is a new science, you cannot compare it with the older sciences like medicine or philosophy. In time, it will produce results that better serve the practice. We just need younger nurse scholars. Current research orientations do not necessarily serve contemporary nursing practices. The purpose of nursing science is to develop models for nursing practice, not by introducing a ready-made model but by studying whether a model is suitable for nursing a particular patient group and why it might be better from the perspective of patients, nurses, society etc. (FPAR 1)

In this narrative, nursing science is identified as the source of professional development and reform in nursing through the eradication of old, outdated routines and practices, as an alternative to the old "trial and error method" in nursing. A scientific status can also be used to raise salaries and it is believed that the evidence produced by nursing science of nursing as effective action will convince decision-makers. A female student remarks: "We do so many unnecessary things in nursing because the work has not been studied from the perspective of nursing and people continue to do what they have always done. Nursing science makes our work visible and research-based neutral facts about fieldwork can help convince decision-makers, too" (FS 3). A female moderator defines the nature of nursing science:

> As I see it, nursing science strives to build models about nursing practice to make it visible. The models can then be used in nursing education to teach future nurses. Nursing dependency scales, used as tools for staffing, are also created by nurse scholars. Their ultimate purpose is to enable us to do our job without working our fingers to the bone. Nursing science turns the need for resources into measurable entities to be used by decision-makers. Nurse scholars emphasize the nurse's role as an independent professional, not as a doctor's handmaiden who does what she is told to do. You'd think that nurses were satisfied instead of an open revolt. (FMOD 1)

It is also believed that scientific research helps to base nursing on something other than intuition and experience. It is felt that apart from an altruistic helping motive, there is a need for cognitive skills to complement craft-based skills and inborn interaction skills, traditionally considered to be the basic skills needed in nursing. Experience and old teachings are no longer to be relied on. Scientific research can be a way of looking at things objectively when trying to come up with a bigger picture – the development of nursing is impossible without a scientific approach. Nursing is thus more than just a practical activity. As a female nurse commented:

> I've always believed that nursing science is "our science". I've studied it for years and I definitely think that it improves my work. It helps me reflect on the things I do with

> patients. We should sometimes sit down and think about what guides our work in practice: Am I just following an ancient routine without noticing that there is new knowledge available or because it is easier for me and someone told me so decades ago? Today's nursing requires continuous self-assessment and skill development, because nursing is becoming more challenging. If we need quality in our work we should embrace scientific knowledge too. (FN 4)

For this nurse, the nature of nursing as a practical activity is perfectly compatible with nursing science: "Practical nursing is always based on experience and experience-based knowledge. Nursing science describes this process scientifically. Few disciplines have such a solid practical basis."

Finally, nursing science can be a source of personal meaning, as suggested by a female student nurse:

> It is true that you cannot necessarily implement nursing science in everyday work because of the hectic pace, but you can at least try. Studying nursing science won't bring you a pay rise, but you have to study it if you want to be a teacher or a nurse manager. On the other hand, it might make your work more meaningful. (FS 6)

9.4.2 The Wage-earner Narrative

As noted above, the resistance to nursing science is led by male nurses who reject both the notions of science and calling. The hard-line wage-earner nurse is male and works in the emergency room, intensive care, psychiatric care, or ambulance services. His main motivation for entering nursing is to earn a living and for him, the only reward for work is money. For him, nursing is craft-based professional work with no caring or scientific connotations associated with it. All the quotes in this section come from male nurses.

The importance of salary for male nurses is reflected in the comment by a nurse working in Norway:

> For me it is about supporting myself since I happened to acquire this training. I've never had a calling and although I am very well paid, I sometimes have a hard time motivating myself. My salary motivates me enough to get through the day. Helping people – my ass. This is my JOB! (MN 3)

The wage earner nurse defines practical nursing as a task-based basic job, involving mainly medical procedures. The role of nursing science in "real nursing" is superfluous as it fails to produce relevant knowledge. By contrast, studying nursing science complicates nursing practice "when instead of work with patients we have to make care plans, nursing dependency scales and develop nursing following some theory. I wish we could focus on patients in peace!" (MN 5)

Real nursing is something that does not require thinking or reflection, at least not in terms of nursing knowledge: "This evidence-based nursing gibberish is useless – we don't need science to justify what we do. Besides, it just happens that the evidence comes mostly from medicine and pharmacy and from various educational and psychological studies" (MMOD 1). The implementation of nursing knowledge

appears as a separate process where the nurse has to take time to reflect upon the theories and models possibly available in the situation at hand: “Nursing science forces you to think about a patient’s nausea and care through a theory: what theory should I use to approach this human being and how should I encounter his/her nausea and what is wrong with his/her life in general” (MMOD 2). Getting “baptized” by nursing science is portrayed as altering the way proper nurses nurse by introducing scientific shenanigans, unrealistic models, and excessive paperwork into nursing: “There is a threat when our first-line managers get baptized by nursing science and we are expected to do the job with management sending piles of paper telling how it should be done” (MN 7).

The reality of understaffed wards and increasing job casualization speaks against the lofty rhetoric of nursing science. Development activities in nursing are deemed by the male wage-earner nurse as useless tinkering by idle women who develop nursing to get an ego boost. Among other things, this reflects the development fatigue evident in the forum:

> Developing nursing in the hope of better salaries is a dead end. It’s been done for ages without avail. We should get the same appreciation, like other occupations requiring a polytechnic degree. And the only measure for appreciation is salary: all other forms of ‘appreciation’ are pointless. We have all these wealthy ladies whose subsistence does not depend on their wages because they are kept by their spouses. These ‘civil engineers’ wives’ are a minority, but their influence on the position of the rest of us is great and detrimental. ‘Developing nursing’ means more demands but without corresponding remuneration or resources. Nursing research should focus on nurses’ working conditions, deterioration of wellbeing and the reasons why so many want to leave the field. The main achievement of nursing science at the moment is that they have forced through the model of primary nursing completely uncritically, with disastrous results. I am pretty sure that in many units the old task-oriented nursing model would function better than this new one, which requires more resources – which we don’t have. (MMOD 2)

All in all, nursing science represents a threat to nursing in the form interpreted by the wage-earner nurse. With next to nothing to offer, these powerful women are still responsible for all the evils in nursing. According to the nontheoretical logic, the “so-called nursing so-called science” has taken control over nursing education, produces professionals unfit for fieldwork, interferes with the routines, and takes time from clinical work. For the wage-earner nurse, polytechnic nursing education is not progress: “Polytechnic nursing education seems to produce these know-it-alls who land on the ward to get experience from fieldwork. Those scientists should have separate training modules so we wouldn’t have to watch them in proper jobs!” (MMOD 3).

However, the pressure for a science-based education is felt in the forum. The image of nursing science is strongly associated with experiences from the classroom. Nurse tutors are described as “bending over backwards” in trying to translate everyday self-evident phenomena into conceptual models and theories. Still, nursing science is a force to be reckoned with. It has the power to influence nursing education curricula and “make hospitals and the employer demand basic studies in nursing science from all nurses” (MN 7). A male participant comments on the research object of nursing science: “I really do wonder why some people are so keen on

studying nurses' skills. For example, research has found that nurses' resuscitation skills are poor. True, but why let the whole world hear about it?" (MN 9). Nursing science thus seems to pose a threat to the wage-earner nurse in a number of ways. The wage-earner nurse may, however, succumb to studying nursing science if the employer requires it.

In conclusion, the wage-earner nurse believes that nursing is not in need of scientification in the form offered by nursing science. The great emphasis put on wage work in Finnish working life is reflected in the participants' emphasis on employers' demands. The wage-earner nurses construct themselves as hardworking, nonreflective, and nonacademic. This also reflects the traditional division in Finland between those who have "intellectual" pursuits and choose university studies, and those who have a vocational orientation and choose vocational studies. This division is in transition because of the increasing demands for nurses to become knowledge workers. The wage-earner nurse's solution to this dilemma is to preserve the status quo, where nurses do a basic job without a science.

9.4.3 The Calling Narrative

In the forum, the calling narrative has a special place in the repertoire of narratives available to nurses in that it provides the background for all the other narratives and is recognized as the cultural heritage of nursing. A sense of calling or vocation is identified with the traditional virtues attached to the nursing profession: altruism, compassion, helping others, a caring attitude, and female gender. A calling may be either empowering or repressive in nature, but it is never addressed in neutral terms. For those advocating a calling, it is a very real thing having to do with the reason for choosing nursing as a career, with professional pride and a job well done:

> It has never even occurred to me that you could do this job without a calling. I would not say no to better pay, but if I had no calling, I would not stay in nursing and waste my time complaining about poor pay. And what does a calling have to do with pay? Complaining about poor pay or demanding better pay does not exclude a calling. I really wonder what attracts you boys in nursing if it's not a calling when it certainly cannot be salary. This is not the only job with an easy and a short education or the only one with a guaranteed job. A calling for me signifies that I have carefully thought over the alternatives and decided that this is my thing. A calling means enjoying one's work. (FS 4)

This comment by a female student nurse is in response to a male participant's attack on the notion of a calling as the main reason for an unequal pay structure, understaffing and "inhumane" working conditions in nursing. The quote opposes intrinsic motivation for nursing to an external motivation – a calling guarantees that you are suitable for the job. The comment echoes the traditional altruistic content of a calling, but it also serves to expand and dialogizes the one-sided conception of nursing as mere wage work, offered by the male nurse: even the "boys" are suspected of having a calling and a "helping motive".

Another female nurse responds to the "calling is the root of all evil" argument by associating it with professional pride and by insisting that a calling is not incompatible with the characteristics of professional work. For her, a calling is a tool for empowerment and thus also credible as a modern concept:

> A calling no longer refers to that Christian and charitable notion, rather it equals the reasons for choosing a field where you can use your capacity and your professional pride to the fullest and do the job to the best of your ability. Professional pride comes from within, not from the paycheck. My calling is the reason why nobody succeeds in putting me down in my job, because I am responsible for doing it well. (FN 13)

By some, the history of nursing is explicitly identified with female characteristics and female indecisiveness. As stated by a visitor to the forum: "Nursing used to be the work of nuns. Men were more determined even in those days. When nuns cared for patients out of a calling, monks distilled wine and even spirits" (V 7). The noble image attached in the calling myth to nurses as better than others is recognized by a female student nurse:

> 'Look at me, I'm such a good person because I help my weaker fellow human beings….' The word 'calling' has a revoltingly charitable ring to it. Professional nursing cannot be founded on someone's 'goodness' or 'helping motive': Who would always want to help others? It has to do with a professional obligation, although in most cases I am happy to oblige. (FS 5)

For those who reject the notion of a calling, it represents the reason for all problems in nursing including a perceived lack of recognition of nursing. It is a tool for repression, used shamelessly to exploit nurses, a sort of ultimate explanation that makes all other explanations unnecessary. A calling is a thing of the past and should be erased from the vocabulary of nurses as it is identified with the public's and the employer's allegedly poor image of nurses as subprofessionals. A male moderator identifies a calling as a tool for repression: "The employer and the general public use it shamelessly to justify our low wages. We have always been put down in the name of a calling. You may be in nursing because of a calling, but you can still want to be paid for the demanding job" (MMOD 3). Another male moderator remarks: "Unfortunately there are loads of nurses who think of their work as a calling and are happy with it. As long as there are people who sacrifice themselves in the name of a "calling", it is impossible for us to settle our situation and the employer will laugh all the way to the bank" (MMOD 4).

In the debate about a nurse's calling, it is important for male nurses to differentiate themselves from the "flock of sheep" who confess to having a calling. One differentiation strategy is to emphasize assertiveness toward the employer's demands. A male psychiatric nurse asserts himself against the "servile" image associated with the feminine occupation:

> I never work overtime and I never swap shifts unless I want to. Overall, nurses are far too nice as a group. The public still thinks of nurses as doctor's handmaidens who just answer the phone and sit behind a desk. The reality is something else. It's not my intention to criticize the contribution of doctors, but it should be remembered now and again that nurses do a worthwhile job, too. Nursing education is all about science, they forget to tell you where the liver is located and what it's for. Phenomenological hermeneutics is more important and

> nurses are supposed to be walking memory banks of concepts. Nurses do practical work, not research. Mere caring does not take you very far either. Still, I like my job and wouldn't trade it for anything. (MPN 9)

For male nurses, the notion of a calling carries an historical burden and should therefore be erased and silenced completely. The bitterness of choosing a female occupation is evident in the comment by a male student nurse:

> I really do hope that nobody who reads this text will think that a calling has anything to do with nursing. Many people continue to think that nursing is non-professional work, and we certainly have not done enough to erase this outmoded thinking. We are totally exploited as a profession, a flock of sheep, doing an extremely hard and responsible job without a proper reward. And it goes without saying that we are so virtuous and conscientious that we cannot go on strike. I chose nursing because I wanted to play it safe, because a job is always guaranteed in our field. Nursing was never a calling for me. (MS 14)

A male moderator cries out: "A calling and nursing should never be mentioned in the same sentence. Never and nowhere, and especially coming from a nurse!" (MMOD 1).

The calling thus features in the forum either as a taken-for-granted core value of nursing or as the root of all evil in nursing, as a repressive influence. For some, nursing without a calling is a mercenary activity, which in extreme cases leads to burnout. A calling thus continues to figure as the criterion for a genuine interest in nursing. For those who see nursing purely in terms of wage work, it is the calling that leads to burnout. For them, a calling is associated with traditional gender image of nurses incapable of standing up for themselves and their employee rights.

9.5 Discussion

The case presented in this article suggests that academization, although the result of a long-term effort, is necessarily not the apex and logical endpoint of professional development, but rather a new beginning for new conflicts, orientations, and developments both for the discipline and the related profession. When striving for academic status, the professionals hold a firm belief in the benefits and outcomes of academic teaching and research. After the establishment of an academic discipline, the relationship between academics and practitioners takes on a new tone and the question of a relevant knowledge base for the profession and the usefulness of scientific knowledge gains new urgency.

It can be said that nursing science reorganizes and mobilizes the nursing identity, and as such it represents a formative moment in the development of nursing. In formative moments, culturally and historically fundamental aspects (such as gender stereotypes) are mobilized as legitimizing or delegitimizing arguments in an attempt to influence the collective interpretation (see Ringmar 1996). The pursuit of nursing science to scientize a domain that has been marked by notions of a calling and practical professional work has challenged the role, professional identity, and values of nurses, calling for a reorientation of moral commitments, collective narratives, and the traditional ethos of nursing (cf. Ylijoki 2000).

As judged from the male nurses' rhetoric strategy of denying and ridiculing the value of nursing science and from the ensuing discussion, nursing identity is by no means unified and one. It seems not to be determined by the expert language of nursing science, but rather by a mixed professional emphasis which continues to include a calling and professional pride as core components. The hard-line wage-earner nurse wishes to conceptualize nursing science as "theory" and an extra burden which so far has not proved its value in everyday nursing practice. While doing this, it is important for him to appeal to the neutral, "no-nonsense" identity of a wage earner. For those who have seized the opportunity to pursue a career and move on to "better jobs", nursing science has provided a valuable route out of clinical work.

The analysis also suggests that great and varying expectations were placed on nursing science on many fronts. The expectations included issues as diverse as recognition for nurses in terms of staffing and pay, gaining an independent domain for nurses in health care, employee autonomy, practice development, and professional progress. The perceived failure of nursing research to inform nursing practice has made it an easy target for the critics. In fact, most of the complaints identified in the discussion are the results of the reorganization and rationalization of the Finnish health care system.

On the other hand, the rejection of nursing science appears to be based on a perceived attack on the nurse's work as something outdated relying excessively on antiquated characteristics. The role given to nurses in nursing education and nursing science alike is that of a passive "implementer" of nursing knowledge. The attempt to record the skills needed in nursing and standardize nursing procedures and nursing language also implies that nurses are not competent to do their job unless they live up to the printed and recorded qualifications required in the job and that it is not enough to do one's job, it must now be done in a way that meets scientific standards. Through its vocabulary, nursing science appears rather as the agent of managerialism than as the solution to practice issues. The exhaustive aspects of nursing have often been accounted for by the traditional calling ideal, while the unpredictable effects of the new challenges to the professional and agentic identity of nurses have received less attention.

The rejection of theoreticality, known as the "theory–practice" gap', reveals a host of contested issues. Scientification has often been marked with a black-and-white notion of a break according to which "old and bad" has been replaced with "new and good" (Filander 2000). For some nurses this means the loss of the core of nursing, caring, or of the things that have described nursing from its very beginning as an occupation with privileged expertise in doing good. The new scientific ideology has offered nursing professionals new subject positions, and they are forced to walk a tightrope between differing vocabularies. The calling narrative continues to offer nurses a vocabulary based on altruistic values, that is, on the desire to work for the public good, which have also been the values of public health care, while the scientific identity is based on abstract and neutral knowledge, on a vocabulary which leaves little room for altruistic values. Science works as an ideology by setting the criteria for what nursing should aspire to. For some nurses, the loss of subjectivity, accompanying "objective" scientific evidence, holds a special appeal, while for others it

means the downfall of everything that is valuable in nursing. It appears, however, that most nurses have managed to strike a balance between the inevitability of nursing science and the inevitabilities of their work environments and roles by assimilating relevant parts of nursing science in their practice and work ethos.

Does the case presented in this article mean that the male wage-earner nurse or Finnish nurses in general reject the notion of scientific knowledge? In terms of storytelling, the science narrative advocated by nursing science is currently not credible as the only basis for nursing for the male audience presented in this study. They do not reject science in general, only nursing science. For these nurses, the story told by nursing science may have internal coherence, but little correspondence to external verifications; it is not what this audience expected in terms of relevance and knowledge. The story is not compelling enough to establish a distinct identity for nursing science (cf. Czarniawska-Joerges 1997, pp. 134–135). In Wenger's terms (1999, pp. 201, 296), nursing science does not appear to have currency in the "economy of meaning" with respect to the practices of these nurses. From their perspective, nursing science is lacking in some key qualities in terms of practical contribution and as a scientific enterprise.

The theoretical frameworks of nursing science seem to exclude something which Mishler (2005, p. 440) defines as a "category for narratives of resistance". In the absence of such a category, the voice of nursing science appears as dominant and ignoring practitioners' voices. On the other hand, the persistent presence of the notion of a nurse's calling may also represent what Dominick LaCapra (2004, pp. 56–57) refers to as the "founding trauma" as an element in identity formation of individuals and groups. The founding trauma is the actual or imagined event that poses in accentuated fashion the very question of identity, yet may paradoxically itself become the basis of an individual or collective identity. One may in such cases ask whether such groups have in their past or mythologized past a trauma that has become foundational and is a source of identity even for those born into its aftermath. The founding trauma may be a way for an oppressed group to reclaim a history and to transform it into a more enabling basis of life in the present. This suggests that despite its allegedly repressive nature, "a nurse's calling" as the mythical representation of nursing identity, is an issue that should be acknowledged and addressed both in nursing and nursing science instead of being silenced.

It has been noted that research into the practices of social professions is academic-driven and that a productive dialogue is needed between academics and practitioners to reformulate the notions of practice and theory and practical and theoretical knowledge. Practice is the ultimate test of theoretical knowledge and theoretical knowledge is hardly likely to succeed in challenging practice unless it is perceived to generate better practice. The impact of new theoretical knowledge on practice is a slow and indirect process where academics and practitioners should have a more equal role. When research and clinical experience do not match, the use of research may be variable. Improving practice thus requires more than accessing new knowledge: it requires skills in reasoning to integrate that knowledge into practitioners' existing knowledge frameworks (e.g., Daley 2001; Gergen 1994) and, one might add, into their identities, culturally and symbolically.

While the old vocabulary of nursing centered around a nurse's job as a calling, the new centers around science and administrative development language. The controversy between the time-honored conception of a nursing as a calling and that of scientific nursing reflects a demand to switch one's identity without having the opportunity to seek a balance between the old and new identity. It is questionable whether it is possible to expunge the old identity once and for all. Nurses have traditionally represented caring and protection, and the notions of professional and scientific nursing compete with this traditional notion. The language, vocabulary, and terminology used by the nursing profession are liable to have crucial and unanticipated consequences for the theory and practice of nursing. With every aspect of nursing being scientized, nurses are left with no words or discourses for the traditional caring side of the work.

The academization of nursing and the theory–practice gap, acutely perceived on both sides of the divide, create major tensions within the nursing profession. What happens if the contribution of an academic discipline is rejected or it is perceived to have little to offer to those who are supposed to embrace it? Can any one discipline claim a monopoly as the science of a professional field? Critical accounts of the process of academization can help us to see the importance of viewing academization not as a one-sided, once-for-all effort, but as a shared, ongoing one. The debate whether nursing knowledge is *the* knowledge for nursing points to the importance for nursing science to gain a discernible identity.

References

Academy of Finland (2003). *Nursing and caring sciences*. Evaluation Report. Helsinki: Academy of Finland.

Allmark, P. (1995). A classical view of the theory-practice gap in nursing. *Journal of Advanced Nursing*, *22*, 18–23.

Ax, S. and Kincade, E. (2001). Nursing students' perceptions of research: Usefulness, implementation and training. *Journal of Advanced Nursing*, *35*, 161–170.

Becher, T. (1990). Professional education in a comparative context. In Torstendahl, R. and Burrage, M. (eds) *The formation of professions. Knowledge, state and strategy*. London: Sage.

Billig, M. (1996). *Arguing and thinking. A rhetorical approach to social psychology*. Cambridge: Cambridge University Press.

Björkström, M.E. and Hamrin, E. (2001). Swedish nurses' attitudes toward research and development within nursing. *Journal of Advanced Nursing*, *34*, 706–714.

Bruni, A., Gherardi, S., and Poggio, B. (2004). Doing gender, doing entrepreneurship: An ethnographic account of intertwined practices. *Gender, Work and Organization*, *11*(4), 406–429.

Castells, M. (1997). *The power of identity*. Oxford: Blackwell.

Czarniawska-Joerges, B. (1997). *Narrating the organization. Dramas of institutional identity*. Chicago, IL: University of Chicago Press.

Daley, B. (2001). Learning and professional practice: A study of four professions. *Adult Education Quarterly*, *52*, 39–54.

Elzinga, A. (1990). The knowledge aspect of professionalization: The case of science-based nursing education in Sweden. In Torstendahl, R. and Burrage, M. (eds.) *The formation of professions. Knowledge, state and strategy*. London: Sage.

Filander, K. (2000). *Development work in transition: Reconsidering commitment, consent and resistance in the public sector in the 1990s*. Doctoral dissertation, University of Tampere.
Gergen, K. J. (1994). *Realities and relationships. Soundings in social construction*. Harvard, MA: Harvard University Press.
Keränen, M. (1993). *Modern political science and gender. A debate between the deaf and the mute*. Doctoral dissertation, University of Jyväskylä.
Kilpiäinen, S. (2003). *Odotetaan käytäntöä ja saadaan teoriaa* [Students expect practice and get theory]. Doctoral dissertation, University of Lapland.
LaCapra, D. (2004). *History in transit. Experience, identity, critical theory*. London: Cornell University Press.
Laiho, A. (2005). *"Sisters and science" – The project of academicising nurses in the Nordic Countries in the 1900s*. Doctoral dissertation, University of Turku.
Lander, M. G. (2000). The theory-practice gap in nursing: The role of the nurse teacher. *Journal of Advanced Nursing*, *32*, 1550–1556.
Maben, J., Latter, S., and Macleod Clark, J. (2006). The theory-practice gap: Impact of professional-bureaucratic work conflict on newly-qualified nurses. *Journal of Advanced Nursing*, *55*, 465–477.
Mackay, L. (1990). Nursing: Just another job? In Abbot, P. and Wallace, C. (eds.) *The sociology of the caring professions*. London: Falmer Press.
Ministry of Social Affairs and Health (2003). *Health and well-being by evidence based nursing. The national target and action plan 2004–2007*. Helsinki: Ministry of Social Affairs and Health.
Mishler, E. G. (2005). Patient stories, narratives of resistance and the ethics of humane care: A la recherche du temps perdu. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, *9*, 431–451.
Palonen, K. (1993). Introduction: From policy and polity to politicking and politization. In Palonen, K. and Parvikko, T. (eds.) *Reading the political: Exploring the margins of politics*. Helsinki: The Finnish Political Science Association.
Ringmar, E. (1996). *Identity, interest and action. A cultural explanation of Sweden's intervention in the Thirty Years War*. Cambridge: Cambridge University Press.
Rycroft-Malone, J., Seers, K., Titchen, A., Harvey, G., Kitson, A., and McCormak, B. (2004). What counts as evidence in evidence-based practice? *Journal of Advanced Nursing*, *47*, 81–90.
Skinner, Q. (1996). *Reason and rhetoric in the philosophy of Hobbes*. Cambridge: Cambridge University Press.
Stenfors, P. (1999). *Tieteellisen ja kriittisen ajattelun kehitys hoitotyön koulutuksessa* [Development of scientific and critical thinking in nursing education]. Doctoral dissertation, University of Tampere.
Uotila, E. (2004). *Terveyskeskuksessa työskentelevien työn järjestäminen, toiminnan ohjaaminen ja kehittäminen* [Organization, supervision and development of the work of health centre employees]. Helsinki: Report of the Ministry of Social Affairs and Health 3/2004.
Upton D. (1999). How can we achieve evidence-based practice if we have a theory–practice gap in nursing today? *Journal of Advanced Nursing*, *29*, 549–555.
Wenger, E. (1999). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.
Wilhelm, A.E. (2000). *Democracy in the digital age. Challenges to political life in cyberspace*. London: Routledge.
Ylijoki, O.H. (2000). Disciplinary cultures and the moral order of studying – A case study of four Finnish university departments. *Higher Education*, *39*, 339–362.
Ylijoki, O.H. (2005). Academic nostalgia: A narrative approach to academic work. *Human Relations*, *58*, 555–576.

Chapter 10
Determining the Norms of Science: From Epistemological Criteria to Local Struggle on Organizational Rules?

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10.1 Introduction

Universities in the Western countries have become complex organizations involving many kinds of activities. Since the Second World War, the traditional functions of universities – academic research and higher education – have expanded simultaneously as universities have taken on a whole variety of societal service functions often termed the university's third mission (Clark 1998). From the beginning of the 1980s, a central part of this changed landscape has been the commercialization of university research results. According to a number of analysts, this alteration, fostered by competitiveness-oriented national innovation policies (Slaughter and Rhoads 1996), has led to the intermingling of public university and private business activities. Four different conceptions of such hybridization can be identified.

First, the concept of the "Mode 2" knowledge production (Gibbons et al. 1994) claims that traditional academic research has merged with the rest of society, including politics and the markets. Scientific knowledge has become "contextualized", meaning that its scope has been expanded so that problems of various societal groups and organizations are set as the starting points of research, instead of purely scientific questions (Nowotny et al. 2001, pp. 65, 106). Second, the intertwinement of science, politics, and business life has created what David Guston (1999) has called boundary organizations, i.e., organizations that are responsible for more than one social world at once. Such organizations operate as initiators and sponsors of new projects, thus enhancing interaction across the boundaries of various activities. Third, the commercial potential of university research has given rise to university–industry research relationships, especially in the quickly developing fields of knowledge-based industries, such as information and communication technology and biotechnology (e.g., Powell and Owen-Smith 1998). In these networks, research is often distributed between three closely related organizations, i.e., public research institutes, companies and universities (Fransman 2001). Fourth, entire universities have sought to redirect their activities, giving birth to what was termed

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the enterprise (Marginson and Considine 2000) or entrepreneurial university (Clark 1998; Etzkowitz 2003). Entrepreneurial universities develop as the traditional university incorporates into its activities commercial functions, such as fostering the formation of research-intensive firms, patenting and licensing offices, and business incubators. In such universities, academics engage in business, resulting in the hybridization of university and commercial activities, for instance, in the form of private companies operating in close connection with public research and teaching (Etzkowitz et al. 2000; Rappert and Webster 1997).

These hybrids are strategic sites for research if only because they provide springboards for better understanding the potential cultural change within academia due to the more intensive commercial influence. As generally claimed, the local practices at universities are in a state of flux, yet it is far from clear what consequences this has for the organizational cultures in academia. Are universities willing and able to sustain their roles as public institutions in the wake of external pressures for privatization? In this paper, we focus on the diverse ways in which norms and rules pertaining to the university culture are contested and redefined as universities get involved in business activities. We study how the intermingling of academic and business activities is practically managed at the grassroots level of the university organization. Our empirical data comes from an examination of two research groups operating within a public and comprehensive European university, the University of Helsinki, in Finland. These groups – called hereafter the Applied Plant Biotechnology Group and the Research Unit for Multilingual Language Technology – sought to make commercial use of their research through spin-off companies while continuing, at the same time, their academic research and teaching. It may thus be maintained that these cases provide excellent examples of "trading zones" (Galison 1997, pp. 803–805) between two distinct cultures, namely, university and business. The work of solving the ensuing conflicts shall be approached in this paper by way of discussing the different kinds of norms and rules pertaining to university practices.

10.2 The Normative Structure of Science: From Institutionalized Epistemological Criteria to Local Organizational Rules

As noted by William Tierney (1988, p. 4), an organizational culture is grounded on the shared assumptions of individuals participating in the given organization. Important elements in these taken-for-granted views are institutional norms and rules, which are claimed to be very important factors in shaping scientific knowledge. Presumably the most famous articulation of the normative structure of science was provided by the sociologist of science Robert K. Merton (1942, 1959). According to him, science is characterized by a particular kind of cultural ethos that guides the appropriate scientific practice and supports the goal of science – the extension of certified knowledge. The ethos of science is manifested by a set of

institutionalized imperatives that reward those who follow the norms of science and sanction those who violate them. The four norms of science are universalism, communism, disinterestedness and organized scepticism.

In his article entitled "Science and Democratic Social Structure", Merton describes the above as follows. Universalism requires that the evaluation of scientific claims is made using pre-established impersonal criteria: "The acceptance or rejection of claims […] is not to depend on the personal or social attributes of their protagonist; his race, nationality, religion, class and personal qualities are as such irrelevant" (Merton 1942, 1959, p. 553). Communism, the second element of the ethos of science, states that findings of science are to be kept a product of social collaboration and are thus owned by the scientific community. Because scientists are dependent upon the cultural heritage, the property rights of researchers are limited to that of the acknowledgment and respect of the claims made. "Secrecy is the antithesis of this norm; full and open communication its enactment" (Merton 1942, 1959, p. 557). Disinterestedness refers to a pattern of public institutional control concerning the behaviour of scientists by their peers. Scientists acting according to the norm disengage their personal interests from their work, implying a virtual absence of fraud in science. Scientists do not therefore fabricate data but report their results in full regardless of the theory they might support. Finally, organized skepticism refers to the tendency of the scientific community to avoid making claims on issues that are not yet firmly supported by data. Otherwise put, scientists withdraw themselves from presenting claims until the facts are at hand.

Having been presented first in 1942, these norms were a topic of rich research and debate in science studies during the decades to follow. An important criticism and further elaboration of the Mertonian conception of the norms of science was provided by Ian Mitroff (1974) on the grounds of empirical evidence concerning the practices of Apollo moon scientists during the late 1960s. According to Mitroff, scientists researching the moon did not only commit themselves to the four Mertonian norms but also formulated what he called "counter-norms". Each counter-norm was a rough opposite to the Mertonian norm, i.e., universalism was supplemented by particularism, communism by solitariness, disinterestedness by interestedness and organized scepticism by organized dogmatism. Indeed, Mitroff found that Apollo moon scientists were ambivalent as regards the normative structure of their work. While committing themselves to the Mertonian norms in cases of well-structured research problems, they adhered to the counter-norms when problems were ill-structured. Thus, instead of being objective and impartial, the researchers were, in times, strongly and emotionally committed to their ideas. They did not expect their colleagues to always freely disseminate their research results throughout the scientific community but accepted secrecy. Instead of disinterestedness and organized scepticism, the scientists required their close associates to serve the interests of their special communities and to speak up for their own research findings.

The interesting finding in Mitroff's study was not the set of counter-norms *per se* but the complex nature of the normative structure operative in science. The system of science, in this view, is not harmonious but inherently contradictory in terms of effective cultural principles. The system of science is governed, according to

Mitroff, not by the four Mertonian norms, but by two major sets of norms. Describing the fact that the norms of science change according to the type of research problem at hand, Mitroff's study, despite its functionalistic overtone, prepares the way for a more nuanced understanding of the norms of science.

In opposition to the quest of overarching norms (whether Mertonian or not) that would provide epistemological criteria for scientists, the so-called constructivist studies of science have argued that the norms of science are not stable entities explaining the advancement of scientific endeavour. Rather, for the constructivists, the norms of science are like any other rules and guidelines: a result of ordinary scientific practices as well as disputes and negotiations between different groups of actors. As noted by Anselm Strauss (1991, p. 206), "the assumption that rules […] stand outside a negotiable realm assumes consistency of conduct that surely exists only in the eye of the beholding theorist". Indeed, rules and norms can only enter into practical conduct as a result of people defining them as relevant to their current situations. Thus, if we look at the norms of science from this angle the normative structure of science turns out to be a fairly variable, changeable and inconsistent entity arising locally and episodically as actors go about their current practices (Gieryn 1999). Rather than being guidelines directly determining the proper course of action, the norms of science – whatever their substantial content – are resources for practitioners as they describe, manage, legitimize, control and question their own and others' activities. These ideas are nicely illustrated by the studies of Michael Mulkay (1991) and Jason Owen-Smith (2001).

In his article entitled "Norms and Ideology", Mulkay suggested that the norms of science should be viewed as an ideology rather than an effective system of social control. According to Mulkay (1991, p. 65), there can be no doubt that both the norms of science as developed by Merton and counter-norms as illustrated by Mitroff are used by scientists "to describe and to judge their own actions and those of their colleagues and to prescribe correct professional behavior". This does not mean, however, that the norms are institutionalized because neither Merton nor Mitroff gives evidence to show the way in which these norms are "positively linked to the distribution of rewards" in science (Mulkay 1991, p. 65). Mulkay thus treats the norms and counter-norms as relatively stable vocabularies that are culturally available to scientists whenever they want to describe scientific action, evaluate it or prescribe acceptable modes of professional behaviour. Further, the overly idealized image of science, as typified by Mertonian norms, is a result of a long historical development and has been politically used to depict science so as to justify its special status as an activity not to be interfered with from outside. Supporting the collective interests of scientists, the norms of science may thus be regarded as an occupational ideology rather than an adequate description of science's working.

An empirical example of the strategic use of norms by scientists was provided by Owen-Smith who investigated the ways in which scepticism was evoked in the meetings of a neuroscience research laboratory in the United States. Owen-Smith examined the critical and directive comments given to researchers on the technical, substantive or theoretical content of their scientific claims. His central finding was that scepticism in laboratory work was "simultaneously a method of control, a path

for resistance, and an evaluative mechanism" (Owen-Smith 2001, p. 429). While allowing the establishment of the veracity of research findings, the norm of scepticism also allowed research group leaders to withdraw direct control mechanisms in favour of more indirect and nuanced forms of governance as regards the work being done in the lab. The flip side of this was, however, that those controlled used the same norm as a means of resistance, i.e., to protect their work through various strategies, such as appealing to disciplinary status and applying group-oriented rhetoric.

From the point of view of the present study, Owen-Smith's article is particularly interesting as it shifts the analytical focus from epistemology to organizational issues. Norms of academic activity are no longer seen exclusively as rules that contribute to the growth of scientific knowledge but also as resources for organizational conduct. The research laboratory studied by Owen-Smith was, however, relatively traditional in the sense that its scientists were involved in producing new scientific knowledge, i.e., understanding the biology of a particular kind of moth. The application of the research results in the commercial world was not in their sight. Henry Etzkowitz (1989, 1998), in turn, has taken up the question of how the norms of science change as a result of universities and academics taking on direct economic functions. Etzkowitz found that new norms of science were emerging: the evolving normative structure involved the capitalization of research results besides the traditional mission of creating new knowledge. "Accordingly, the norms of science which traditionally condemn profit-making motives are beginning to change to allow for such a kind of entrepreneurship; and varying institutional structures are experimented with which fit to these new cognitive and normative patterns" (Etzkowitz 1998, p. 824). As maintained by Etzkowitz (1998, pp. 826–827), changes of this sort have already taken place in such fields as biotechnology and linguistics, where researchers are eager and willing to marry academic research with the running of a company. Interesting as it is, Etzkowitz's study (1989, 1998) fails to specify what the emerging new norms of entrepreneurial science are, besides the general orientation towards the capitalization of knowledge by universities and academics and the institutional imperative to raise funds in the wake of declining budgets.

A possible answer to this question was provided by John Ziman (2000). According to him, science, as characterized by Merton, is an incomplete account of what science in our age really is. The virtue of the Mertonian norms is that they emphasize "practices and principles […] that genuinely distinguish science from other institutions and callings" (Ziman 2000, p. 33). Academic science cannot, however, be completely defined by such norms. As a result of greater societal demands, science is being transformed into a new form, "post-academic science". Representing a new kind of ethos, post-academic science is regulated by a set of cultural norms that are the rough inverse of the Mertonian ones: proprietary, local, authoritarian, commissioned and expert. Post-academic science thus produces knowledge that is not necessarily made public but is patented and held secret. It does not pursue a general understanding of things and processes but is geared towards the solving of local technical problems. Scientists work no longer as

individuals but rather are subjected to the managerial authority of an organization in order to achieve commissioned goals. And they no longer work as personally creative individuals but are employed as expert problem-solvers (Ziman 2000, pp. 78–79).

Taking advantage of the constructivistic understanding of the norms of science, we will analyse the ways in which the commercialization of university activities is governed in academic departments. We are especially interested in the redefinitions of culturally accepted patterns of behaviour in situations in which universities have assumed new tasks. Such situations should provide excellent opportunities to study existing norms and the overall ethos of science. As illustrated by Harold Garfinkel (1989), rules and norms are usually taken for granted by the actors involved and are recognized only when they are breached. In the cases analysed here, the situations were more complex than that: the actors did not straightforwardly breach culturally well-established norms but argued for different kinds of rules. Some of these norms could be traced back to national legislation or other external sources, while others were based on the actors' cultural understandings concerning the nature of academic work. We take both of the cases studied as indications of the cultural conflicts that are underway between the traditional modes of academic activity and the more recent entrepreneurial behaviours. What is more, even though our approach to norms is constructivistic, our results do not support the conclusion that the norms of science would be entirely locally negotiated and predominantly variable. In both cases, conflicts arose as regards the proper management of the participants' academic-cum-commercial obligations, which can be traced back to the qualitative differences between the university and business cultures and their respective normative expectations.

10.3 Constructing Norms at the University–Business Interface

In order to study how the norms of science and university activity are locally challenged and redefined we examine two attempts to commercialize academic research through spin-off companies. The studied research groups are the Applied Plant Biotechnology Group and the Research Unit for Multilingual Language Technology, both of which operated under the auspices of a comprehensive public university, the University of Helsinki. Both of these groups make interesting cases for studying the construction and definition of norms because they blurred the boundaries between university and business, leading them either to ignore or violate the accepted ethos of scientific behaviour. A major task for the actors involved was thus to reconsider the effective rules and norms applying to the situations at hand and enforce them. In what follows, we shall examine these processes. The norms to be (re)defined fell roughly into four distinct areas: (1) the missions of the university, (2) economic and academic rewards, (3) communication within the scientific community, and (4) the connection between public and private activities.

10.3.1 Missions of the University

Multiple tasks for universities also mean multiple duties, which in turn require the actors to decide which tasks should be prioritized over the others. Indeed, in both cases, the research group members quite soon after the partial commercialization of their activities encountered the problem of how to define the main missions of the university. In the case of the Plant Biotechnology Group, the teaching of undergraduate students came to be singled out as the primary duty of a university professor. This rule emerged as an organizational response to the group leader's attempt to become engaged in both university and business activities all at once. As described by her, she wanted to maintain her academic research group while simultaneously becoming involved in private business activity. This resulted, from the outset, in a heated debate between the group leader and her superior, the department chairman.

The department chairman was concerned over whether or not the group leader was capable of taking care of the undergraduate teaching while being closely involved in the company's operations. Based on his discussions with other teachers in the department, the chairman became convinced that the group leader had neglected her teaching duties. He thus decided to give her a formal written admonishment grounded on the regulations of the Civil Servant Law. According to the warning, the professor was instructed to use most of her time to achieve the goals of the department rather than those of the company. As the chairman wrote in the letter:

> You are still more a professor […] than a private entrepreneur: Society pays you expecting that you use most of your time and energy for achieving the goals of your subject and those of our department. Teaching undergraduate students is the most important part of your duties.

The group leader was upset by this letter. She was of the opinion that she had fully performed her teaching duties. Because several of the department's staff had already focused on the undergraduate teaching, the group leader considered it best for her and the department to concentrate on scientific research, the commercialization of the research results and postgraduate education, as well as participating in the undergraduate curriculum design. The department chairman, on the other hand, emphasized the teaching of undergraduate students. Due to his higher position, he was able to rule that this was the most important of the group leader's duties.

In the case of the Research Unit for Multilingual Language Technology no apparent conflicts concerning the basic missions of the university arose, yet the unit's researchers judged for themselves that their commercial activity did not really belong to the university because it did not fulfil the criteria of academic research. The commercialization of the research results achieved by the unit had begun much earlier than those of the Applied Plant Biotechnology Group. Already at the beginning of the 1980s, the unit's home department, the Department of General Linguistics, started to get orders from large Finnish companies that needed new language-technological applications. These orders were managed through the department's administration and written in the form of formal research contracts.

The resulting money and equipment were more than welcome, since the department had, like many other small departments in the humanities, constant problems in gaining funding for its activities.

Nonetheless, the department had some difficulty in fitting the extra income with its budget as no clear procedures existed for chargeable service and research at the university. Meanwhile, the professor who led both the unit and the department had begun to think that the commercial orders received had nearly nothing to do with scientific research. In his opinion, the personnel at the university were expected to do research instead of engaging in commercial activity:

> It was sort of selling. Those contracts were not genuine research contracts in the sense that we would have needed to do research to execute what stood in them. In fact, we just sold programmes that were already made here […]. Of course, some configuring work was done.

The professor and the principal researcher of the unit therefore decided to establish a company into which the commercial activities were transferred. By so doing, they strove to keep the two activities separate. From the point of view of their colleagues, a close connection between the department and the firm persisted, however, as the department was specialized in language technological research, the results of which were utilized by the company. Some faculty members also criticized the department for concentrating too heavily on language technology. In their view, it should have had a wider research orientation.

Consequently, in the studied cases two tasks of the university rose above the others: undergraduate teaching and scientific research. Moreover, not only was the quality of research considered important, but also its breadth. The Department of General Linguistics, for example, was expected to carry responsibility for the entire discipline of linguistics. This responsibility seems to be motivated by teaching, since higher education is usually backed up by research. In and of itself it is not too surprising that teaching and research were singled out in our cases as the most important missions of the university. What our findings serve to show, however, is how highly these tasks are valued even in a situation where public universities were generally expected to take over other societal functions as well. The basic tasks of teaching and research were not to be interfered with by the emerging entrepreneurial activities.

10.3.2 Economic and Academic Rewards

Whereas the origin or "ownership" of ideas in science has traditionally been indicated by credits given to colleagues, the property rights in commercial activities are more formally defined and exclusive. Indeed, as a result of commercialization, property rights of various kinds were contested in both of the studied cases either by fellow academics or by university administrators. The struggles that took place in the Research Unit for Multilingual Language Technology were originally due to a situation in which two professors[1] owned a company which made use of the

[1] Later, the principal researcher also was appointed as a full professor.

research done in the department. As the time went on the bulk of the unit's research was done by a second generation of language technologists, who licensed the programs they had developed for the company. Soon the younger generation began to think that their contribution to the economic activities of the professors' company should be institutionalized, i.e., they expected to receive ownership of a small share of the company. Despite some preliminary negotiations, the professors did not ever consider accepting the younger researchers as shareholders. This created a bad atmosphere within the research unit.

The younger generation attributed the reluctance of the professors to accept them as co-shareholders to the professors' inability to recognize that despite their pioneering work, the technology was not the fruit of the professors' research only. The disagreements concerning the economic rewards thus unleashed a latent struggle within the group concerning academic priorities and credits.

The disagreements relating to academic credits worsened once the company started to market the licensed programs as if these were originally developed by the firm. The field of language technology gathers researchers from universities and commercial enterprises and, in addition to new ideas, well-working tools are highly appreciated. Since the company sold the programs as if these were its own achievements, the researchers of the younger generation who had actually developed them did not receive the appropriate credit. Their part in developing the technology remained unrecognized, even in the academic context. The situation was described by one of the researchers as follows:

> We travelled abroad a lot in those days and nearly every time when we presented our work, we were asked how our work was related to that of [the professors' company] — that is, didn't the company do it much better […]. Thus we did not get the credit we deserved.

Another instance where economic rewards were debated can be found from the Applied Plant Biotechnology Group. A joint project on biotechnological oat improvement by the group and two state research centres is the case in point. The confusion resulted from some complexities in the contract law and the proposed modification of the Finnish intellectual property rights (IPRs) legislation. Traditionally, the university researchers had the right to patent their research results without having to inform the university about it. This policy was subject to reconsideration at the time when the oat improvement project was initiated: the University of Helsinki's central administration launched a new procedure according to which faculty members were expected to voluntarily transfer their IPRs to the university. The Plant Biotechnology Group's researchers were not willing to do so, however.

The controversy originated in the first project meeting between the research group and the two research centres. In this meeting, the group leader picked up the issue about the IPRs in order to reach an agreement about it. She suggested to the representatives of the research centres that they would receive rights to use the group's inventions although these were to remain in the group's possession. Despite this offer, the negotiations ended in conflict. The main reason for this was the fact that the lawyers of the research centres were not willing to accept the research group as a contracting party as it was not a legally qualified entity. The lawyers wanted the

contract to be signed by the University of Helsinki instead. The university, on the other hand, was willing to assent to this, but maintained that it should receive the IPRs of the research group into its possession. This was something the group could not approve. The researchers referred to the national legislation and emphasized that they had indisputable ownership of the IPRs. The struggle went on for more than a year because of the deep disagreement between the parties. Finally, the researchers conceded to their opponents' demands and transferred their IPRs to the university. They did so because agreeing with the university on the contested IPRs was set as a precondition for the group's relocation from its home department to the university's biotechnology research institute. The group wanted to do so because of the conflicts over work duties its leader had encountered at the department.

As we have seen, the commercialization of academic research led to disagreements concerning the property rights in both of the departments. In the case of the Plant Biotechnology Group, the conflicts were initiated by a complex and changing legislative system: the IPR legislation granted the rights to the researchers while the logic in the contract law would have them assigned to the university. The problems encountered by the Research Unit for Multilingual Language Technology were more subtle. The members of the group faced the rather fundamental question of how the economic rewards of the research should be distributed between those who had contributed to it. As there were no clear answers to that question, the disagreements escalated to involve the academic priority and credits as well.

10.3.3 Communication within the Scientific Community

In our opinion, some of the problems concerning IPRs and academic credit might have been avoided had they been foreseen by the actors involved, or if the proper legislation and administrative regulations had been in place. However, the high value given in academic culture to basic research and undergraduate teaching combined with the commitment to open communication seems to create more profound problems for an activity that strives to combine research with business. That the academic community was not willing to give up the ideal of open communication stood out clearly in the case of the Research Unit for Multilingual Language Technology. After a long period of both academically and commercially successful activity, the evaluation of the Department of General Linguistics resulted in a rather disappointing statement in a research assessment report:

> Given the high degree of excellence that the department achieved in the eighties and early nineties, the results for the period covered by this evaluation are disappointing. Considering the level of support and the number of people involved one would expect to see more interesting results and more scientific output.

The evaluators were worried that, firstly, the group's commercial ties were affecting the kind of research the department was doing. In their opinion, there was a danger that the department's success in turning its research results into a business was shifting the research focus "from scientifically interesting 'difficult' issues to problems whose

solution might be financially more rewarding". Secondly, even though the evaluators admitted that the commercial success of the developed methods "validate the value of scientific work", they pointed out how "the presence of competing commercial interests in the same department gets in the way of a free exchange of ideas". Indeed, the exclusiveness of commercial property rights and the related secrecy do not fit well with the academic norm of open communication. The situation regarding the research unit was further complicated by the fact that frustrated with their exclusion from the professors' company, the younger generation set up a company of their own in 1997. This created a secretive atmosphere also *within* the unit that was commented on by one professor as follows:

> For some years already we have had a problem that the whole truth has not been laid out on the table neither in our internal discussions nor in our publications […] It is a big ethical problem, indeed. How much you can hide — and still act as a credible researcher — when you know that you have something that is commercially relevant as well?

Disagreements concerning one doctoral dissertation provide an apt example of the contradictions the researchers of the unit encountered while trying to fulfil simultaneously the requirements of both academia and business. The doctoral candidate in question belonged to the group of younger researchers who had established their own company. He was accused by the professors of having been intentionally vague in describing a new parser he had been developing. The university grading committee made the following note concerning the thesis:

> […] [XX] has in some important points, especially when it comes to algorithmic descriptions and design principles, refrained from such scientifically detailed descriptions that would have been desirable. Here it is a question of the principle of openness central to science.

In the opinion of the doctoral candidate himself he had just acted in a way that had become customary in the department. Moreover, he referred to the new policy of the university concerning innovations and academic research as follows:

> When we were starting our company I went to a couple of functions organized by the University of Helsinki. At one of them the rector of the university was speaking […] and his message was that there was no sense in telling everything to the Japanese and Americans and letting them collect the money from our innovations. The university needs publications but it does not mean that all things should be revealed.

The Applied Plant Biotechnology Group, in turn, met a different kind of problem concerning open communication within the academic community. Here the issue was about whether or not the research group leader was supposed to inform the department chairman about the commercial activity of her group. The matter came up as a faculty member of the same department sent the following e-mail to the chairman: "[…] everything I hear around me seems to indicate, really, that [the group leader] is managing her firm here among us supported by the professor's salary". The faculty member declared that the issue should be tackled. A month later, she approached the chairman again, complaining that the group had "sold" university courses co-designed by other faculty to external customers. This case was presented by the

faculty member as an unfortunate example of what might happen if private business is mixed with public university duties.

As a consequence, the department chairman asked the group leader to tell him how she was going to arrange the firm's relationship to the department. He also advised her to apply for a permit for a secondary occupation and asked her to draw up a comprehensive work-time schedule, both of which were administrative procedures recently introduced at the university. Although the group leader promised to do so, her plans soon changed. Due to some earlier conflicts that had occurred between her and the chairman, the leader held back information concerning the company. The actors' viewpoints were in sharp contrast: while the chairman regarded his information needs as legitimate, the group leader took them as an expression of mistrust and over-enthusiastic administration exercised at the expense of the department's academic performance and applied mission.

A few months later the conflict seemed to settle as the group leader told the chairman about the company and her intention to take a partial leave of absence from the university. She wanted to work part-time in the firm while continuing to lead her academic research group. The department head approved this. The different viewpoints concerning the communication patterns clashed again, however, when the university rector visited the group's laboratory to discuss the commercial activities. Because the chairman was not informed of the visit, he sent a letter to the rector regretting that he had not known about it and added that the department had adopted a positive attitude towards the group's company. The professor objected to this intervention and sent an e-mail to the chairman saying:

> Hi, my meeting [with the rector] was entirely private, and I do not want you to intervene in it in any manner. […] If any of my meetings with the university management, or others, are connected to the department I shall inform you properly. […] We are arranging our affairs legitimately, and we shall contact the department properly.

This e-mail expressed the grave difference in viewpoints between the two actors. The group leader maintained that she did not need to share information about the company with "outsiders", including the chairman. The chairman, on the other hand, regarded his information demands as legitimate and was bewildered. In his interpretation, the group leader was ignoring the partnership with the department.

As shown above, serious conflicts concerning the openness of communication arose in both cases studied. In relation to the Research Unit for Multilingual Language Technology, the issue was about the adequate scientific description of the technology that had both academic and economic value. In the case of the Plant Biotechnology Group, it was about the extent to which the department chairman should have been informed about the group's emerging business activity. Despite these differences, both cases point in the same direction: the academic community and the university organization seem to be unwilling to give up the norm of open communication even though economic activities might otherwise be accepted. From the point of view of those active in the commercial world, this insistence on transparency was something to be objected to. The open nature of university work

thus seems to be in contradiction with the confidentiality and privacy of corporate activity.

10.3.4 Connection between Public and Private Activities

As the above conflict between the research group leader and the department chairman shows, distinguishing what is private and what is public turns out to be difficult in the case of private firms operating in close connection with universities. On the other hand, we found in our cases a strong urge to keep the public and private separate, which created problems in terms of the finances of the research groups and the social roles of the researchers. The Applied Plant Biotechnology Group shows a situation in which some stake-holders are concerned about the blending of private and public finances. As indicated earlier, the group transferred to the university's biotechnology research institute. Because the institute was running short of working space, it came up with the arrangement of having the group carry out its academic research in the same laboratory as its commercial research. As noted by the institute's head of administration, this ran the risk of mixing the public research with the business activity. He thus wanted to make the group's finances administratively transparent:

> See, what I'm afraid here is that the public funding […] although it is meant to foster economic life and competitiveness, when it enters the university, should meet the criteria set by the financial administration of the university. And these criteria do not include the mixing of business activity and university activity in such a way that nobody is able to make a measure of.

According to the head of administration, engaging in private business in the context of the university organization was possible, but only within very strict limits. These included, for instance, renting equipment or paying for premises and services. Being a public authority governed by the legislation, the university was forced to actively police the separation between the public and private funds. The head of administration said: "It is my duty to keep researchers out of prison. I take it seriously, although it is a joke." Those representing the university's central administration were of the same opinion. Referring to some cases where academics were caught involved in wrongdoing, the university lawyer declared: "Due to external pressure, we have to be even more rigorous than before to watch that accounts are being kept separated."

Since the Research Unit for Multilingual Language Technology had externalized its private activity into a company that functioned outside the university organization, keeping public and private finances separate did not pose any straightforward problems. However, the professors' dual roles as *de facto* leaders of the department and owners of the company caused dissatisfaction both in the department and the company. Stake holders on both sides criticized the professors for not being interested enough in what was happening in their company. The researchers of the department

thought that the professors should not have let their company sell as its own products the programs licensed from the researchers. The professors agreed with this but justified their inactivity by reverting to their policy of externalizing the commercial activity into the company. The employees of the company complained, on the other hand, that the professors – the principal owners and board members of the firm – should have assumed stronger leadership of the commercial activities in the middle of the IT crash that took place in Finland at the turn of 2000s. As time went by the professors themselves also realized that their dual roles were problematical. As one of them explained:

> We were no longer credible professors once we had a firm that applied the research done in the department […]. I understand more than well that the other researchers were worried about, or at least in their minds secretly wondered about, what was going on […].

In summary, the difficulties in managing the boundary between the public and private activities finally led the individual members of both groups to choose one side over the other. In the case of the Research Unit for Multilingual Language Technology, the second generation of researchers moved away from the university to work in their own company. The professors, on the other hand, chose to remain within academia, withdrawing themselves from business activity: they sold their company to a larger corporation, and retained minority shareholder positions only. The Applied Plant Biotechnology Group, on the other hand, decided to finish its academic research programme and become a fully independent private entity. Most of the group's researchers found jobs in the company while the group leader decided to accept a position in a large multinational organization in the United States.

In both of the cases studied the conflicts concerning proper rules and norms of conduct caused by hybridizing academic work with business were resolved by separating the two activities from each other. This had the effect that the business activity as well as the actors dedicated to it moved away from the university. From the point of view of the university this was not a happy resolution, however, since many competent researchers were lost and successful research programmes terminated.

10.4 Conclusion

In the recent discussion of science and innovation policy, much has been made of the possibility of hybridizing academic research with business. Since academic and corporate cultures are traditionally considered to involve rather different kinds of values and norms, the possibility of the aforementioned hybridization seems to indicate changes in the ethos of science. Moreover, the visions of the entrepreneurial university are further reinforced by their normative overtone

according to which existing organizations may and will be moulded into new kinds of forms at will. Combined with the results of the constructivist studies of science this viewpoint might make us believe that the norms of science could be locally recreated so as to support the commercialization of research results. Against this perspective, in the present study we found that negotiations and redefinitions concerning the proper ways of conduct did indeed take place in the two departments as a result of the commercialization of research results. Yet no qualitatively new norms and ways of conduct resulted from these negotiations. Rather, in both cases the attempt to become engaged in academic and commercial activities engendered various conflicts, which eventually led to the separation of the two activities.

Consequently, even though our approach in this study was constructivist in that we were interested in the negotiations concerning the norms and rules operative at the grassroots level of university departments, the outcome of the study does not support any thoroughly "constructivistic" position. By this we mean that the entrepreneurial researchers in our study were not able to recreate the norms and rules at will but eventually complied with the more traditional ethos of science. This was either enforced by those in more powerful organizational positions or the academic-cum-entrepreneurial actors themselves respected it even though the official university rhetoric embraced the importance of the commercial activities.

We take this outcome to indicate that the scientific community and the university institution is still largely operating according to some rather stable norms of which our study singled out the following: (a) the two basic tasks of the university are teaching and scientific research, (b) the results of scientific work should be collective and not owned by private persons, (c) communication should be open within academia and (d) public and private activities should be kept separate. As such, these norms support the existence of some of the norms already described by Merton, namely, communism and disinterestedness. The fact that such norms were simultaneously challenged indicates, however, the presence of an ongoing cultural contest as regards the norms of science and the university, a contest where various kinds of cultural resources – including the norms themselves – are strategically used by the participants to achieve goals of their own. The constructivistic perspective thus offers an interesting new angle regarding the discussion of the norms of science. Instead of stating on a general level what the ethos of science might be, it urges us to examine how the norms and rules are used as cultural resources to advance scientists' varying aims and views.

All in all, the difficulties the actors of our cases met in trying to combine science and business suggest that academic and commercial activities make up very specific cultures with differing values and conflicting goals, that make the intermingling of academic and commercial activities anything but an easy task. Before more knowledge of the problems that are prone to emerge when the two activities are combined is gained, any straightforward optimism concerning the entrepreneurial university appears to remain unfounded.

References

Clark, B.R. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation*. Oxford: IAU Press and Pergamon.

Etzkowitz, H. (1989). Entrepreneurial science in the academy: A case of the transformation of norms. *Social Problems*, *36*(1), 14–29.

Etzkowitz, H. (1998). The norms of entrepreneurial science: Cognitive effects of the new university-industry linkages. *Research Policy*, *27*(8), 823–833.

Etzkowitz, H. (2003). Innovation in innovation: The triple helix of university-industry-government relations. *Social Science Information*, *42*(3), 293–337.

Etzkowitz, H., Webster, A., Gebhardt, C., and Cantisano Terra, B.R. (2000). The future of the university and the university of the future: Evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, *29*(2), 313–330.

Fransman, M. (2001). Designing Dolly: Interactions between economies, technology and science and the evolution of hybrid institutions. *Research Policy*, *30*(2), 263–273.

Galison, P. (1997). *Image and logic: A material culture in microphysics*. Chicago: University of Chicago Press.

Garfinkel, H. (1989). *Studies in ethnomethodology*. Cambridge: Polity Press.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., and Trow, M. (1994). *The New Production of Knowledge: The dynamics of science and research in contemporary societies*. London: Sage Publications.

Gieryn, T.F. (1999). *Cultural boundaries of science: Credibility on the line*. Chicago: The University of Chicago Press.

Guston, D.H. (1999). Stabilizing the boundary between US politics and science: The rôle of the office of technology transfer as a boundary organization. *Social Studies of Science*, *29*(1), 87–111.

Marginson, S. and Considine, M. (2000). *The enterprise university: Power, governance and reinvention in Australia*. Cambridge: Cambridge University Press.

Merton, R.K. (1942/1959). Science and democratic social structure. In Merton, R.K. (ed.) *Social theory and social structure*. Revised and enlarged edition. Glencoe: The Free Press, pp. 550–561.

Mitroff, I. (1974). Norms and counter-norms in a select group of the Apollo moon scientists: A case study of the ambivalence of scientists. *American Sociological Review*, *39*(4), 579–595.

Mulkay, M. (1991). Norms and ideology. In *Sociology of science. A sociological pilgrimage*. Milton Keynes: Open University Press, pp. 62–78.

Nowotny, H., Scott, P., and Gibbons, M. (2001). *Re-thinking science: Knowledge and the public in an age of uncertainty*. Cambridge: Polity Press.

Owen-Smith, J. (2001). Managing laboratory work through skepticism: Processes of evaluation and control. *American Sociological Review*, *66*(3), 427–452.

Powell, W.W. and Owen-Smith, J. (1998). Universities and the market for intellectual property in life sciences. *Journal of Policy Analysis and Management*, *17*(2), 253–277.

Rappert, B. and Webster, A. (1997). Regimes of ordering: The commercialization of intellectual property rights in industrial-academic collaborations. *Technology Analysis & Strategic Management*, *9*(2), 115–130.

Slaughter, S. and Rhoads, G. (1996). The emergence of a competitiveness research and development policy coalition and the commercialization of academic science and technology. *Science, Technology, & Human Values*, *21*(3), 303–339.

Strauss, A.L. (1991). *Creating sociological awareness. Collective images and symbolic representations*. New Brunswick: Transaction Publishers.

Tierney, W.G. (1988). Organizational culture in higher education: Defining the essentials. *The Journal of Higher Education*, *59*(1), 2–21.

Ziman, J. (2000). *Real science: What it is, and what it means*. Cambridge: Cambridge University Press.

Chapter 11
Doctoral Education and Doctoral Theses – Changing Assessment Practices

Helena Aittola

11.1 Introduction

Most European countries are today highly interested in the quality of doctoral education. Undoubtedly, the Bologna Process has also given impetus to a reassessment of national doctoral education systems. There is a need to find comparable indicators measuring the efficiency and quality of doctoral education systems and educational practices alike. At the centre of the doctoral education agenda are not only national research funding systems, research training and doctoral programmes but also issues involving international collaboration and mobility (Enders and de Weert 2004; Tomusk 2006).

It is widely accepted that doctoral candidates and doctoral theses make a major contribution to the creation of new knowledge in their particular fields of academic study (Hakala 2005; Welle-Strand 2000). Additionally, doctoral candidates should be recognised as prospective researchers who will have an essential role in national research systems in the near future. In general, doctoral education faces a challenge stemming from the interplay between internal and external determinants of science and scholarship.

Although there may be a universal consensus of some kind on the standards that a doctoral thesis should meet, the nature of theses can vary. That is, a doctoral thesis may be traditionally defined as a piece of pure academic research while at the same time more practice-oriented and vocational dissertations are also accepted (McAlpine and Norton 2006; Wallgren 2003). Moreover, the thesis assessment process, assessment methods and the role of preliminary thesis examiners vary according to national regulations (Morley et al. 2002).

Traditionally doctoral degrees have been based on independent study. The Finnish graduate school system was established in 1995. The aim of the reform was to reorganize doctoral education to make it more systematic and efficient. Although the organisations and practices of the different programmes do vary, the evaluation of the Finnish doctoral education system as a whole (Dill et al. 2006) confirms that they provide high-quality research learning environment for their doctoral students.

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Majority of the doctoral candidates study, however, outside the graduate schools and doctoral programmes and the large proportion of part-time doctoral students has been distinctive for the Finnish system. There has been a rapid increase in the 1990s in the number of doctoral degrees and number of doctorates has continued to grow yearly.

In Finland, the national debate on higher education has focused on an increase in the number of completed doctoral degrees on the one hand and on the quality of doctoral theses on the other. It has been argued that the standard of theses and even the qualifications of doctorate holders will suffer as more doctoral degrees are taken every year. These arguments are intertwined with demands that doctoral education must meet also the needs of the wider labour market. Thus, the quality issues revolving around doctoral education and doctoral dissertations concern not only academia or national higher education practices but also the international context of doctoral education, including what seems to be a trend towards uniform international demands and global academic markets.

The thesis assessment process itself has received little attention in research (Mullins and Kiley 2002). The purpose of this article is to describe and analyse the assessment of doctoral theses in Finnish higher education. The assessment process of a doctoral thesis includes special phases in Finland. At first, the preliminary examiners revise the manuscript of a thesis and give their comments and suggestions for corrections for the doctoral candidate. The preliminary examiners give also statements of acceptance for the faculty. Then the faculty gives permission to publish the manuscript. In principle, all the doctoral theses must be printed before the public examination of the thesis. The public examination is really public, because in addition to the academic colleagues, friends and relatives of the doctoral candidate are allowed to attend the occasion.

11.2 Data

The first set of data consists of statistics on doctoral dissertations completed in four different Finnish universities (University of Oulu, University of Jyväskylä, University of Turku and Helsinki University of Technology) between 2000 and 2004. In each university, the study covered the discipline represented by the theses, the sex of the doctoral candidates and their thesis opponents, and the opponents' home countries and universities. An analysis of the data will reveal some aspects of the scientific networks underlying the assessment system. The role of preliminary examiners and public opponents as academic gatekeepers and the national and international features of the thesis assessment system will also be examined.

The second set of data comprises a sample of assessment reports submitted by opponents after the public examination of a doctoral thesis. The content-related and structural aspects of the reports will be analysed to gain a detailed description of the assessment procedures.

Because preliminary examiners and public opponents of Ph.D. theses play a critical role in the assessment process, a third set of data was collected through interviews. A sample of thesis examiners and opponents representing different disciplines were asked to describe in concrete detail how they go through and assess a thesis manuscript. They were also requested to evaluate the general quality of the theses presented in their academic field and the Finnish thesis examination practices as a whole. Given that the criteria used in assessing doctoral dissertations are not explicit and the format of assessment reports may vary considerably, the interview data will provide some authentic accounts of the current assessment criteria and practices.

11.3 Who are the Doctoral Candidates and their Public Opponents?

First I shall describe results from statistical data collected from the web sites of the four universities. The quantitative data is intended to give an overview of the final stage of doctoral education, the assessment of doctoral theses. The analysis will shed light on institutional and disciplinary differences in the assessment culture.

In three universities the relative proportions of the female and male doctoral candidates preparing to defend their doctoral theses were almost equal. The exception was Helsinki University of Technology, where female candidates comprise a minority (18%). In general, the proportion of women preparing their doctoral thesis in engineering also in other universities is smaller than in other disciplines. There was wide variation between disciplines in each university as to the ratio of female to male doctoral candidates, but this variation will not be analysed in the present study. In 2006, women accounted for 47% of all the doctoral degrees (Research.fi).

Although the proportion of women among holders of doctorates is constantly rising, the proportion of female professors is not rising at the same rate. In Finnish universities, the percentage of women in the professoriate is about 21 (KOTA). Therefore, opponents of doctoral theses are predominantly male professors, with female opponents still a rarity. Only some 18% of the public examinations of the dissertations looked at here feature women as opponents. In one university only has the proportion of female thesis opponents risen to 24%. There was variation between disciplines regarding the gender of opponents: Male opponents are most paradigmatic in the natural sciences, mathematics and medicine. By contrast, female opponents are typical in nursing science (68%–86%) and the humanities (about a third), where their proportion in the professoriate is also higher than in other disciplines.

However, female thesis opponents tend to examine the doctoral theses of female doctoral candidates. In some ways the process is selective. The proportion of pairs of female doctoral candidates and female thesis opponents varied between 21%–36.5% in the universities. By contrast, a male candidate submitting a thesis is typically examined by a male opponent (85%–93%). This situation stems partly from the

size of the group of academic women available in different disciplines qualified to act as examiners and opponents. However, this does not fully explain the underrepresentation of women among thesis opponents. In fact, the selection of examiners is not an open process at the faculty level. Networks of male professors and reciprocal assessment invitations will exclude qualified women from the doctoral thesis assessment system (Husu 2001, pp. 19–21).

In the last few years, international research practices have contributed to shaping national doctoral education in Finland. International collaboration in education and research has become common in various disciplines (Academy of Finland, International Strategy 2002). International research contacts, again, have made it easier to invite foreign opponents to examine Finnish doctoral theses. The relative proportions of Finnish and foreign opponents varied in the four universities. In Helsinki University of Technology, most of the opponents came from abroad (78%), while in the other three universities the proportion of foreign opponents was substantially smaller (29%–46%). Naturally, the differences between the universities were smaller than the differences between disciplines. In each university there may be disciplines where almost all opponents (90%–100%) are Finnish: Finnish opponents are common in, for example, education, nursing science, the social sciences, the humanities and medicine.

In the system for assessing doctoral theses in Finland, the University of Helsinki enjoys something of a scientific and scholarly hegemony. In the data, academics from it were popular as thesis opponents. The proportion of opponents from the University of Helsinki in each of the four universities (19%–37%) exceeds the representation of any other Finnish university. Unfortunately, in our small country there may be research topics where the pool of academics competent to serve as opponents is limited. While the great number of potential opponents representing a wide range of disciplines who are available at the University of Helsinki does not alone fully account for its dominance, the esteem accorded to academics from the University of Helsinki is rooted deeply in the Finnish academic world (Välimaa 2001, pp. 16–25).

The universities investigated here had invited opponents from 39 different countries. In one of them the percentage of opponents from the Nordic countries in the total number of foreign opponents was 30, whereas in the other universities more than half the foreign opponents came from different countries of continental Europe (50.5%–55%). This indicates that the total number of opponents from the Nordic countries and from various continental countries amounts to three fourths of all foreign opponents. The proportion of opponents from the United States (19%–24%) was equal to the proportion of the Nordic countries. Undoubtedly, the United States holds the top position in the scientific world. Foreign opponents from other parts of the world play quite a minimal role, amounting to no more than 5% in the four universities (Table 11.1).

Among opponents who came from abroad, the proportion of female academics sank dramatically. This study found that the proportion of women in all Finnish opponents was about a quarter (23.5%), in all foreign opponents only half as much (12%) (Table 11.2). Unfortunately, this internationalising trend has consequences which may not promote equality between men and women in academia. If higher

Table 11.1 Foreign thesis opponents: distribution by country of origin (percentages)

Universities	HUT	Jyväskylä	Turku	Oulu
Nordic countries	24.5	14	21	30
Other countries of Europe	50.5	55	54	42.5
Unites States, Canada	22	24	19	20.5
Rest of the world	3	7	6	7
	100	100	100	100
n	332	180	158	129

Table 11.2 Finnish and foreign opponents: gender distribution (percentages)

	Finnish opponents ($N = 945$)	Foreign opponents ($N = 783$)
Women (including male–female opponent pairs)	23.5	12
Men	76.5	88

education institutions will increasingly invite opponents from abroad, the majority of them will be men. Thus, national equality policies will be endangered to some extent. In general, the status of women and their prospects of ascending the academic ladders can vary in different countries and disciplines as a result of various historical and cultural factors.

In sum, ranking is commonplace in the academic world (Dill and Soo 2005). At the national level ranking processes may be open and officially implemented or they can be covert and opaque. Differences between disciplines are not disappearing in doctoral education and, therefore, discipline-based traditions and practices are still alive in the thesis assessment process (Becher and Trowler 2001; Enders and de Weert 2004; Henkel 2000). For instance, faculties and networks of opponents will maintain the non-transparent decision-making process where preliminary examiners and public opponents are selected and invited. One of the main issues involved here is how to increase the proportion of female academics serving as thesis opponents and make them visible and respected within the academic hierarchy. Being picked up as an opponent is an important way for a female academic to attain recognised status in academia.

11.4 Assessment Reports as Indicators of the Quality of Doctoral Theses

The assessment reports submitted by opponents after the public defence of doctoral theses are supposed to be accurate indicators of thesis quality. In principle, anyone can confirm the quality of theses because both the theses and the assessment reports

are public documents. In Finnish universities, regulations for writing a thesis assessment report vary. Some university departments have well-defined instructions on how to draw up an assessment report, listing also the assessment criteria. In general, however, opponents are allowed to write their reports according to their own conceptions and experiences of assessment. Their assessments usually reflect the institutional and disciplinary traditions which they have adopted in their academic communities. So, the final phase of the assessment process can be said to take place in a world of tacit academic knowledge (Polanyi 1998).

The preliminary examiners have a vital role in the assessment process. In practice, all Finnish doctoral theses must be printed before the public viva voce. Preliminary examiners are responsible for assessing the scientific quality of a doctoral study. They give permission to publish the manuscript. In addition, the preliminary thesis examiner will sometimes act as the opponent in the public viva, but in many disciplines preliminary examiners and public opponents are different people. In the last few years, assessment practices have changed in that opponents are no longer required to give a detailed analysis of the thesis they are judging. Grading is not always insisted upon either, some academic institutions asking no more than a statement that the opponent passes the thesis.

I have studied assessment reports from one university, analysing 43 reports representing three faculties: 14 reports from the Faculty of Education, 17 reports from the Faculty of Humanities and 12 reports from the Faculty of Sport and Health Sciences. All assessments were submitted in 2004–2005. There was variation from a very brief one-page report to an extensive appraisal of ten pages, typically the reports consisted of 2–3.5 pages. Although the sample was limited, it is enough to illustrate the varying nature of such documents.

My first objective was to analyse the main features of the reports submitted by the thesis opponents on the basis of the *structure of the thesis assessed*. The opponents had paid a great deal of attention to certain thesis sections. Typically, their reports included a description of the starting points of and research problems addressed in the given study. Similarly, they stressed data collection and analysis, which confirms the central status of methods in a doctoral dissertation. Moreover, although the opponents described the concrete methods used in the doctoral study reported on, such as the data collection and data analysis procedures, the question whether a doctoral thesis as a whole had treated methodological issues adequately was given less consideration.

> The empirical approach suffers above all from a paradigmatic basic problem. Even though the researcher repeatedly stresses that he has conducted qualitative research, in all the three part studies they have quantified. … The researcher is also himself aware of the contradiction and explains it both in the introductory and the discussion chapters. The researcher does not, however, anywhere give though to what he means by a phenomenological philosophy of research, considering his study, without further ado, a phenomenological one despite it being nothing of the sort. (Report 16, Faculty of Humanities)

The interrelationship between a thesis' theoretical framework and its empirical section and findings are considered in one statement as follows:

> The section where the writer discusses the data-gathering process reveals a lability of the epistemological starting point that is reflected in the study as a whole. The researcher

> emphasises that he has conducted hermeneutic research where the aim "is to understand the subject in new fruitful perspectives and raise topics for conversation" (p. 52). On the other hand, the stages of the data-gathering process might be considered to lead to the conclusion that the researcher has, nevertheless, been following a logic based on another conception of knowledge. The lability of the epistemological starting point is reflected also in the findings in that the way in which the research questions have been framed and the concepts that have been used in framing them have contributed to predetermining the findings. (Report 5, Faculty of Education)

The reports characterised the research topic of the doctoral study examined as timely and (socially) relevant but the scientific relevancy of the topic was not clearly justified. Apparently, doctoral theses fail to explicitly define the gap in scientific or scholarly knowledge that they hope to fill. An opponent representing the Faculty of Sport and Health Sciences assessed the research task and the research problems addressed in a thesis in the following way:

> The study focuses on (the often conflicting relationship) between civic activity and public administration – cooperation – interpreted as collaborative planning and local development work. The research task is defined in a slightly vacillating manner. In some passages the writer emphasises the theoretical character of their study even though in practice the main task of the study is an empirical examination of cooperation. (Report 2, Faculty of Sport and Health Sciences)

Ordinarily, an opponent took notice of how relevant a thesis' theoretical framework and the concepts applied in it were. The opponents criticized the unreflective, repetitive or superficial nature of the framework. On the other hand, positive comments were also made, acknowledging the relevance, critical approach and profound conception of the theoretical constructs discussed. Assessments of the relevance of the literature drawn on in a doctoral study were linked to its theoretical framework. Remarks on the relevance of sources were scattered. Thus, some opponents judged a thesis' literature review adequate and internationally well-founded, but a great many considered the literature base of a dissertation unsatisfactory for one reason or another. In the following statement, the sources and reference style of a thesis are discussed rather thoroughly:

> Doctoral candidate's study has been written on the basis of extensive, many-sided and international source materials. Doctoral candidate is conscientious about the manner in which she presents her sources and refers to them. By contrast, her use of her sources is in places rather superficial and circumlocutory, meaning that there is a failure to initiate a reflective discussion between the sources. Doctoral candidate makes much use of an allusive style, but fails to specify how her own text relates to the reference, often making it impossible for the reader to link the reference with the process of deepening doctoral candidate's text. While the sources are abundant, their use is uneven. I would have liked to see more source criticism. (Report 11, Faculty of Education)

Surprisingly, not all of the opponents outlined the main results of the doctoral thesis they discussed in their report. However, many of them had commented on the construction of the results. The opponents' assessments of the significance of the results gained in a thesis varied in different faculties. Naturally, opponents representing the humanities had found it more difficult to discuss the importance and applicability of thesis results than opponents representing other faculties. This general observation confirms the disciplinary differences found in this study.

It is taken for granted that the structure and language of the doctoral thesis should be revised before publication. The doctoral candidate and the editor(s) are responsible for the final revision in the publication process. Nonetheless, the opponents pointed out deficiencies in the structure of the thesis they were assessing, including its language and other surface qualities (e.g., format, readability):

> The results section has been written by arranging results gathered from different sets of materials under certain headings. The aim has been to synthesise data derived from different sources into structured wholes. Here the disposition of the results section remains a little unfinished. The headings do not necessarily incorporate results that one would have expected, and the combination of results derived from different sets of materials fails to promote the reader's understanding. Giving the results drawn from the different materials as separate items or at least differentiating them a little more clearly would have made the text more easy to understand. (Report 5, Faculty of Sport and Health Sciences)

When presenting their general assessment the opponents' reports focused mainly on the doctoral study process and the doctoral thesis summing it up rather than on the doctoral candidates themselves or their capacities and qualities as independent researchers. In this way the reports in a sense blur the authorship. The focus of the Finnish assessment system is clearly on the doctoral thesis as a printed document. Most commonly, assessments focusing on the doctoral candidate limited themselves to their ability to pursue research:

> The researcher does what she has set herself to do. The study shows an adequate mastery of the research field, familiarity with research on both age and competence, an ability to conduct and report empirical research as well as an evaluative attitude towards the researcher's own studies. (Report 12, Faculty of Education)

Although the opponents rarely opened their assessment reports with an explicit discussion of the significance of a doctoral study, they did highlight its merits in the conclusion. The contribution it made to the field was attributed to scientific merits. The following statement, written by an opponent from abroad, is a good example of a general assessment of a thesis:

> This is a fascinating study made even more convincing with the second volume of illustrations and maps that accompany the main text. These provide a clear demonstration of exactly what N.N. meant by ideas of … There is also some delightful personal photographs of … There seems to be a certain lack of system in their presentation, but they are certainly a "goldmine" for the future publications that I hope will come from this thesis. The scholarly apparatus contained in the footnotes is very impressive, though of course, I am unfamiliar with the Finnish sources. But there is no doubt that papers and perhaps even a book might come from this thesis. It is an excellent piece of work and would be readily accepted for the award of a doctorate in my institution. (Report 13, Faculty of Humanities)

11.5 The Quality of the Assessment Reports

In the second phase of my analysis of the thesis assessment reports the focus was on *the reports' general assessment features*: the quality of the assessment, the comprehensiveness of the assessment report, the clarity of the assessment criteria and the logic of the assessment were used as units of analysis.

Although evaluative aspects were dominant in the reports, many reports interweaved evaluative and descriptive features. Some of the assessments focused mainly on summarising the content of the doctoral theses and in some reports evaluative comments were almost totally missing. It was hard to conclude from such an assessment report what elements of the doctoral dissertation reported on make the opponent consider it good or less than good. It is arguable whether it will give the faculty and the candidate's academic colleagues a satisfactory picture of the standard achieved by their study. The style of assessments reports varied in different faculties. The majority of the assessment reports presented to the Faculty of Sport and Health Sciences were overtly evaluative, whereas descriptive aspects were prevalent in the other faculties, in the Faculty of Humanities and in the Faculty of Education.

Given that there were institutional contexts without a formal definition of the criteria to be used in assessing doctoral theses, it was unexpected to find opponents similarly omitting to make their own criteria explicit in their reports. Some opponents offered, however, the doctoral candidate suggestions on how they could have improved their study, redundant because the candidate could not actually revise their study anymore. Perhaps the comments were intended to confirm the opponent's authority or give hints to future doctoral candidates rather than to provide feedback to the candidate actually assessed. There were reports which could be characterised as lacking internal consistency. That is, in one section of an assessment report the opponent might argue for one solution but elsewhere in the report the suggestions could point to an opposite direction. This may have been a message to the faculty that there were serious deficiencies in the doctoral thesis which must be reconsidered before the thesis could be approved.

However, the Faculty of Humanities seemed to have explicit assessment criteria of some kind regarding the things that an opponent should pay attention to. They were:

> 1. Extensive familiarity with a special field of a scientific discipline. 2. A profound understanding of the subject field that is consistent from the perspective of the study conducted. 3. Creation of new knowledge and understanding in the research field. 4. Mastery of a high standard of the principles and practice of scientific research. 5. Demonstrating an ability to conduct independent research. 6. An ability to produce a large-scale, consistent explanation of an intellectually demanding research task. 7. An ability to independently and successfully carry out a demanding study. 8. An ability and skill to orally defend the objectives and implementation of the implemented research project. (Report 11, Faculty of Humanities)

One opponent representing the Faculty of Education also described her assessment criteria, which were very much like those of the Faculty of Humanities:

> On the whole, I justify my view of the work on the basis of three central requirements to be met by a doctoral thesis. The concepts used in the study must be theoretically reasoned and [the writer] must demonstrate thorough familiarity with the Finnish and international literature on the subject. The methodology- and method-related choices made in the study must be reasoned and consistent. The researcher must produce a contribution to the scientific discussion on the subject. (Report 8, Faculty of Education)

In sum, analysis revealed that the thesis assessment reports yielded neither a broad perspective on current assessment practices nor a detailed picture of the specific

criteria used in assessing doctoral theses. The results show wide variation in the quality of assessment reports. The doctoral theses in the Faculty of Sport and Health Sciences comply with the mode of scientific research in the natural sciences, whereas in the Faculty of Humanities and in the Faculty of Education the mode of the theses may vary considerably. Thus, there is an obvious need to provide preliminary examiners and public opponents of doctoral theses with guidelines.

11.6 The Interviews: The Opponents Tell Their Own Story of the Assessment Process

The aim of the interviews was to investigate how examiners of doctoral theses themselves describe and analyse the assessment process. Their accounts will give insight into the unstated and invisible features of the process (Morley, Leonard and Davis 2002). The academics interviewed here ($n = 8$) were not the same people as those whose assessment reports were discussed above. The group consisted of six women and two men and they represented the social sciences, humanities and educational sciences. The interviewees were asked to think back to the last doctoral dissertation which they had reviewed.

Here I shall pick up certain themes present in the interviews which will shed light on the opponents' experiences of the assessment practices. First, what were the critical aspects of a dissertation on which the opponents focused as they read it? The interviewed opponents emphasised the relevance of the theoretical framework and the starting points, aims and problems of a study. In particular, they stressed the need for clear and reasoned research problems.

> In a sense, how to find out how widely or deeply this person understands the field, how they delimit it. It's perfectly acceptable to have a quite narrowly delimited field if it's a reasoned choice. It's really those works that are extensive beyond reason, they have written down everything imaginable, there's nothing there to tell you why these things were included. … [I'd s]ooner that it's narrowly and more precisely focused. Many people think that you must put in your whole life course and everything. (Interviewee 3)

The opponents said also that they revised the data collection and data analysis procedures and the methods and methodology of a study in detail. This confirms the observations made from the assessment reports that opponents are holding out for traditional scientific features in dissertations. The professor quoted above discussed the importance of methodological issues as follows:

> I'm a pretty critical reviewer and I read pretty carefully. I do [look at] all these basic solutions, such as all methodological choices and how they are spelled out, and then this suitability of the method for this processing the data. And I do [consider] this the writer's positioning of their own work, how it is positioned in relation to the rest of the theoretical literature. (Interviewee 3)

The opponents could quite easily define the difference between an excellent and a satisfactory doctoral thesis. An excellent thesis includes an original research idea and a critical review of previous research. In an excellent study, a researcher might

make complex judgements and argue for their solutions in a critical and well-reasoned manner. By contrast, a merely satisfactory thesis is repetitive and superficial in scientific terms. One of the interviewees compared the differences between an excellent and a satisfactory doctoral thesis as follows:

> That's why I've been thinking about where this difference between good and bad lies. In a way you might [say it's] something like how well and at what level they know what they're doing. It's this that comes across to you as you read a thesis. If the way it is that they are preparing a thesis as if it was a thesis and looked like a thesis but you see from it that they don't really understand very well, it's muddled, they haven't given thought to things. Then again there's this kind of [thesis] where they know what they're doing. That's where at the best they [go on] to also evaluate and develop the starting point theories and not just use them. And to develop the method and they are at ease also with these their data and with their methods, they master them instead of just using them somehow. (Interviewee 5)

As is widely noted, a contribution to scientific knowledge is an essential feature of an excellent doctoral thesis:

> But then these very good theses are … Somehow I do associate them also with this some kind of novelty, some new viewpoint, starting point or application or some observations or results that are somehow quite essentially different from previous ones. (Interviewee 4)

Even though manuscripts of doctoral theses are revised before their publication and final assessment, the opponents had much to say about their structure and language. Apparently, the pressures to produce doctoral degrees in a given time had made it impossible for doctoral candidates to revise their texts properly. The demands for efficiency may undermine the academic ambitions of doctoral candidates.

From the opponents point of view the assessment process is not unambiguous either. The regulations governing the writing of an assessment report had not been clearly stated for all the opponents. The academics had not received any explicit criteria for use in the final assessment. This reflects the unofficial and invisible practices in the assessment process. The answers included also nonchalant attitudes towards instructions, as can be seen from the following quote:

> I think that even though different universities [have] slightly different practices, the preliminary examiner and the public opponent are given quite a bit of freedom. It has never happened that in the preliminary examiner's report for example you would have been required to add something about some thing or other. Even though they do send instructions that you should do so and so … You can do as you like. Preliminary examiners and public opponents are really bound only by the timetable, otherwise you can scribble whatever you please. If you don't yourself start making too much of the kind of fuss they wish for, it's a pretty painless process. (Interviewee 2)

Sometimes it had not been evident to whom opponents should primarily address their reports. One opponent argued that "the report too must be such that it communicates also in the direction of the author, that it isn't just for the faculty" (Interviewee 4). Typically, a doctoral candidate hopes for concrete feedback while the faculty expect the problematic aspects of the study to be specified. It is sometimes difficult for an opponent to combine these two viewpoints.

The external features of doctoral theses are changing. In the interviewees' opinion, the most salient changes in the form of doctoral theses concern their length and scope. Today's dissertation are less extensive than earlier studies, while

systematised doctoral education and the new graduate school system have shortened the number of years spent preparing the reports. In fact, many doctoral candidates are bound up in the schedules of research projects and temporary employment, so, they can not prepare their doctoral thesis as long as they would like to do.

> Maybe this that I've in mind, this attitude towards the thesis has changed completely. Earlier, you know, it was what you could call a concluding work, a life's work. When it was thought that it must be something excellent, that contains all the thoughts that you have at the moment, what you've achieved and … It was a conclusion to your life's work. But now when they think that it is a certain intermediate stage that you must get done quickly. This efficiency thinking has arrived. (Interviewee 1)

This does have the advantage that theses are "of a more reasonable scope". In the social sciences, educational sciences and humanities, however, doctoral dissertations have not changed alike. They are still large-scale works and mostly monographs. Moreover, most of the monographs are written in Finnish. Nowadays, in the natural sciences dissertations are mainly consisting of articles published in international scientific journals.

The academics interviewed disagreed with the statement that the quality of doctoral theses has fallen dramatic in the last few years. Moreover, it is difficult to compare theses across different disciplines. According to one opponent, "some disciplines are so new and unestablished by nature that some weak doctoral theses have been approved". Some of the academics thought, however, that the quality of dissertations had become more heterogeneous in the last few years as a result of the pressure to produce more doctors in a shorter time; it appears that quantity is replacing quality in this area. On the other hand, theses were getting better because of systematised doctoral education.

> If you think about, there's been talk that graduate schools lower standards, I don't think so. Maybe there's some this kind of change I expect that previously when they were prepared over a long time people may have had more time to pursue what you might call a broader general education in their own field and philosophical and the like that's reflected in the work. It may be that kind of thing isn't there in the same way. Instead, there may be this that when we have doctoral education it really means something both as texts and methodological reflection and I expect everything like this is on a better level. (Interviewee 5)

The opponents proposed that it would be essential to reflect on existing practices and discuss the foundations of and criteria used in assessment. Descriptions of assessment levels would make assessment easier whatever the scale used.

> Yes, definitely, that this is kind of hidden knowledge, it isn't publicly stated anywhere. This is those things that you must learn the hard way. I think that what we should do better is spelling out these criteria and assessment practices. I wouldn't mind at all if university web pages displayed the practices of that university, the set of criteria, how things are done. (Interviewee 1)

On the whole, the academics interviewed saw that the assessment process of doctoral theses has become quite demanding from the opponents' point of view due to diversified and undefined responsibilities. There is a fear that if, as the number of dissertations grows, one accepts too many assessment jobs, reviewing may be turned into something akin to an assembly-line process. In this situation the basic principles of "quality assurance" by peer review is challenged by efficiency requirements.

Moreover, in the Finnish assessment system the role of preliminary examiner is problematic, for in some cases the preliminary examiners might find themselves shouldering the responsibility for supervising the thesis they were supposed to review. In fact, they have to compensate for the deficiencies of supervision afterwards during the assessment process. A reasonable delimitation of the reviewer's contribution and the amount of time they can be asked to use were also mentioned by interviewees as a problem. A reviewer's actual contribution may often be bigger than what was originally agreed on.

11.7 Discussion

The purpose of this article was to discuss the quality of doctoral theses and assessment practices in Finland. Quality is a topical issue in all European doctoral education systems. Although the system for assessing doctoral theses is a well-established element of Finnish higher education and has a long tradition in it, the national system of doctoral education as a whole faces challenges stemming from the so-called third cycle of the Bologna process which concentrates on the quality of doctoral education. Graduate schools and doctoral programmes play a central role in the Finnish research system. Explicitly, the main objective of doctoral education has been defined as involving the provision of systematically organised doctoral training and the supervision of doctoral studies as a means of ensuring the quality of research (Dill et al. 2006).

The study looked at the process where doctoral theses are assessed in Finland. Statistics on doctoral dissertations, analyses of thesis assessment reports, and interviews with thesis opponents yielded a multifaceted description of how doctoral theses are evaluated. While the results shed light on the various aspects of assessment procedures and methods, they also revealed invisible practices and unwritten regulations underlying the assessment system as a whole.

The quantitative data demonstrated, firstly, that women's status in academia is unequal: the proportion of women among doctoral students and holders of doctorates is rising, but their proportion in the professoriate is still small. Therefore, female academics are a minority also among the preliminary examiners and public opponents of doctoral theses. This can be assumed to mirror not only cultural and disciplinary differences but also hidden discriminatory practices. It is likely that invisible networks are still excluding women from significant academic positions and assignments (Husu 2001; Simeone 1987).

Secondly, the quantitative data suggested that the process of selecting thesis examiners and opponents reflects the ranking system of universities. In Finland the University of Helsinki has hegemony over other Finnish universities: this study found that academics representing it were the most sought-after opponents for public thesis examinations at other universities in the country. This probably indicates that in the Finnish higher education and research system, academics working in the University of Helsinki are rated highest among their peers. This situation is not going to change because national and international ranking systems are currently

playing a critical role in higher education. On the contrary, it seems that national and international ranking processes will reinforce traditional status hierarchies among universities (Dill and Soo 2005).

International collaboration has always been an integral element of doctoral education. The current intensification of international collaboration processes is manifested among other things in the increasingly common practice of inviting foreign academics to serve as thesis opponents also in Finland. In this study, most of the foreign opponents came from the Nordic countries and from different countries in continental Europe. On the other hand, the proportion of opponents from the United States was equal to that from the Nordic countries. Characteristically, different universities and disciplines varied in their practices regarding the invitation of foreign opponents. The results confirm that the Finnish model of the assessment process of doctoral theses has remained quite unique although it has been argued that the Finnish graduate school reform was based on the graduate schools of the United States (Aittola 2001; Määttä 2001; Oksanen et al. 2003.) The quantitative data did not show whether the thesis opponents from different countries had applied uniform assessment criteria. Disciplinary traditions affect probably more than institutional differences in the assessment process.

The thesis assessment reports submitted by opponents after the public examination of a dissertation could be made to tell us more about the quality of doctoral theses. The contents and extent of assessment reports varied because different faculties have different regulations concerning how a thesis assessment report should be written and what assessment criteria should be applied in it. The opponents grounded their assessment of a thesis on its structure and they had paid attention to several critical sections of a doctoral dissertation. In general, the contribution made by a doctoral thesis is appraised on the basis of its scientific or scholarly merits or on how it can be applied to practical problems in the given field of research. It was a surprising finding of this study that statements concerning the scientific value of a doctoral thesis were less common than would have been expected. This may confirm the assumption that the opponents had been primarily concerned to determine whether a submitted dissertation could be accepted as a part of the requirements for a doctoral degree. Now that some academic institutions have ceased to demand a grade for a doctoral thesis and are content with an opponent's statement of acceptance, the assessment reports mainly certify that a thesis meets certain basic norms. It is typical of the Finnish tradition that in their general statements the assessment reports focus mainly on a study as a printed document, not on the doctoral candidate as a researcher or on their capacities.

Apparently, as long as the assessment criteria are not formally set down, opponents may apply the criteria they have themselves adopted within their own academic community. If a doctoral thesis does not represent an opponent's own discipline, there is probably no guarantee that it will be evaluated using uniform assessment criteria. Similarly, academics who have not acquainted themselves with the doctoral education and assessment system of another country where they are invited to serve as thesis opponents are confronted by a set of assessment criteria different from those familiar to them.

The sample of opponents who were interviewed told their own story of the assessment process. They described in full and vivid detail how they had gone about the assessment process. Their statements mainly substantiated the observations made from the thesis assessment reports. In their opinion, there is an indubitable difference between an excellent and a passable dissertation: an excellent doctoral thesis has an original research idea, and the writer is able to position their own research within a wider field of knowledge. In addition, they are capable of presenting critical and well-reasoned arguments to justify their conclusions. These findings confirm internationally shared conceptions of the nature of a Ph.D. thesis: although a study must be sound, an excellent thesis must also be creative, coherent and original (Mullins and Kiley 2002). However, the interviewees considered that the quality of doctoral theses had not changed radically in recent years but that theses have become more heterogeneous. Generally, they are less extensive than before, but there is a wide variation as to their length and scope. This can be explained as reflecting differing values underpinning doctoral education and different disciplinary cultures and traditions (Becher and Trowler 2001; McAlpine and Norton 2006).

The opponents found some defects in the prevailing doctoral thesis assessment system. In the actual assessment process the role and duties of the preliminary examiners and public opponents are not clearly defined. They may find themselves in a situation where they are acting more like a supervisor than a reviewer. Additionally, the assessment criteria of doctoral studies and regulations concerning the writing of assessment reports are not necessarily publicly stated which may prolong the process. From the opponents point of view the quality issues in a doctoral study are the most important and they found thesis assessment as a very demanding task. The increasing requirements for efficiency and the varying assessment procedures in different institutional contexts make sometimes the assessment process very challenging and stressful for them.

Morley et al. (2002) have pointed out that "assessments involving interviewing or orals are costly, and have worrying fallibilities and potential for sex, race and other stereotyping and discrimination". The opponents interviewed in this study concluded that as a whole, the Finnish thesis assessment system is fair and reliable. The general mode of assessment is widely accepted but there is, however, currently a diversity of assessment practices and methods, which need to be reconsidered. In general, if quality assurance issues are to be taken seriously it is essential to discuss them critically in every academic institution. The external opponent of doctoral theses has a central role in ascertaining that doctoral theses meet the established criteria (Bartlett and Mercer 2001). Furthermore, the international context of doctoral education highlights the need for clear assessment criteria. Because the purpose of doctoral education and doctoral dissertations is to contribute to the creation of new knowledge, the call for international examiners and reviewers is increasing. It can be inferred from this that a high quality of doctoral education and academic work within an ambitious academic community would ensure a high quality of doctoral theses. In the doctoral programmes there is a challenge how to ensure the originality of research and reduce the time-to-degree at the same time.

The findings of this study indicate that the possibilities to realize the demands of quality and efficiency vary according to different institutional and disciplinary contexts and practices.

References

Academy of Finland. (2002). *International strategy*. (Publications of the Academy of Finland 6/02). Helsinki: Academy of Finland.

Aittola, H. (2001). Academic life and the pressure of massification. In Välimaa J. (ed.) *Finnish higher education in transition. Perspectives on massification and globalisation*. University of Jyväskylä: Institute for Educational Research, pp. 111–138.

Bartlett, A. and Mercer, G. (eds.). (2001). *Postgraduate research supervision. Transforming Relations*. New York: Peter Lang.

Becher, T. and Trowler, P.R. (2001). *Academic tribes and territories* (2nd edn.). Buckingham: Society for Research into Higher Education & Open University Press.

Dill, D.D., Mitra, S.K., Jensen, H.S., Lehtinen, E., Mäkelä, T., Parpala, A., Pohjola, H., Ritter, M.A., and Saari, S. (2006). *PhD training and the knowledge-based society. An evaluation of doctoral education in Finland*. Tampere: Finnish Higher Education Evaluation Council.

Dill, D.D. and Soo, M. (2005). Academic quality, league tables, and public policy: A cross-national analysis of university ranking systems. *Higher Education*, *49*(4), 495–533.

Enders, J. and de Weert, E. (eds.). (2004). *The international attractiveness of the academic work-place in Europe*. (Materialen und Dokumente Hochschuleн und Forschung). Frankfurt am Main: Gewerkschaft Erziehung und Wissenschaft.

Hakala, J. (2005). Nuoret tutkijat akateemisissa tutkimusyhteisöissä [Young researchers in academic research communities]. In Aittola H. and Ylijoki O.-H. (eds.) *Tulosohjattua autonomiaa. Akateemisen työn muuttuvat käytännöt* [Performance-conducted autonomy. The changing practices of academic work.]. Helsinki: Gaudeamus, pp. 109–129.

Henkel, M. (2000). *Academic identities and policy change in higher education* (Higher Education Policy Series 46). London: Jessica Kingsley.

Husu, L. (2001). *Sexism, support and survival in academia. Academic women and hidden discrimination* (Social Psychological Studies 6). Helsinki: University of Helsinki.

KOTA database. Available online at http://www.csc.fi/kota/kota.html

McAlpine, L. and Norton, J. (2006). Reframing our approach to doctoral programs: An integrative framework for action and research. *Higher Education Research & Development*, *25*(1), 3–17.

Morley, L., Leonard, D., and David, M. (2002). Variations in vivas: Quality and equality in British PhD assessment. *Studies in Higher Education*, *27*(2), 263–273.

Mullins, G., and Kiley, M. (2002). It's a PhD, not a Nobel Prize: How experienced examiners assess research theses. *Studies in Higher Education*, *27*(4), 369–386.

Määttä, P. (2001). Doctoral studies in the 1990s: From elite to mass training. In Välimaa, J. (ed.) *Finnish higher education in transition. Perspectives on massification and globalisation*. University of Jyväskylä: Institute for Educational Research, pp. 139–155.

Oksanen, T., Lehvo, A., and Nuutinen, A. (eds.). (2003). *Suomen tieteen tila ja taso. Katsaus tutkimustoimintaan ja tutkimuksen vaikutuksiin 2000-luvun alussa* [The state and standard of Finnish science. A review on research activity and effects of research at the beginning of the 21 Century.] (Publications of the Academy of Finland 9/03). Helsinki: Academy of Finland.

Polanyi, M. (1998). *Personal knowledge: Towards a post-critical philosophy by Michael Polanyi* (Corr. ed., repr.). London: Routledge.

Research.fi. Finnish science and technology information service.

Simeone, A. (1987). *Academic women. Working towards equality*. South Hadley: Bergin & Garvey.

Tomusk, V. (ed.). (2006). *Creating the European area of higher education. Voices from the periphery* (Higher Education Dynamics 12). Dordrecht: Springer.

Välimaa, J. (2001). A historical introduction to Finnish higher education. In Välimaa J. (ed.) *Finnish higher education in transition. Perspectives on massification and globalisation*. University of Jyväskylä: Institute for Educational Research, pp. 13–53.

Wallgren, L. (2003). *Skilda världar. Företagsdoktoranders upplevelser av forskarutbildning* [Separate worlds. Perceptions of researcher education among doctoral students in enterprises]. Linköpings universitet: Institutionen för beteendevetenskap.

Welle-Strand, A. (2000). Knowledge production, service and quality: Higher education tensions in Norway. *Quality in Higher Education*, *6*(3), 219–230.

Chapter 12
Challenging Traditional Research Training Culture: Industry-oriented Doctoral Programs in Australian Cooperative Research Centres

Kay M. Harman

12.1 Introduction

Traditional structures and cultures of doctoral research training are being challenged in many countries around the world. In Australia, doctoral programs in Cooperative Research Centres (CRCs) are challenging traditional modes of university science-based research training by integrating professional development closely with industry needs. A key emphasis is on producing "industry-ready" graduates who possess a broader educational experience closely aligned with the needs of research users. This chapter focuses on how the education and training culture of doctoral students working in or funded by CRCs, differs from that of the traditional science-based training culture, and to what degree the more innovative culture of CRCs is seen to be achieving its goals in light of the demands of an ever-challenging knowledge society.

The need to reconceptualise the role and style of doctoral education in knowledge economies is a theme of growing interest in higher education. The traditional model of doctoral education is seen to have significant limitations in the context of mass higher education, the changing role of research in knowledge economies and changing labour market needs (Kemp 1999; Evans 2002; Enders 2004). Given too that the forces of globalisation and "high tech" continue to develop well into the 21st century and no doubt beyond, more emphasis is being placed on the most effective ways of acquiring, generating, transferring and using knowledge. An allied trend is that as old boundaries between basic and applied research become more diffuse and the integration of work, learning and contextualised knowledge gains importance in knowledge economies, universities are being challenged to shift from their traditional disciplinary-based mode of educating doctoral students to a more cooperative, enterprising and competence-based way of handling transferable knowledge (Cryer 1998; Evans 2002; Hövels 2003; Rip 2004). Employers are not only calling increasingly for researchers who can integrate knowledge across traditional disciplinary boundaries (Wessner 2002) and demonstrate "industry readiness" when they graduate (Harman 2004), but governments in

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many countries are expressing increased concern about the quality of the research training experience and the employability of graduates (Gallagher 2000). Alongside these developments, greater pressure is being put on students in doctoral programs to develop a broader range of skills that will produce graduates who are enterprising and commercially aware, enhance the transferability of the skills they have developed and their marketability to a range of users on graduating, a situation that demands more open and flexible modes of research education and training (Pearson and Ford 1997; Cryer 1998; ESF 2002; Rip 2004).

Australian CRCs place a high priority on doctoral education and training for meeting the special needs of industry, especially in fields like engineering which have been long associated with industry. Between 1998 and 2002, resources allocated to education and training in CRCs averaged around 6.5%, with nine CRCs allocating more than 10% of their resources. Most CRC doctoral students are full-time, supported by industry-based scholarships and are supervised jointly by researchers in universities, industry or government research laboratories. Recent government statistics reveal that Ph.D. students in CRCs comprise about 8% of all those enrolled in science and technology (S&T) and innovation-related fields in higher education, CRCs account for around 25% of all information communication technology candidates,[1] 45% of agriculture and environment candidates and about 10% of candidates in engineering-minerals areas (Howard Partners Pty Ltd 2003, pp. 61–62).

The chapter examines some different models of doctoral training and education[2] that have evolved in a number of industrialised countries, outlines the goals, ethos and cultural norms and associated practices of the integrated-cooperative CRC model and the challenges this kind of model presents to traditional programs, and assesses to what degree the more innovative model of the CRCs is seen to be achieving its goals. The perceptions of CRC-related students about their training culture, research environment and selected aspects of their course experience, are compared with their science-based peers in more traditional research training programs. Findings reported on these indicators are based on a social survey of all Ph.D. students in two Australian research-intensive universities that support a number of CRCs, and from interviews conducted with doctoral students and their supervisors on these locations. The data set guiding earlier work on the doctoral experience in CRCs is drawn on for this chapter (Harman 2002, 2004). Data were gathered from a survey of all Ph.D. students in two Australian research-intensive universities attached to CRCs.

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[1] This situation is about to change. In a recent and much-disputed development, all IT-related programs were culled in the recent round of CRC funding, while programs related to manufacturing and agriculture received quite a boost. It is planned that the new National ICT Australia (NICTA) will be the new home for all IT R&D (Hayes 2005, p. 34).

[2] The term "training" in the Australian context typically carries a narrow instrumentalist connotation more aligned with the technical and vocational sector. Critics of the term when applied to doctoral programs would see the term "doctoral education" as capturing more the richness and multiplicity of the postgraduate research experience, not merely restricting it to the acquisition of technical skills (Smith 2000, p. 2).

12.2 Data Collection Methods

Data were gathered from a social survey in 2000 of all enrolled Ph.D. students in two major cities' research-intensive universities that support a number of CRCs. 3750 questionnaires were distributed. In-depth interviews with doctoral students and supervisors at these two universities augmented the statistical data.

The overall response rate from the questionnaire of 41% provided a suitably large sample to examine ($N = 1549$). From this sample, 42.02% ($N = 651$) of Ph.D. students indicated they were full-time and science-based. Of the 651, 11.2% ($N = 73$) indicated that they carried out research in a CRC and 88.8% ($N = 578$) carried out research in traditional science-based departments outside of CRCs. Thus the total numbers of CRC-related students and non-CRC-related students whose responses are analysed in Tables 12.2–12.3 are 73 and 578 respectively. The cohort referred to throughout as CRC-related doctoral students refers only to those students in the science-based disciplines of agriculture/animal science, engineering/surveying, veterinary science, science and health/medicine (83.3% of doctoral students in CRCs were in these fields). Students in science-based disciplines located outside CRCs are referred to throughout as non-CRC-related (63.9% of doctoral students in traditional science-based departments were in these fields). Where differences occurred between the cohorts' responses, data were tested for statistical significance. When these differences are described as "significant", they have been tested statistically.

Background characteristics of both cohorts revealed that the majority of students were female, under 30 years of age, marked English as their first language, had been enrolled in their course between 1 and 3 years and had part-time employment. On t-tests, significant differences were noted in the variables of gender and employment status. Gender statistics revealed that 56.2% of CRC-related students and 51.3% of non-CRC-related students were female, while 44.4% of CRC-related and 51.9% of non-CRC-related students had some part-time work.

Limitations imposed on the findings are that: only two research-intensive universities were surveyed; only science-based Ph.D. students in CRCs are compared with their counterparts in regular science-based departments (findings reported do not relate to the experience of students in the humanities and social science); and attention is paid only to the experience of full-time students who are likely to be seeking work on completion of their courses (part-time students who are already or have been in the workforce could be described as already "industry ready"). As the percentage of part-time students in CRCs in science-based disciplines was relatively small at 25.5% ($N = 25$), it was considered that this did not present a suitably large enough sample from which to draw valid conclusions.

12.3 Models of Doctoral Training and Education

Critics see the traditional model of doctoral education as a linear model of knowledge production, where a master–apprentice relationship between student and supervisor is the norm and where classical scientific knowledge is structured according to

specific disciplines. Science typically takes place as an individual activity with academic reward systems focused mainly on individual measures of performance. This is described by van Kerkhoff (2002, p. 2) as "the Eureka model", a "stubborn stereotype" of doing science. Knowledge gained is seen as an "asset" opposed to knowledge seen in terms of interactive "flows", the latter representing a more contextualised form of knowledge which results from greater interaction between research producers and their economic environment (Weggeman 2000 cited in Hövels 2003, p. 2). The traditional model of Ph.D. research training, typically geared towards an academic career, is seen by many scholars as too narrow, a focus resulting in "disconnected specialization" where graduates lack direction on how to apply their skills outside academe (Murray 2003, pp. 2–3). Moreover, as more Ph.D. graduates take up jobs outside academe and academic jobs become fewer, a traditional model of doctoral training is becoming increasingly difficult to sustain.

Across Europe challenges to the traditional mode of research training are seen to be influenced by four trends – the massification and diversification of the student body in higher education, the changing role of research in the knowledge economy, the "internationalization of the Ph.D. factory" and government intervention in doctoral training (Enders 2004, p. 419). In response to these trends, new policies in Europe are challenging traditional notions of knowledge production. According to Enders (2004, p. 428) these new policies are seen to

> reflect the move from the 'Humboldtian apprenticeship model' of doctoral training, in which 'infection' by science and discovery is supposed to serve a broad variety of careers to the realities of mass higher education, changing labour markets and the knowledge economy. From the governmental point of view, the new organization of research training aims mainly at a more efficient production of Ph.D. holders, a concentration of scarce resources and the stimulation of innovative responsiveness to the needs of the economy and labour markets.

Innovative responses to the economy and labour markets have been affected by the transition from industry-based societies concentrating on goods, capital and labour to knowledge-based economies identified by a growing services sector, a declining role for physical labour advances in "high-tech" and the growing importance of applied knowledge. Consequently, there has been a shift away from traditional "mode 1" knowledge production to "mode 2" where "enterprises that are located largely outside universities in a variety of forms ranging from industrial laboratories, think tanks, management consultancies and science parks to small to medium sized enterprises" are also included in knowledge production (Gibbons et al. 1994).

Apart from the move in some European countries to "Americanise" the Ph.D. experience in terms of organising training in research schools, graduate schools or doctoral schools, another trend in Europe outlined by Enders (2004) is the evolution of the doctorate from the master–apprentice model to more structured forms of postgraduate education both within higher education and through alliances with public and private organisations. This move indicates that stronger links are being forged between research producers and research users.

Hövels (2003) cites some examples in European higher education of increased interaction between research produces and research users. This interaction is helped by:

- Members of business communities being on management teams of institutions
- Market demand – dependency on sponsors, students, consultancy contracts helped to adapt courses in response to economic and client demands
- Work placements in study programs that helped graduates gain technical competencies (Hövels 2003, pp. 3–4)

Doctoral education and training programs that blend learning, professional development, knowledge production and industry input, are not a new idea and many universities and funding councils acknowledge that skills training should be an integral part of Ph.D. programs (EPSRC 2005; ESRC 2005; National Science Foundation (NSF) 2006). Indeed this "combined and integrated" model (Godin 1998, p. 478) marked by application and transdisciplinarity, has been around for a long time in professional fields such as engineering, medicine, psychology, nursing, counselling and other areas, especially where accreditation is necessary if graduates wish to practice in particular professional fields. One such model is the Integrative Graduate Education and Research Traineeship Program sponsored by the NSF (2006) which has been operating since the 1990s. The main rationale for most of these programs is to bridge often artificial divisions between disciplines, between theory and practice and to make graduates more flexible and marketable when they enter the job market (Cooper and Juniper 2002; Bailey 2003). The CRC develops this model further by stretching the boundaries between research, government and industry. While its research programs are user-driven, multidisciplinary and emphasise integrated industry-based work-study programs, professional development programs broaden students' skill base with the aim of enhancing their marketability.

12.4 Ideological Drivers of the CRC Model

Australia, like other developed nations, views research as a key to success in the global knowledge economy and innovation as a key to prosperity. Concentrating particularly on S&T fields, CRCs were established with special government funding in 1990 with the idea of linking major players in the national innovation chain—producers of research (universities, research organisations and research institutes) and a wide range of research users (industry, businesses and government agencies) and to stimulate and strengthen collaborative ventures between these two groups. This model of knowledge production and transfer is referred to by Etzkowitz and Leydesdorff (2000) as a "triple helix" where the university plays an enhanced role in innovation and knowledge exploitation in knowledge-based societies. Government–industry–university links were assumed to be a triumvirate, at least in the US mould, where the "roundtable" or "triple helix" model of university–industry–government relations was quite common and highly regarded (Etzkowitz and Leydesdorff 2000).

The model for Australian CRCs was influenced largely by overseas models of collaborative industry-R&D research centres including the Network of Centers of Excellence in Canada, the Interdisciplinary Research Centres in the UK and the National Science Foundation-instigated Engineering Research Centers (ERCs) Program in the United States. Although Australia has developed a version of these models it is less high profile than in the United States.[3]

The traditional mode of knowledge production has been augmented by a mode whereby research problems are addressed in the context of application from a multidisciplinary perspective (Enders 2004, p. 423). While Clark (1998, p. 138) sees these transforming elements in universities as "the enhanced development periphery", Gibbons et al. (1994) portray them as "Mode 2" frameworks for organising knowledge. As CRCs are based in universities and carry out both long-term and short-term strategic research, their operations would fit somewhere between "Mode 1" and "Mode 2" types where "T-shaped people" whose down-stroke represents depth and specialist knowledge and whose cross-stroke represents breadth and flexibility, are being trained (European Science Foundation 2002, p. 4; Rip 2004, p. 154). Organisationally, such units help to stretch the "core" university into the distributed university where traditional boundaries are transcended and where knowledge, as the primary commodity, is more "applications generated" (Scott 1997, pp. 11–14 cited in Clark 1998, p. 139). Mitchell (1997, p. 267) argues that these are "boundary spanning" units have not merely buffered the "technical core" (research, teaching, curriculum) but they have altered relationships and structures within the university, "actually reversing their original purpose by becoming conduits for external demands".

With their emphasis on excellence and relevance in their training agendas, it is arguable that CRCs reverse the "original purpose" of universities by bringing researchers and research users together. They do, however, act as spanning mechanisms between university and public sector research and users of knowledge from the private and public sectors. They are symptomatic of the changes wrought by universities stepping more aggressively into the marketplace, and by responding to user demand and world-wide trends such as increased industry support for university research emphasising technology transfer and more government funding targeting university–industry partnerships.

A strong ideology underscoring the Australian Government's moves to stretch traditional research boundaries is that participation in knowledge-based economies powered by advances in S&T is the way to achieve economic prosperity. Seen as particularly important are reaping the benefits of research by transforming knowledge and technology into commercially useable form, turning ideas and inventions into income and jobs for Australians and creating better career opportunities for Australia's best researchers (Kemp 1999, p. iv; AusIndustry 2001, p. ii). Research is viewed as the production engine of new "tradeable" knowledge and those

[3] While the European Community, Japan and the United States now all subsidise research cooperatives, in Australia industry must make a financial or "in kind" contribution to participate in CRCs. In this sense industry is contributing in some small way to producing "industry-ready" graduates.

with doctorates are seen as the producers of this kind of knowledge (Evans 2002, pp. 156–157). Thus, investing in research training, particularly Ph.D. training, is seen as an important national investment. As Gallagher (2000, p. 5) indicates,

> The research and research training reforms are intended to improve the effectiveness of the diffusion of university-produced knowledge throughout the national innovation system. They involve cultural as well as procedural change.

The CRC Program is seen to be playing an important role in this vision with its emphasis on generating new and innovative ideas through long-term strategic research, developing a wide range of skills and competencies in researchers and businesses, utilising research-based knowledge via technology transfer and by turning ideas and skills into commercial success.

The CRC training philosophy also fits with the Government's view of research as a means of addressing the gap between postgraduate qualifications and the needs of industry (Harman 2004, p. 389). Reinforcing this position are recent selection criteria for prospective CRCs focusing on "industrial, commercial and economic growth" (McGauran 2003, p. 1). Consequently, CRC training programs are geared to enhancing student attractiveness to industry and developing more favourable attitudes to university-industry collaboration and more positive orientations towards careers in industry.

Australia's former Chief Scientist and Advisor to the Prime Minister on S&T, Ralph Slatyer, who helped to establish the CRC Program, noted in the late 1980s that R&D was not well developed in Australia's industry sector and that graduate training represented far too much the traditional research-only, single supervisor model geared to academe. Slatyer (2000, p. 2) opted for a different model that would prepare students better for jobs outside the academic world, provide access to the skills and experience of many of Australia's best researchers and give those researchers the stimulus of interaction with students. He envisaged a "one stop shop" centre model for innovation where a cooperative team of researchers and research users would have a "real and continuing impact" in the sectors where they were located. Education and training would have a key role, hence the importance of having at least one university partner in each CRC.

As professional education and training have been key roles of CRCs from their inception, it is mandatory that each Centre has a university as a core partner. Indeed, some universities are involved in as many as eleven CRCs, but most are involved in one or two.

Probably the closest to Slatyer's desired model in terms of the way doctoral students are educated, is the aforementioned ERC Program in the United States. In order to produce industry-ready graduates who have a broader and deeper "T-shaped" educational experience, ERCs integrate doctoral education and research through collaborative ventures with industry, expose their students to industrial views in order for them to succeed in technological innovation, ensure an effective transition of graduates to the marketplace and develop in them effective skills for leading interdisciplinary teams throughout their careers (ERC Association 2004, p. 1).

12.5 CRC Doctoral Programs: The Integrated/Cooperative Model

There is often much confusion about what integrated research actually is. In the CRC context, van Kerkhoff (2002, p. 2) conceptualises the concept simply as "a shift from thinking about and designing research as if it were an isolated, individual activity toward being a multi-dimensional, widely shared activity". She illustrates different models of integrated research that operate in CRCs and stresses that the models she describes (including the Eureka model) are not mutually exclusive. Her analytical distinction comprises:

- "The Newtonian model", the most common mode of scientific research. It is two-dimensional in that it is not solely individual but also social in the sense that progress depends on interaction with other scientists and their work. This is where teamwork and collaboration are important. However, whereas the Newtonians share the same organisation or discipline, "in CRCs these conventional boundaries can be crossed, and inter-disciplinary, inter-organisational opportunities exist".
- "Science-in-a-context model", which extends the boundaries of conventional science to encompass interaction and negotiation with industry, government, interested community groups and the general public. This model brings in non-science players and may have formal arrangements for supervision of research students or advisers from outside academia (van Kerkhoff 2002, pp. 3–4).

This latter model is nicely illustrated by a CRC doctoral supervisor in the field of engineering, who, when interviewed, revealed that:

> Before CRCs, many PhD supervisors were training replicas of themselves. A new model of supervision has developed that gets away from this idea. Now students look what industry is doing and this influences the projects they do and makes them more valuable to industry. Shared supervision by partners works well.

As part of their doctoral training alongside their long-term strategic research, CRCs have emphasised integrating closely the graduate experience with outside work and shared supervision by industry partners, an approach that represents a move away from the more traditional disciplinary-based research training model in the sciences. Doctoral training displays strong links between work and learning. The training culture that has emerged integrates academic and industry norms as van Kerkhoff (2002, p. 1), herself a doctoral student in a CRC, illustrates:

> [The training offers] … a shift away from research that is fragmented intellectually (in terms of disciplines and sub-disciplines), isolated (both geographically and organisationally), and decontextualised (in its separation from end-users, clients, stakeholders, etc.) toward research that is integrated across all these dimensions.

As the aim of CRCs is largely to transform knowledge and technology into commercially useable form, from their beginnings commercial and managerial cultures have dominated and the research emphasis has changed from a traditional "bottom-up",

Table 12.1 Comparisons of doctoral training models in science-based disciplines

Indicator	Traditional model	Integrated/cooperative model
Knowledge production	Fragmented	Integrated & holistic
	Linear (decontextualised)	Contextualised
	Discipline-based	Multi/transdisciplinary
	Tight boundaries	Boundary spanning
	Mode 1	Mode 2
Emphasis on knowledge transfer/commercialisation	Minimal	Strong
Alignment with industry/user needs	Weak link	Strong link
Alignment with national economic needs	Weak link	Strong link
Mode of research	Investigator-driven	User-driven
	Bottom-up	Combined bottom-up/ top-down
Research management	Loose arrangements with less direction	Managed research with timelines, milestones and more direction
Supervision mode	Master–apprentice	Shared between university, industry and research producers
Professional development	Weak emphasis	Strong emphasis with formal Ph.D. courses and yearly CRC Association conferences
Emphasis on networking	Variable	Strong emphasis, CRC Association support
Emphasis on collaborative research	Weak	Very strong
Career emphasis	Largely for academe	Industry, research leadership
Reward systems	Individual performance measures	Performance rewarded on a project or team basis

curiosity-driven university research environment to a much more collaborative, user-driven one designed to produce knowledge and technology of value and applicability to potential users. Other trends evident are the shift in research from being single disciplinary-bound to being multidisciplinary. Students working in multidisciplinary contexts are typically offered a more integrated model of training. Comparisons between the traditional model and the integrated/cooperative model of research training in CRCs are illustrated in Table 12.1. Presented in this table are two contrasting models which should be viewed as ideal types.

For CRC-related doctoral students concentrating on the fields of agriculture, engineering, health/medicine, science and veterinary science, their disciplinary areas appeared well adapted to the integrated/cooperative model. On the other hand, for science-based students in the same disciplinary fields outside CRCs in regular academic departments, the traditional model still prevailed.

Because business/managerial cultures are the norm in CRCs, for most doctoral students managed (or program) research guided by pre-specified timelines and milestones

is the norm, with a greater concentration on collaborative, multi-disciplinary and commercially oriented research. As stressed by one CRC Education Program Manager when interviewed, to prepare high quality research graduates,

> it is not sufficient to merely ensure that they are expertly trained in research techniques. It is essential that we provide them with a much broader training that includes an introduction to business management skills. This is necessary if they are to contribute effectively in the companies that they may join and to be equipped to take on the leadership roles that they will be expected to fill in future careers.

Professional development courses are particularly designed to enhance students' career prospects, increase their value to future employers and provide them with a broader skill set especially relating to commercialisation. Accordingly, doctoral students engage in cooperative research with industry, their supervision, often shared with industry partners, is more directed than traditional supervisory practices, and a key part of their training concentrates on professional development that is industry-focused. These activities typically involve participation in specially designed workshops or retreats where courses, apart from research methods, include topics specifically focused on developing business and research management skills.

Some examples of the kinds of professional development offered by CRCs include the following: the CRC for Catchment Hydrology provides more generic skills training such as employability and further study, critical evaluation, decision-making, ethics and independent and lifelong learning (Whelan 2001, pp. 5–6). Other CRC programs encourage professional development in different ways. For instance, the CRC for Sustainable Tourism acknowledges the need for students to acquire "a range of additional education and capacity-building opportunities if their skills and knowledge are to be of direct social, economic and vocational relevance upon graduating" (CRC for Sustainable Tourism, Education Programme 2003, p. 1). The CRC for Coastal Management offers more than 30 courses so that their graduates will benefit from a holistic and well coordinated professional development experience. Their program includes skills specific to its area of research concentration and more generic skills such as science and thesis writing, speed reading, using English effectively and media skills (CRC for Coastal Management 2004, pp. 1–2).

Further to these developments, in response to industry demand some CRCs now offer a Graduate Certificate in Management designed specifically for researchers. Two new CRCs have made these courses compulsory and it is now proposed to make the Graduate Certificate available to all Ph.D. students throughout Australia (CRC Association 2005, p. 27). Another development in CRCs is the Industry Placement Program where successful applicants spend up to three months at partner research centres in the United Kingdom, Sweden or the United States. The CRC for Chronic Inflammatory Diseases has established such a program (CRC Association 2005, p. 29). Another similar scheme is run by the CRC for Catchment Hydrology involving "negotiated learning tasks and objectives with appropriate host organisations". The scheme's value is seen in its ability to provide doctoral students with "enhanced opportunities … to learn from experienced environmental researchers, managers, regulators and consultants" (CRC for Catchment Hydrology 2003, Program 8, p. 1).

The CRC Association also plays a significant education role in running regular workshops and conferences where students can share expertise and network with other students, senior researchers and industry partners. In a Government-commissioned study designed to describe and assess Australia's science and innovation activities across the public and private sectors – *Mapping Australian Science and Innovation* (Commonwealth of Australia 2003) – the benefits of such CRC activities are reported as very positive by both students and industry partners alike. The report from the study claims that the CRC training program has been particularly effective, citing as evidence high levels of user satisfaction with its scope, quality and relevance (Commonwealth of Australia 2003, p. 261).

12.6 Perceptions of the CRC Training Culture

The training culture that has emerged for Ph.D. students engaged in strategic research with industry is seen by a number of stakeholders to enhance the quality of their doctoral experience, and to bridge the gap between the "lab" and the market place, so enhancing graduates' marketability. These aspects were reinforced in interviews with three CRC supervisors in science-technology and engineering fields:

> We are now changing the way that we teach students. We expose our PhD students to the culture of our partners and arrange for them to spend time working with our partners. So they get more than just a university view of the world. We like them to spend time with end users and we provide them with the context… Now 50% of our PhD students get their first job on graduation with an end-user. Prior to the CRC this was zero. We want students to realise that life inside the monastery is not the whole world. We train better graduate students. We develop in them an external perspective from a professional engineering perspective.
>
> Young graduates have much less trouble getting jobs if they have been working with industrial partners in more applied areas. They have user marketability. Many of them are employed by industry when they finish… Industry seeking out these students before they finish…urges them on to finish and they are typically assured of a job at the end.
>
> Industry is most impressed with scientists who are brilliant, articulate, understand the issues and present well… There is a lot of respect for the graduates trained here. About half go into industry … and about half into academia.

CRC-related and non-CRC-related students in the areas of agriculture, engineering, health/medicine, science and veterinary science, were asked on a range of questionnaire items how satisfied they were with aspects of their overall training. Selected responses are indicated in Table 12.2.

While on a number of indicators, positive trends were evident for both groups, it is clear that on most items, CRC-related students' levels of satisfaction were significantly higher. For instance, the item on the quality of the department in its field as part of the research culture and environment, attracted a significantly higher response from CRC-related students – 90.4% of CRC-related compared with 78.2% for non-CRC-related. Competence of supervisor(s) was rated highly by both but significantly higher by CRC students – 83.6% compared with 73.2% for non-

Table 12.2 Ratings of very satisfactory/satisfactory on aspects of doctoral training for full-time CRC-related students and non-CRC-related students in agriculture, engineering, health/medicine, science and veterinary science units (%)

Criteria	CRC-related (*N* = 73)	Non-CRC-related (*N* = 578)
Research culture & environment		
Intellectual environment of department/research centre	*71.2	*63.7
Department is very good in its field	*90.4	*78.2
Suitability of research topic to produce a good thesis	72.6	72.9
Help provided in designing project	*58.9	*57.3
Competence of supervisor(s) in area	*83.6	*73.2
Access to resources		
Access to specialised equipment, computers, etc.	*76.7	*66.4
Working space available for research	*69.9	*67.2
Availability of library holdings and services	*80.8	*71.3
Support provided		
Financial support for project	*69.9	*59.9
Freedom to approach other academics for help	*69.9	*62.5
Overall experience as a Ph.D. student	*66.7	*64.3

* The differences are statistically significant ($P < 0.05$)

CRC students. This could mean that shared supervision across academic–industry boundaries is working effectively. Access to resources also scored higher ratings for CRC students – availability of library holdings and services scored an 80.8% response from CRC-related students compared with 71.3% for non-CRC, for access to specialised equipment CRC-related students rated 76.7% opposed to 66.4% for non-CRC, and for level of financial support 69.9% of CRC students responded positively compared with 59.9% of non-CRC students.

Particular concerns are the disappointing ratings ascribed by both CRC-related and non-CRC-related groups to satisfaction with overall experience as a Ph.D. student (66.7% and 64.3% respectively). These findings are consistent with official government findings and other studies looking at similar indicators of student satisfaction. Both cohorts rated help provided in designing their project the lowest (58.9% for CRC-related and 57.3% for non-CRC-related students). This is a concern that needs to be addressed.

The higher overall levels of satisfaction indicated by the CRC-related cohort, especially on the quality of the research environment, availability of library services, and access to specialised equipment and financial support, no doubt reflect the superior levels of resources available to these students. Whereas in some basic science disciplines, access to equipment, “depends on how much money your supervisor has” (doctoral student in Chemistry), access to top level equipment and

Table 12.3 Full-time students in agriculture, engineering, health/medicine, science and veterinary science who agree/strongly agree with statements on the value of researcher–industry links (%)

Statement	CRC-related ($N = 73$)	Non-CRC-related ($N = 578$)
I like the idea of doing research in industry/government department	*68.5	*58.4
For a future career I find a research position in industry attractive	*74.0	*62.5
Industry funding can enhance the career prospects of students	*86.3	*84.9
I am optimistic about my career prospects	*74.0	*62.0
Industry research funding often delays publication of findings	*30.6	*32.3
Research links with industry threaten traditional academic values	*23.3	*27.3
Research users should have more say over research priorities	*50.0	*46.8

*The differences are statistically significant ($P < 0.05$)

getting support funding rarely, if ever, pose problems for CRC students. CRCs provide students with equipment budgets and much-needed support for their projects. One CRC doctoral student expressed delight that the equipment budget in his CRC made accessible for students a national facility super computer. CRC students also get funding to go to conferences and to the annual meetings of their CRCs, which are often held on different sites. Moreover, many CRC students receive "top-up" funding from their Centre in addition to receiving industry-funded scholarships. Comparing support provided by CRCs with the basic sciences, a dean of Graduate Studies at one of the universities studied expressed that CRC students "are living in the lap of luxury. They often get top-ups and funding paid for doing various courses, and lots of money to do things like going to conferences".

As a highly valued part of the CRC training culture is to develop positive attitudes to working with industry, this was an important item to survey. Although both student cohorts indicated positive attitudes to working with industry, on three of the indicators as seen in Table 12.3, CRC-related student responses were significantly more positive about the relationship. With regard to how much they like the idea of doing research in industry, 68.5% of CRC-related students liked the idea, while only 58.4% of non-CRC-related students responded likewise. An even stronger response came from CRC-related students regarding the possibility of a future career as a researcher in industry (74% positive as opposed to 62.5% of non-CRC-related students). Both cohorts saw career prospects greatly enhanced by links with industry, with 86.3% of CRC-related students and 84.9% of non-CRC-related students responding positively, and 74.0% of CRC students felt optimistic about their career prospects on graduating, compared with only 62.0% of their science-based peers outside of CRCs.

With regard to what extent researcher–industry links are seen to threaten academic values, it is noteworthy that only 23.3% of CRC-related and 27.3% of

non-CRC-related students believed that researcher–industry links pose threats to traditional academic values, given the litany of risks documented in the literature, particularly on issues of publishing, commercialisation and intellectual property (Blumenthal et al. 1996; Lee 1996; Krimsky et al. 1999). Less than a third of both cohorts (30.6% of CRC students and 32.3% of non-CRC students) saw that industry funding often delayed publication of findings. These findings appear to challenge critics who find inherent dangers in academic–industry links. When it came to whether or not users of research should have more say in setting research priorities, 50.0% of the CRC-related cohort thought users should have more say, while 46.8% of non-CRC students agreed that they should. This result probably indicates that in CRCs much more bottom-up, researcher-driven research takes place than is often believed. In interviews students revealed that this was the case, explaining that they often engaged in "blue sky" research from which published theoretical papers resulted.

12.7 Conclusions

Findings indicate that despite the criticisms of academic "purists" levelled at user-driven modes of research, CRC-related students were more positive about their training culture and the environment it provided, and on most indicators registered higher levels of satisfaction with aspects of their course experience, compared with their science-based peers in more traditional research training programs.

By introducing new modes of collaborative research, transcending disciplinary boundaries, being user-directed, training young scientists to be entrepreneurial and by challenging some long-held academic values about the dangers of research–industry collaboration, CRC doctoral education and training is responding to the new demands of Australia's rapidly growing knowledge economy with its emphasis on the importance of integrated work and learning and producing knowledge that is contextualised and transferable. This kind of integrated, cooperative experience rejects the "add on model" so criticised by Pearson and Brew (2002, p. 137) and the traditional doctoral training model with its clear limitations. As the CRC model of research training and education is embedded in a culture that stretches traditional research boundaries and integrates research and industry norms without too many compromises, it appears to be meeting the new demands of a diversity of users. On most indicators, Slatyer's (2000) "one stop shop" model for innovation using a cooperative team of researchers seems to be working well and achieving its intended goals.

This is not to say that the CRC model should be recommended as a "one size fits all" model of doctoral education, but findings indicate that CRCs appear to be more than holding their own on the typical indicators of Ph.D. course experience. In particular, on most indicators, CRC-related students, compared with their peers in similar disciplinary fields outside of CRCs, were found to be more positive about the research culture and environment in which they operate, the research status of

their work unit, the availability of and access to equipment and financial resources, and they displayed a more positive orientation to working with industry. While both cohorts reported favourable attitudes to working with industry and agreed that industry funding greatly improves their career prospects, CRC-related student responses were significantly more positive on these items. This would suggest that CRCs are playing an important role by contributing significantly to producing industry-ready Ph.D. graduates who are both attracted to working in industry and attractive to potential employers.

The professional development aspects of CRC doctoral training, which aim to make students more attractive to employers, were seen to be especially valuable. Doctoral students in CRCs claimed to benefit particularly from the professional development skills they accumulate during their course experience. In developing as research entrepreneurs, not only do they learn valuable negotiation and management skills, but also their industrially relevant research helps them to understand better what the real requirements are of both the outcomes of their research and the wider potential applications of their research.

The integrated CRC doctoral programs aimed to produce industry-readiness graduates would thus appear to be challenging successfully traditional approaches to doctoral education, especially in light of the new demands of fast-developing knowledge economies that emphasise the importance of integrated work and learning and producing knowledge that is contextualised, marketable and transferable. It may well be a model worth emulating by universities still geared to the needs of an industry-based economy in contrast to a new mindset geared to the rapidly changing needs of the knowledge economy of the 21st century and beyond.

In this context, the challenge for universities will be to reconceptualise the role of doctoral programs in order to move from an insular training culture to one with "a more socially contributive, outward orientation" (Gallagher 2000, p. 2) which aims to broaden the educational experience of students who, when they graduate, will be able to *apply*, not merely *acquire* skills they have developed during their candidature. This strategy, as we have observed, is already gaining momentum in a number of countries.

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References

AusIndustry. (2001). *Cooperative research centres program*. Canberra: Commonwealth of Australia.

Bailey, D. S. (2003). Combined and integrated. Doctoral training programs that blend school, counseling and clinical psychology find their voice. *Monitor of Psychology, 34*(7). American Psychological Association (http://www.apa.org/monitor/julaug03/combined.html)

Blumenthal, D., Causino, N., Campbell, E., and Louis, K. S. (1996). Relationships between academic institutions and industry in the life sciences – an industry survey. *New England Journal of Medicine, 334*(6), 368–373.

Clark, B. R. (1998). *Creating entrepreneurial universities – organizational pathways of transformation*. Oxford: Pergamon.

Commonwealth of Australia. (2003). Mapping Australia's science and innovation – Main Report. Canberra: Department of Education, Science and Training, AGPS.
Cooper, G., and Juniper, S. (2002). A postgraduate research training programme in generic skills and strategies: Description and evaluation. HERDSA 2002 Conference Proceedings (http://www.ecu.edu.au/conferences/herdsa/main/papers/ref/CooperG.pdf).
CRC Association (CRCA). (2005). Reaping the benefits: Innovation through collaboration. Recent highlights of the Cooperative Research Centres Programme. (http://www.crca.asw.au/resource_materials/reapingbenefits.htm)
CRC for catchment hydrology. (2003). Program 8: Education and training. (http://www.catchment.crc.org.au/programs)
CRC for coastal management. (2004). Professional development. (http://www.coastal.crc.org.au/postgraduates/professional.development.html)
CRC for sustainable tourism. (2003). Education programme. (http://www.ecotourism.com.au/postgrads)
Cryer, P. (1998). Transferable sills, marketability and lifelong learning: The particular case of postgraduate research students. *Studies in Higher Education, 23*(2), 207–216.
Enders, J. (2004). Research training and careers in transition: A European perspective on the many faces of the PhD. *Studies in Continuing Education, 26*(3), 419–430.
Engineering Research Centers (ERC) Association. (2004). About the ERCs' (http://www.erc_assoc.org/index.htm).
EPSRC (Engineering and Physical Sciences Research Council). (2005). Joint statement on skills training. (http://www.epsrc.ac.uk/PostgraduateTraining/JointStatementonskillsTraining.htm)
ESRC (Economics and Social Sciences Research Council). (2005). Postgraduate training guidelines. (http://www.esrc.ac.uk/ESRCInfoCentre/Images/Postgraduate_Training_Guidelines)
ESF. (2002). Agents for change. Bringing industry and academia together to develop easier opportunities for young researchers. European Science Foundation Policy Briefing, July. (http://www.esf.org/publication/141/ESPB17.pdf)
Etzkowitz, H. and Leydesdorff, L. (eds.). (2000). The dynamics of innovation: From national systems and "mode 2" to a triple helix of university-industry-government relations. *Research Policy, 29*, 109–123.
Evans, T. (2002). Part-time research students: Are they producing knowledge where it counts? *Higher Education Research* and *Development, 21*(2), 155–165.
Gallagher, M. (2000). New directions in Australian research and research training – Some questions for researchers. Paper presented for the Australian Network of Higher Education Policy Research. Canberra, Australian National University, December 7–8, 2000.
Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., and Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. London: Sage.
Godin, B. (1998). Writing performative history: The new Atlantis? *Social Studies of Science, 28*(3, June), 465–483.
Harman, K. (2002). The research training experiences of doctoral students linked to Australian Cooperative Research Centres. *Higher Education, 44*, 469–492.
Harman, K. M. (2004). Producing "industry-ready" doctorates: Australian Cooperative Research Centre approaches to doctoral education. *Studies in Continuing Education, 26*(3), 387–404.
Hayes, S. (2005, April 15). CRCs roast federal cut in hi-tech funds. *The Australian*, 34.
Hövels, B. (2003). The knowledge economy: Learning and work integrated. Preparatory background paper for the 2003 World Association for Cooperative Education (WACE) conference in Rotterdam (http://www.wacerotterdam2003.nl).
Howard Partners Pty Ltd. (2003). *Evaluation of the cooperative research centres programme*. Report to the Department of Education, Science and Training. Canberra, July.
Kemp, D. A. (1999). *Knowledge and innovation: A policy statement on research and research training*. Canberra: Commonwealth of Australia.
Krimsky, S., Campbell, E., and Blumenthal, D. (1999). Perils of university-industry collaboration. *Issues in Science and Technology, 16*(1), 14.
Lee, Y. S. (1996). Technology transfer and the research university: A search for the boundaries of university-industry collaboration. *Research Policy, 25*, 843–863.

McGauran, P. (2003). 2004 CRC Selection round announced. Media release, December 4, 2003. (http://www.dest.gov.au/minimas/live/mcgauran/2003/12/mcg002041203.asp)

Mitchell, T. R. (1997). Border crossings: Organizational boundaries and challenges to the American professoriate. *Daedalus, 126*(4, Fall), 265–292.

Murray, B. (2000). The growth of the new PhD. *Monitor on Psychology, 31*(10, November). American Psychological Association (http://www.apa.org/monitor/nov00/phd.html).

National Science Foundation (2006). Integrative Graduate Education and Research Traineeship Program. Program solicitation NSF 06–525 (http://www.nsf.gov/pubs/2006/nsf06525.htm).

Pearson, M. and Brew, A. (2002). Research training and supervision development. *Studies in Higher Education, 7*(2), 135–150.

Pearson, M. and Lys, F. (1997). *Open and flexible PhD study and research*. DETYA EIP, Canberra, AGPS.

Rip, A. (2004). Strategic research, post-modern universities and research training. *Higher Education Policy, 17*, 153–156.

Scott, P. (1997). The changing role of the university in the production of new knowledge. *Tertiary Education and Management, 3*(1), 5–14.

Slatyer, R. (2000). *Cooperative research centres – A retrospective view*. Paper presented to the Annual Meeting of the CRC Association. Brisbane, May 19, 2000.

Smith, B. (2000). "Research training" and the conceptual barbarism of the White paper's postgraduate research agenda. *Australian Universities' Review, 43*(2), 1–4.

van Kerkhoff, L. (2002). *Integration and education: dilemmas, paradoxes and challenges for CRCs*. CRCA Education Workshop Presentation. Canberra, May 24, 2002.

Weggeman, M. (2000). *Kennismanagement: de praktijk* [Knowledge management: Practice]. Schiedam, Amsterdam: Scriptum Management.

Wessner, C. W. (Ed.). (2002). *Government-industry partnerships for the development of new technologies*. Washington: The National Academies Press.

Whelan, J. (2001). Towards accreditation of CRC research skills training. Presentation to CRC Association (CRCA) Education Workshop, May 15, 2001. (http://www.crca.asn.au/activities /2001/eduwshp/whelan.pdf)

Chapter 13
The Evolution of American Scientific Fields: Disciplinary Differences Versus Institutional Isomorphism

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13.1 Introduction

Since its inception the US National Science Foundation (NSF) has supported basic and applied research in science, technology, engineering, and mathematics (STEM). The NSF and the US Department of Defense also have long supported graduate students in STEM fields. In the last 20 years or so the NSF along with such professional societies as the Accreditation Board for Engineering and Technology (ABET) have expanded their policy focus to include improving the quality of undergraduate teaching and student learning in STEM fields. This expanded mission is in part a response to the decline in students choosing to major in STEM fields, declining percentages of STEM undergraduates continuing to graduate school, and the social and economic consequences of these trends.

The USA is not alone in its concern about the quality of teaching and learning in STEM fields or in higher education generally. Witness the emphasis on quality assurance in Europe through the Bologna Process among other mechanisms. For the most part European quality assurance efforts focus on the full range of faculty work, especially research productivity and quality of teaching and on student graduation rates (Schwarz and Westerheijden 2004).

American national policy focuses on the societal need for a more scientifically literate citizenry and increased recruitment into STEM-related careers (National Science Foundation 1996; Center for Science Mathematics and Engineering Education, Committee on Undergraduate Science Education 1999). Current higher-education teaching practices appear to lie at the heart of these problematic trends. Seymour and Hewitt (1997), for example, found that about 90% of students who switched from majors in science, mathematics, and engineering, and about 74% of "non-switchers," complained about poor teaching by STEM faculty. Furthermore, faculty attitudes toward the importance of research and scholarship also play a crucial role. Faculty resistance to adopting more effective teaching strategies in part derives from the perception of STEM faculty that the teaching process is at odds

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with the research process, and that research is more interesting and more valued (Fairweather 1996; Massy et al. 1994).

One important factor in changing faculty attitudes and behaviors toward teaching and research may be to honor and take into account disciplinary differences. Burton Clark (1987) and Tony Becher (Becher and Trowler 2001) convincingly have argued that each academic discipline has its own shared attitudes and beliefs about academic work, dominant pedagogy, primary research methodology, and theoretical orientation; in other words, its own culture and identity. These components of belonging to an "academic tribe" are fundamental to the development of faculty attitudes and behaviors toward teaching and research. Alpert (1985) argued that these distinct worlds lead faculty members to focus more on national disciplinary norms, particularly research and scholarship, at the expense of local norms, especially teaching and public service.

At the same time, advocates of institutional theory (e.g., Powell and Dimaggio 1991) argue that institutions trend toward isomorphism or homogeneity, which if true may act to reduce differences between academic disciplines within the university. In a similar vein, Fulton and Trow (1974) claim that the pursuit of status has driven academic institutions of all types to mimic the most prestigious among them, providing external pressure toward homogeneity across universities. Fairweather (1996) showed that in the US faculty rewards in the form of pay follow a national pattern with research and scholarly productivity being rewarded more than teaching and service in all types of academic institutions. Massy and Zemsky (1994) earlier extended the same argument to academic departments, claiming that the emphasis on research and scholarship at American universities was driving departments toward a more uniform set of expectations for faculty work irrespective of disciplinary norms.

In this chapter we examine trends over time between faculty in four disciplinary categories – STEM, humanities/fine arts, social sciences, and professional fields – and two major types of institutions – doctoral-granting/research and nondoctoral-granting (teaching-centered) – by studying data on about 13,000 US full-time tenure-track faculty members gathered by the 1993 and 1999 National Surveys of Postsecondary Faculty (NSOPF). We identify within-discipline norms for teaching and research workload and productivity, instructional pedagogy, and attitudes about teaching and research. We compare these norms by disciplinary category across types of American 4-year institutions, and then examine trends between 1993 and 1999 to see whether disciplinary differences are disappearing within type of institution – the institutional isomorphism argument – or whether they continue as quite distinct "tribes" irrespective of institutional pressures. Throughout we pay particular attention to the contrast between STEM and other types of disciplines. We conclude with a discussion of the policy implications of our findings.

13.2 Disciplinary Categories and Institutional Types

To develop broad disciplinary categories for analysis, we started with the detailed list of disciplines defined by the US National Center for Education Statistics and by the Research Fields, Courses, and Disciplines Classification (RFCD)

Table 13.1 Sample (NSOPF–93, NSOPF–99)

Year	
	N
NSOPF–93: 1992–1993	6,911
NSOPF–99: 1998–1999	5,701
Total	12,612
Type of institution	
	N
Doctoral	6,553
Nondoctoral	6,059
Disciplinary category	
	N
Science, Technology, Engineering, Mathematics (STEM)	3,443
Humanities/Fine arts	3,178
Social sciences	1,887
Professional fields[1]	4,104

[1]Other than engineering.

commonly used in Europe and elsewhere. In our study, STEM fields include Agricultural Sciences, Engineering, Biological Sciences, Physical Sciences, Mathematics, and Computer Science. Humanities/Fine Arts include Fine Arts, English and Literature, Foreign Languages, History, and Philosophy and Religion. Social Sciences include Economics, Political Science, Psychology, Sociology, Other Social Sciences, and Public Administration. Professional Fields (other than Engineering) include Business, Communications, Education, Health Sciences, and Law. We used an abbreviated categorization based on the Carnegie Classification (Carnegie Foundation for the Advancement of Teaching 1994) to define institutional type. Doctoral institutions include Research Universities and other doctoral-granting institutions. Although most of these doctoral-level universities have substantial undergraduate programs, their missions are heavily oriented toward research and graduate programs. Nondoctoral institutions include masters-level institutions and liberal arts colleges. Both types of nondoctoral institutions focus on teaching and undergraduate education. Table 13.1 shows the sample by type of institution and discipline.

13.3 Research Questions

Two questions guided the research:

1. Do STEM faculty teaching and research practices and attitudes differ from faculty in other disciplinary categories? Do they differ by type of institution?

Have these patterns changed over time? Here we examine the extent that teaching and research attitudes, values, and behaviors vary by disciplinary category, type of institution, and over time.

2. How much are the differences over time in faculty teaching and research practices and attitudes, if any, a function of discipline or type of institution? Here we test the "academic tribe" and "institutional isomorphism" hypotheses by determining whether faculty behaviors and attitudes from different disciplines and types of institutions are becoming more or less heterogeneous over time.

13.4 National Survey Data

We used the 1992/93 and 1998/99 National Surveys of Postsecondary Faculty (NSOPF–93 and NSOPF–99, respectively) to examine US trends over time by discipline and type of institution. We focused on teaching and research time allocation and productivity as well as attitudes about the importance of teaching and research. This chapter focuses on the 5,701 and 6,911 full-time, tenure-track faculty in 4-year colleges and universities with appointments in one of four designated disciplinary categories that responded to the survey in 1998/99 and 1992/93, respectively. The respective individual faculty response rates were 92% and 87%. Weights were calculated so that the statistical estimates would represent the population of faculty within the universe of 4-year institutions in the USA.

13.5 Study Variables

To permit comparisons between 1992/93 and 1998/99 we selected comparable variables from NSOPF–93 and NSOPF–99. We categorized study variables into gender, teaching time allocation and instructional practice, research productivity, and attitudes about teaching and research.

13.5.1 Gender

Gender (0 = female, 1 = male) is a critical factor in shaping disciplinary cultures. The dearth of women in many STEM fields, as one example, may influence the dominance of lecturing and the importance of research and scholarship in those fields (Seymour and Hewitt 1997). Further, women's methods of approaching scholarship and teaching can differ from their male peers – for

instance, women may approach problems more broadly and at a system level (Belenky et al. 1986)

13.5.2 Teaching

Based on previous research (Baldridge et al. 1978; Fairweather 1997, 1999; Fulton and Trow 1974; Marsh and Hattie 2002), we included a combined measure of time allocated to teaching and instructional productivity, hours spent in the classroom per week. To account for the primary instructional approach used in classroom teaching and as a proxy for instructional quality, we included whether or not the faculty member showed evidence of collaborative instruction during the course(s) taught in the semester under study (0 = no, 1 = yes). Research indicates that faculty members who use collaborative or active learning approaches achieve higher levels of student learning than those using passive instructional techniques (Wankat 2002; Weimer 1996). ABET in particular has emphasized the use of active and collaborative instruction in its accreditation reviews of engineering programs. We deemed a faculty member to demonstrate use of collaborative instruction when he or she used any of the following instructional methods as the primary instructional approach in at least one course during the semester under study: apprenticeship, internship, fieldwork, or field trips; role playing, simulation, or other performances; group projects; or cooperative learning groups. We also included faculty members not using one of these primary instructional methods if they made extensive use of student evaluations of each others' work in their courses, a principal ingredient in collaborative teaching and learning. Although better than simple measures of instructional quality, this proxy for instructional practice is admittedly imperfect, omitting many dimensions of instructional quality.

13.5.3 Research

The study included three measures of research and scholarly activity and productivity used in previous research (Baldridge et al. 1978; Fairweather 1997). Percent of time spent on research during Fall term (1992 or 1998) reflects the self-reported percentage of time a faculty member spent on research, including reviewing or preparing articles or books, attending or preparing for professional meetings or conferences, reviewing proposals, seeking outside funding, giving performances or exhibitions in the fine or applied arts, or giving speeches. Total refereed publications during the last 2 years – which included articles, chapters in edited volumes, textbooks, other books, monographs, and reviews of books and articles – is the most commonly used measure of traditional scholarly productivity. We also included whether or not the respondent was a principal or coprincipal investigator (PI) on an externally funded project during fall 1998 [or fall 1992] (0 = no, 1 = yes), a measure of particular importance in STEM fields.

13.5.4 Attitudes

We used two attitudinal measures, one about the importance of teaching and the other about the importance of research. The first asked the respondent to rate on a 4-point scale (1 = strongly disagree, to 4 = strongly agree) whether research should be the primary criterion for promotion of faculty/instructional staff at this institution. The second combined two different items into a single scale indicating preference for teaching relative to research. Respondents on the NSOPF surveys were asked to rate on a 3-point scale (1 = not important, to 3 = very important) if you were to leave your current position to accept another position inside or outside of academe, how important would each of the following be in your decision: (1) greater opportunity to teach and (2) greater opportunity to do research. We gave respondents who rated greater opportunity to teach more highly than greater opportunity to do research a score of 1. We gave respondents that rated the opportunity to teach and do more research equally a score of 0. We gave respondents that rated research opportunities more highly than teaching a score of −1.

13.6 Methods

The primary analytical methods were analyses of variance with accompanying orthogonal contrasts and Tukey-Kramer post hoc tests of mean differences. F tests were calculated using Type III Sums of Squares. Post hoc mean comparisons and orthogonal contrasts were particularly important in identifying the sources of variation in significant overall F tests. We used a common model incorporating main effects and interaction effects for each research question.

13.6.1 Statistical Model

Main Effects: Type of Institution (doctoral or not), Year of Survey (1999 or 1993), Disciplinary Category (STEM, Humanities/Fine Arts, Social Sciences, Professional Fields).

Interaction Effects: Type of Institution*Disciplinary Category, Type of Institution*Year of Survey, Disciplinary Category*Year of Survey, Type of Institution*Disciplinary Category*Year of Survey.

13.6.2 Statistical Tests

For research question 1 we used an orthogonal contrast to compare STEM disciplines with all others. For research question 2 we used the magnitude of the F test to indicate

the relative importance of Type of Institution and Disciplinary Category in the teaching and research variables under study. Next, we excluded Year of Survey as an effect and ran the ANOVAs separately by Year of Survey. We compared change in the size of the F test over time to look for trends in the size of the effect of Type of Institution and Disciplinary Category over time.

13.7 Results

Table 13.2 presents means and variances overall and by Disciplinary Category. Table 13.3 presents the means and variances for study variables by Year of Survey and Type of Institution.

Research Question 1
Tables 13.2 and 13.3, respectively, show substantial variation across the four general Disciplinary Categories and Type of Institution for each study variable. Most results are as expected. Variation over time was also apparent for all study variables except hours spent in the classroom teaching per week and the preference of teaching relative to research. Table 13.4 summarizes the ANOVA results.

13.7.1 Gender

Gender varied most by Disciplinary Category,[1] then by Type of Institution,[2] and by Year of Survey.[3] The percentage of men ranged from a low of 62% in professional fields to a high of 87% in STEM fields. The orthogonal contrast comparing the STEM category with the other three categories was highly significant.[4] Doctoral institutions had more male faculty members than did nondoctoral institutions, 77% versus 68%. The percentage of men declined slightly between 1993 and 1999 from 74% to 71%. Neither the Type of Institution*Year of Survey nor the Disciplinary Category*Year of Survey interaction effect was significant, indicating little change over time by discipline or by type of institution.

13.7.2 Hours Teaching in the Classroom Per Week

Type of Institution is by far the strongest main effect for hours spent teaching in the classroom per week.[5] Faculty members in doctoral institutions taught on average

[1] $F = 202.44$, df = 3, 11306, $p < 0.0001$.
[2] $F = 54.90$, df = 1, 11306, $p < 0.0001$.
[3] $F = 27.14$, df = 1, 11306, $p < 0.0001$.
[4] $F = 431.15$, df = 1, 11306, $p < 0.0001$.
[5] $F = 697.22$, df = 3, 11306, $p < 0.0001$.

Table 13.2 Means and variances, overall and by disciplinary category (1993 and 1999 combined) (NSOPF–93, NSOPF–99)

	All		STEM		Humanities/ Fine Arts		Social Sciences		Professional Fields	
Variable	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Male (yes/no)	0.72	0.004	0.87	0.006	0.67	0.008	0.74	0.010	0.62	0.008
Hours teaching in class/week	8.86	0.057	8.09	0.099	9.67	0.100	8.36	0.121	9.12	0.120
Used active/collaborative instruction (yes/no)	0.30	0.004	0.19	0.007	0.40	0.009	0.19	0.009	0.38	0.008
Time spent, research (%)	20.09	0.170	4.88	0.381	16.80	0.279	21.74	0.404	17.56	0.280
Principal investigator (yes/no)	0.23	0.004	0.42	0.008	0.07	0.004	0.21	0.009	0.20	0.006
Refereed publications, last 2 years	5.51	0.086	6.68	0.190	4.42	0.153	5.71	0.224	5.20	0.139
Belief that research should be primary criterion for promotion[1]	2.26	0.008	2.32	0.016	2.21	0.016	2.41	0.021	2.17	0.013
Would change jobs for more teaching relative to research[2]	–0.12	0.006	–0.16	0.011	–0.17	0.012	–0.21	0.015	0.00	0.010

Source: NSOPF–93, NSOPF–99

[1] Scale: from 1 to 4, ranging from strongly disagree to strongly agree.

[2] 1 = Likelihood of changing jobs for more teaching > Likelihood of changing jobs for more research
0 = Likelihood of changing jobs for more teaching = Likelihood of changing jobs for more research
−1 = Likelihood of changing jobs for more research > Likelihood of changing jobs for more teaching.

Table 13.3 Means and variances, by year of survey and type of institution (NSOPF–93, NSOPF–99)

	Year of survey				Type of institution			
	1993		1999		Doctoral		NonDoctoral	
Variable	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Male (yes/no)	0.74	0.006	0.71	0.006	0.77	0.006	0.68	0.006
Hours teaching in class/week	9.76	0.078	9.00	0.082	7.79	0.084	10.94	0.077
Used active/collaborative instruction (yes/no)	0.28	0.006	0.33	0.006	0.26	0.006	0.34	0.006
%Time spent, research	19.64	0.203	18.74	0.213	26.17	0.217	12.74	0.201
Principal investigator (yes/no)	0.23	0.005	0.24	0.005	0.36	0.005	0.11	0.005
Refereed publications last 2 years	3.23	0.117	8.05	0.122	7.93	0.124	3.08	0.115
Belief that research should be primary criterion for promotion[1]	2.16	0.011	2.36	0.011	2.57	0.011	1.95	0.011
Would change jobs for more teaching relative to research[2]	−0.10	0.008	−0.14	0.009	−0.26	0.009	0.01	0.008

[1]Scale: from 1 to 4, ranging from strongly disagree to strongly agree.

[2]1 = Likelihood of changing jobs for more teaching > Likelihood of changing jobs for more research

0 = Likelihood of changing jobs for more teaching = Likelihood of changing jobs for more research

−1 = Likelihood of changing jobs for more research > Likelihood of changing jobs for more teaching.

Table 13.4 Summary of ANOVAs for research questions 2 and 3 F tests (NSOPF–93, NSOPF–99)

Effect	Gender	Classroom hours	Active/collaborative instruction	Time, research (%)
Type of institution	54.90****	697.22****	71.16****	1812.74****
Disciplinary category	202.44****	35.09****	144.34****	79.50****
Year of survey	27.14****	NS	36.90****	98.25****
Institution * Discipline	8.27****	22.44****	NS	66.22****
Institution * Year	NS	NS	NS	NS
Discipline * Year	NS	6.62****	54.13****	4.91**
Institution * Discipline* Year	2.91*	2.87****	4.83**	3.54*
Contrast: STEM versus other disciplines	431.15****	10.60****	130.41****	79.13****

Effect	Principal investigator	Publications, 2 years	Research as criterion for promotion	Preference for teaching/research
Type Of institution	715.17****	548.73****	1397.02****	426.00****
Disciplinary category	322.65****	11.28****	45.53****	62.34****
Year of survey	16.86****	525.33****	44.29****	NS
Institution * Discipline	114.33****	18.88****	11.83****	9.01****
Institution * Year	NS	72.06****	NS	16.53****
Discipline * Year	3.02*	NS	NS	NS
Institution * Discipline * Year	NS	8.46****	NS	NS
Contrast: STEM versus other disciplines	741.89****	12.71***	NS	NS

NS = not significant
* = P < 05
** = P < 0.01
*** = P < 0.001
**** = P < 0.0001

7.79 hours per week whereas their counterparts in nondoctoral institutions spent 10.94 hours per week in the classroom on average. The variation across Disciplinary Category was significant but much smaller.[6] Faculty members in the Humanities/Fine Arts taught the most, STEM faculty members the least. The orthogonal contrast comparing STEM with the other three categories showed on average that STEM faculty members taught less than the combined average of the other three.[7] Results did not vary significantly by Year of Survey, although it varied somewhat by the Disciplinary Category*Year of Survey interaction.[8] Average hours spent in the classroom teaching declined significantly for both STEM and Professional Fields over time.

[6] F = 35.09, df = 3, 11306, p < 0.0001.

[7] F = 10.60, df = 1, 11306, p < 0.001.

[8] F = 6.62, df = 3, 11306, p < 0.001.

13.7.3 Use of Active/Collaborative Instruction

Instructional approach varied most by Disciplinary Category[9] with faculty members in the Humanities/Fine Arts and Professional Fields almost twice as likely as their peers in STEM and Social Sciences to use these instructional practices. An orthogonal contrast showed STEM faculty members significantly less likely to use these instructional approaches than the other three disciplinary categories combined.[10] Results also varied significantly by Type of Institution[11] with faculty in nondoctoral institutions more likely than those in doctoral-granting institutions to use active/collaborative instruction. The use of active/collaborative instruction also increased over time,[12] moving from 28% to 33%. Neither the Type of Institution*Disciplinary Category nor Type of Institution*Year of Survey interaction effects were significant. The Disciplinary Category*Year of Survey interaction was significant.[13] We found a significant increase over time in the use of active/collaborative instruction in STEM fields – from 10% to 29% – and a significant decrease in the Humanities/Fine Arts over time – from 45% to 33%.

13.7.4 Percent of Time Spent on Research

Not surprisingly, percent of time spent on research varied most by Type of Institution (doctoral or nondoctoral).[14] Faculty members in doctoral universities spent about twice as much of their time on research as their counterparts in teaching-oriented institutions. Disciplinary Category had a smaller significant effect.[15] Faculty members in STEM fields spent the most time on research, the Humanities/Fine Arts faculty the least. When compared with the other three disciplinary categories combined, STEM faculty members spent the most time on research.[16] Year of Survey also showed a modest effect.[17] The average percentage of time spent on research actually declined modestly over time from about 20% in 1993 to approximately 19% in 1999. The Disciplinary Category*Year of Survey interaction showed a modest effect.[18] This effect seems mostly a function of the decline in time spent on research by faculty members in the Humanities/Fine Arts.

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[9] $F = 144.34$, $df = 3, 11306$, $p < 0.0001$.

[10] $F = 130.41$, $df = 1, 11306$, $p < 0.0001$.

[11] $F = 71.16$, $df = 1, 11306$, $p < 0.0001$.

[12] $F = 36.90$, $df = 1, 11306$, $p < 0.0001$.

[13] $F = 54.13$, $df = 3, 11306$, $p < 0.0001$.

[14] $F = 1812.74$, $df = 1, 11306$, $p < 0.0001$.

[15] $F = 79.50$, $df = 3, 11306$, $p < 0.0001$.

[16] $F = 79.13$, $df = 1, 11306$, $p < 0.0001$.

[17] $F = 98.25$, $df = 1, 11306$, $p < 0.0001$.

[18] $F = 4.91$, $df = 3, 11306$, $p < 0.01$.

13.7.5 Principal Investigator (PI)

As with percent time spent on research, the largest factor in being a principal investigator on a funded research project was Type of Institution.[19] Faculty members in doctoral institutions were more than three times more likely to manage a research project than the faculty in teaching-oriented institutions. Disciplinary Category also had a substantial effect.[20] STEM faculty members were twice as likely to be PIs as their counterparts in Social Sciences and Professional Fields, six times more likely than their colleagues in the Humanities/Fine Arts. Although Year of Survey[21] and the Disciplinary Category* Year of Survey interaction[22] showed modest effects, post hoc mean comparisons showed no significant change over time by Disciplinary Category.

13.7.6 Publications during the Last 2 Years

As was true for the other measures of research activity and productivity, Type of Institution[23] had a much stronger effect on publishing productivity than Disciplinary Category although the latter was also significant.[24] Faculty members in doctoral universities produced more than twice as many refereed publications during a 2-year period than their counterparts in teaching-oriented institutions. STEM faculty members published the most when contrasted with their disciplinary counterparts,[25] especially those in the Humanities/Fine Arts. Change over time was also substantial[26] with a dramatic average 2-year publication rate increase from about 3 to about 8 between 1993 and 1999. The Type of Institution*Year of Survey was significant[27] with substantial increases in publication rates at both doctoral and nondoctoral institutions over time. The Disciplinary Category*Year of Survey interaction was not significant.

13.7.7 Research Should Be the Criterion for Promotion

Again, the dominant effect was Type of Institution with faculty members in doctoral universities rating the importance of research more highly than those in

[19] $F = 715.17$, df = 1, 11306, $p < 0.0001$.
[20] $F = 322.65$, df = 3, 11306, $p < 0.0001$.
[21] $F = 16.86$, df = 1, 11306, $p < 0.0001$.
[22] $F = 3.02$, df = 1, 11306, $p < 0.05$.
[23] $F = 548.73$, df = 1, 11306, $p < 0.0001$.
[24] $F = 11.28$, df = 3, 11306, $p < 0.0001$.
[25] $F = 12.71$, df = 1, 11306, $p < 0.001$.
[26] $F = 525.33$, df = 1, 11306, $p < 0.0001$.
[27] $F = 72.06$, df = 1, 11306, $p < 0.0001$.

teaching-oriented institutions.[28] Disciplinary Category had a more modest, significant effect.[29] Faculty members in the Social Sciences rated research highest in consideration for promotion followed by faculty members in STEM fields, Humanities/Fine Arts, and finally, Professional Fields. The attitude about the importance of research increased over time[30] although neither interaction effect was significant.

13.7.8 Preference for Research Versus Teaching

Preference for research versus teaching in seeking another job varied most by Type of Institution.[31] Faculty members in teaching-oriented institutions were about equally divided in their preference for teaching and research when considering another job. Faculty members in doctoral institutions clearly preferred to look for a position with greater research opportunities.[32] Disciplinary Category was a significant but less important effect.[33] Faculty members in the Social Sciences were most likely to look for research opportunities in a new position followed closely by those in Humanities/Fine Arts and STEM. Faculty members in Professional Fields seemed less concerned about changing positions to pursue research. Although there was no significant main effect for Year of Survey, the Type of Institution*Year of Survey interaction was significant.[34] This significant interaction was a function of the substantial increase in preference for research over teaching among faculty in doctoral institutions.

Research Question 2

Part of the research evidence for research question 2 comes from the size of the main effects for Type of Institution and Disciplinary Category, respectively. As shown in Table 13.4, academic discipline seems the more important of the two effects for gender and instructional approach. Type of Institution is the stronger effect for the other six traditional measures of teaching and research. The Year of Survey effect was significant for all but hours spent in the classroom per week and preference for research vs. teaching, indicating some change in trends over time.

To examine trend data in more detail, Table 13.5 shows the effect sizes separately for 1993 and 1999 by Type of Institution and for an orthogonal contrast comparing

[28] $F = 1397.02$, $df = 1, 11306$, $p < 0.0001$.

[29] $F = 45.53$, $df = 3, 11306$, $p < 0.0001$.

[30] $F = 44.29$, $df = 1, 11306$, $p < 0.0001$.

[31] $F = 426.00$, $df = 1, 11306$, $p < 0.0001$.

[32] A negative score indicates preference for research, a positive score indicates a preference for teaching, and a score near 0 indicates no preference either way.

[33] $F = 62.34$, $df = 3, 11306$, $p < 0.0001$.

[34] $F = 16.53$, $df = 1, 11306$, $p < 0.0001$.

Table 13.5 Comparison of effect sizes (r), overall and over time[1]

Effect	Male	Classroom hours/week	Active/collaborative institution	Time, research (%)	Publications, 2-Year
Type of institution					
93	0.08	0.25	0.09	0.37	0.27
99	0.06	0.30	0.07	0.37	0.22
Overall	0.07	0.27	0.08	0.37	0.22
Contrast: STEM versus other fields					
93	0.17	0.03	0.22	0.13	0.07
99	0.20	0.04	0.00	0.07	0.03
Overall	0.19	0.03	0.11	10	0.04

Effect	Principal investigator	Research as criterion for promotion	Preference for research versus teaching	Average r
Type of institution				
93	0.24	0.31	0.15	0.22
99	0.25	0.36	0.22	0.21
Overall	0.22	0.33	0.19	0.22
Contrast: STEM versus other fields				
93	0.27	0.02	0.00	0.11
99	0.23	0.00	0.01	0.07
Overall	0.25	0.01	0.00	0.09

[1] r is the Pearson correlation estimating effect size.

STEM with the other three Disciplinary Categories combined.[35] Of particular interest is the apparent reduction in variation between disciplines across virtually all measures over time, the most dramatic being the decrease in mean differences for the use of active/collaborative instruction. The orthogonal contrast comparing STEM with the other three Disciplinary Categories showed similar results. In comparison, although the F test value for Type of Institution decreased over time for gender, active/collaborative instruction, percent of time spent on research, publication record, and being a principal investigator, it increased substantially for hours spent teaching in the classroom per week, the belief that research should be the primary criterion in promotion and tenure, and preference for research over teaching.

13.8 Conclusion and Policy Implications

With the exception of the use of active and collaborative instruction, the influence of type of institution was more important than that of academic discipline in measures of faculty members' attitudes about and behavior in teaching and research. All

[35] Calculation of an average effect size with the Disciplinary Category main effect is more complex. Since we focused most heavily on STEM fields, examination of effect size focused on the orthogonal contrast.

of these measures varied in the expected direction based on differences in institutional mission more than disciplinary differences. In particular, faculty members in non-doctoral institutions tended to emphasize teaching, faculty members in doctoral institutions tended to emphasize research. In addition, research results indicate a reduction in variation between disciplines over time, meaning that disciplines are becoming more similar. These two findings support the primacy of the type of institution in faculty teaching and research and are consistent with the institutional isomorphism hypothesis.

There is considerable good news in these results. Use of active and collaborative learning and instructional technologies is increasing in all disciplines and at all types of institution; however, the numbers remain quite modest. The "revolution" in instructional practice is not over yet. With the matriculation of the Net Generation, it will become imperative for faculty members to make greater use of active and collaborative learning and instructional technologies. Further, ever so slowly, the gender differential in STEM is decreasing.

Equally important, the results have important implications for how national, state, and even institutional policymakers approach reform. Many reform efforts to improve teaching and achieve a better balance between teaching and research in the USA start with the academic discipline. Calculus reform, reintroducing design into undergraduate engineering curricula, enhancing laboratory instruction, even efforts to reinvigorate liberal education frequently appeal to the discipline first (Gaff and Ratcliff 1997). These reform efforts are based on the belief, consistent with Becher and Trowler (2001) and Clark (1987), that the way to appeal to the professoriate is through the affiliation of individuals with their "academic tribes." Our results strongly suggest that although the discipline can be quite dominant, the institutional impact may play an even bigger part in shaping what faculty members do and how they do it. This finding suggests that efforts to improve mathematics instruction, as one example, should take into account differential programming by type of institution just as much as appealing to national disciplinary societies. A mathematics professor may agree that a new curriculum or course advocated by a national disciplinary society is preferable to the one she or he uses now, but whether or not she or he adopts it depends on workload and whether or not the institution values curriculum reform in evaluating faculty performance. We believe that professional identity for the modern American professor increasingly is based on a combination of academic discipline and type of institution with the latter increasing in importance over time.

Upon reflection, it seems that evidence about the increasing homogeneity of faculty reward structures based on research and scholarship across types of institutions in the USA, including work by one of the authors (e.g., Fairweather 1996), has tended to draw attention away from the considerable variation remaining between types of institutions when considering curricular and instructional reforms. One consequence is the emergence of an accepted paradigm where academic discipline is viewed as the key to understanding faculty work. Our research suggests that institutional mission remains a powerful influence on faculty work, one deserving equal footing with the academic discipline.

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References

Alpert, D. (1985). Performance and paralysis: The organizational context of the American research university. *Journal of Higher Education*, *56*, 241–281.

Baldridge, J. V., Curtis, D., Ecker, G., and Riley, G. (1978). *Policy making and effective leadership*. San Francisco, CA: Jossey-Bass.

Becher, T. and Trowler, P. (2001). *Academic tribes and territories: Intellectual inquiry and the culture of disciplines*. Philadelphia, PA: Society for Research into Higher Education and Open University Press.

Belenky, M., Clinchy, B., Goldberger, N., and Tarule, J. (1986). *Women's ways of knowing: The development of self, voice, and mind*. New York: Basic Books.

Carnegie Foundation for the Advancement of Teaching (1994). *A classification of institutions of higher education*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Center for Science, Mathematics, and Engineering Education, Committee on Undergraduate Science Education (1999). *Transforming undergraduate education in science, mathematics, engineering, and technology*. Washington, DC: National Academy Press.

Clark, B. (1987). *The academic life: Small worlds, different worlds*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Fairweather, J. (1996). *Faculty work and public trust: Restoring the value of teaching and public service in American academic life*. Boston, MA: Allyn & Bacon.

Fairweather, J. S. (1997). The value of teaching, research, and service. In Wechsler, H. (ed.) *The NEA 1997 Almanac of Higher Education*. Washington, DC: National Education Association, pp. 43–62.

Fairweather, J. S. (1999). The highly productive faculty member: Confronting the mythologies of faculty work. In Tierney, W.G. (ed.) *Faculty productivity: Facts, fictions, and issues*. New York: Falmer Press, pp. 55–98.

Fulton, O. and Trow, M. (1974). Research activity in American higher education. *Sociology of Education*, *47*, 29–73.

Gaff, G., Ratcliff, J., and Associates (1997). *Handbook of the undergraduate curriculum: A comprehensive guide to purposes, structures, practices and change*. San Francisco, CA: Jossey-Bass.

Marsh, H. W. and Hattie, J. (2002). The relation between research productivity and teaching effectiveness. *Journal of Higher Education*, *73*, 603–641.

Massy, W., Wilger, A., and Colbeck, C. (1994). Overcoming "hallowed" collegiality: Departmental cultures and teaching quality. *Change*, *26*, 11–20.

Massy, W. and Zemsky, R. (1994). Faculty discretionary time: Departments and the "academic ratchet". *Journal of Higher Education*, *65*, 1–22.

National Science Foundation (1996). *Shaping the future: New expectations for undergraduate education in science, mathematics, engineering, and technology*. Washington, DC: National Science Foundation.

Powell, W. and DiMaggio, P. (eds.) (1991). *The new institutionalism in organizational analysis*. Chicago, IL: University of Chicago Press.

Schwarz, S. and Westerheijden, D. (eds.) (2004). *Accreditation and evaluation in European higher education area*. Dordrecht: Kluwer.

Seymour, E. and Hewitt, N. (1997). *Talking about leaving: Why undergraduates leave the sciences*. Boulder, CO: Westview.

Wankat, P. (2002). *The effective, efficient professor: Teaching scholarship and service*. Boston, MA: Allyn & Bacon.

Weimer, M. (1996). *Teaching on solid ground: Using scholarship to improve teaching*. San Francisco, CA: Jossey-Bass.

Chapter 14
Quantitative Assessment of Organisational Cultures in Post-merger Universities

Yuzhuo Cai

14.1 Introduction

The aim of this study is to provide insight into the construct of organisational culture in the context of post-merger higher education institutions, and to discuss possible approaches to its assessment with a particular emphasis on the quantitative ones. The term "organisational culture" has proved difficult to define, even though several of its important components are agreed on by most researchers. These include the norms, perspectives, values, assumptions, and beliefs shared by organisational members. Due to the abstract nature of these elements, they present a considerable challenge for external researchers seeking to assess organisational culture. It is even difficult for members of an organisation to describe their own culture. Cameron and Freeman (1991, p. 31) use the old proverb "Fish discover water last" to illustrate the problem of assessing culture among those immersed in it.

The study of organisational culture is important in post-merger institutions because the cultures of the pre-merger organisations will often have been different. Although many researchers have claimed that cultural differences exercise a profound influence on post-merger integrations, the higher education literature has been relatively silent as to how one might empirically measure this phenomenon. The difficulty is compounded by two major interrelated problems in organisational research, namely a lack of common understanding of culture and the absence of effective tools to identify and access the content of culture.

The processes involved in assessing the culture of the post-merger institution are likely to be ambiguous and complex, because the cultures of pre-existing institutions will usually have differed from each other. However, this complex situation just provides a better setting for capturing organisational cultures, because organisational cultures can become more obvious when compared or contrasted with each other. As noted by Daniel and Metcalf (2001, p. 29) "there is no more obvious contrast than during a merger or an acquisition".

The paper starts with a discussion on how the concept of organisational culture is understood in the setting of post-merger higher education institutions, and is

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followed by a brief introduction to the tradeoffs between qualitative and quantitative approaches to assess culture. Next, it reviews instruments that can be used to access cultures, either in business mergers or between higher education institutions. This study concludes by identifying some of the implications of selecting or designing instruments for assessing cultural differences in post-merger higher education institutions.

14.2 The Concept of Organisational Culture and Its Meanings in Post-merger Institutions

Before attempting to describe the content of organisational culture, one should first understand the concept of organisational culture. Organisational culture has been criticised as being conceptually weak, since it has been defined in many ways and each definition emphasises a particular focus or level. Since Schein (1985) published the book *Organisational Culture and Leadership*, many researchers have recognised culture as a multidimensional and multilevel concept. Schein describes three levels of culture. The first level consists of visible organisational structures and actions, such as dress code, facilities, and procedures. This level of culture can be easily observed. The second level consists of espoused values manifested in the public images of organisations, such as strategies, goals, and philosophies. While not as visible as the artefacts present in the first level, these values can be ascertained by norms, the way things are done in the organisation. The third level consists of basic assumptions, or unconscious beliefs, perceptions, thoughts, and feelings. These determine both behavioural norms (the way people should behave) and organisational values (the things that are highly valued).

In Buono and Bowditch's (1989, pp. 137–139) category, the visible elements created by an organisation on the first level can be regarded as objective organisational culture, while the elements on the second and the third levels are concerned with subjective organisational culture. According to them, objective organisational culture refers to the artefacts, physical settings, and subjective organisational culture refers to "the pattern of beliefs, assumptions, and expectations shared by organisational members and the group's characteristic way of perceiving the organisation's environment and its values, norms, and roles as they exist outside the individual" (1989, p. 137).

Most researchers agree that subjective culture is a more significant determinant of beliefs, attitudes, and behaviours, and it thus provides a more distinctive basis for characterising and interpreting similarities and differences between people in different organisations. On this understanding, university culture as a particular form of organisational culture can be defined "as the collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behaviour of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off campus" (Kuh and Whitt 2000, p. 162).

While the term *organisational culture* is used as if an organisation has a monolithic culture, most organisations have more than one set of beliefs influencing the behaviour of their members. Cultural diversity appears to be more obvious in higher education institutions.

> The "small homogenous society" analogues used in anthropological studies of culture is sorely strained when applied to many contemporary institutions of higher education. Large public, multipurpose universities are comprised of many different groups whose members may or may not share or abide by all of the institution's norms, values, practices, beliefs, and meanings. Instead of viewing colleges and universities as monolithic entities, it is more realistic to analyze them as multicultural contexts that are host to numerous subgroups with different priorities, traditions, and values. (Kuh and Whitt 2000, p. 161)

With mergers, Greenwood et al. (1994, p. 253) have suggested that "it is not the more salient aspects of organisational culture that may be important, but the more concealed, unquestioned subculture". In higher education institutions, subcultures may be divided along occupational, functional, product, or geographical lines, and they can enhance or counter one another. In terms of culture shared by staff members in a university, it is also possible to distinguish between academic culture and administrative culture (Sporn 1996, p. 51). This study pays particular attention to academic staff and specifically those engaged at the departmental level. Therefore, from the perspective of this paper, the organisational culture refers to values, beliefs, and assumptions developed within an academic department by academic staff and those who manage academics through shared experiences over long periods of time.

Disciplinary identity is a core dimension to differentiate between academic cultures in different academic departments which are normally divided according to disciplinary foundations (Becher 1981; Becher and Trowler 2001). Although, it has been argued by Välimaa (1998, p. 120) that "the studies of disciplinary cultures skip the institutional level and focus on an individual academic to reconstruct the international disciplinary culture", within a higher education institution disciplinary cultures often exhibit themselves as a range of departmental cultures (subcultures). Nevertheless, disciplinary identity is not the sole source of the culture shared by academic staff members within an academic subunit. It is also subject to a variety of circumstances, such as national context, professional culture, and organisational character (Austin 1992; Clark 1983, p. 75; Välimaa 1998). An illustration of departmental cultures in a merger process is shown in Fig. 14.1.

When the merger partners come from the same national system, even partners within close geographic proximity, the culture of academic staff members of these pre-merger institutions is likely to have characteristics similar to the system-level culture relating to the academic profession. What is relevant is that departmental cultures are an amalgam of institutional cultures and disciplinary cultures. As noted by Lee, "the academic department is often referred to as the intersection between the larger discipline and the local institution" (Lee 2004, p. 604). This intersection is clearly shown in Fig. 14.1. For mergers of departments within similar disciplinary areas, disciplinary culture may contribute to the eventual similarities between two pre-merger partners. The source of diversity is institutional culture, meaning

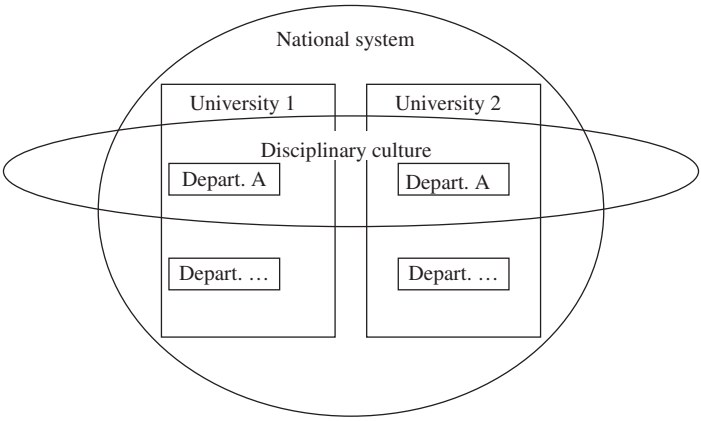

Fig. 14.1 Cultures in academic departments

that the major differences between two departments are caused mostly by the institutional cultures of the pre-merger institutions. For instance, in the context of American higher education, Austin (1992, p. 1617) has said that "the employing institution plays a significant role in defining the work and life of a professor or professional".

This does not necessarily imply that there will be no cultural divergence between the academics from pre-existing departments. However, the difference may be less salient during a merger process, partly because a merger can increase the cohesiveness within pre-merger groups (Cartwright and Cooper 1996, p. 43).

14.3 Qualitative Versus Quantitative Assessment of Culture

In addition to the debates on definition come questions of how to measure culture. The above discussion implicitly indicates that approaches to the study of cultures in organisations depend on researchers' perspectives. Many studies on organisational culture, such as ethnographic or phenomenological investigation within a small number of organisations, are from insiders' perspectives. The commonly used research methods are, for example, in-depth interview and participation observation. This strategy requires participation over a long period as well as gathering a huge amount of information in specific cases. Such qualitative approaches stress the uniqueness of organisational culture, and provide "an opportunity to maximize the values of heurism, flexibility, adaptiveness, depth and realism" (Tucker et al. 1990, p. 5).

Despite its advantages, the qualitative approach has inherent problems if one would like to make generalisations at the population or a system levels. Qualitative investigation cannot usually cover a large sample, and therefore it is difficult to draw firm conclusions for empirical generalisation to the overall population. The

idiosyncratic nature of the results leads to the difficulty of applying them to another context. Accordingly, this approach does not allow systematic comparison between organisations or between subcultures within one organisation.

The other approach from an outsider's perspective is quantitatively orientated. It usually consists of administering questionnaires to large numbers of organisation members within or across organisations. "Quantitative methods provide an opportunity to maximise the values of precision, systematisation, repeatability, comparability, convenience, large scale, unobtrusiveness and cost-effectiveness" (Tucker et al. 1990, p. 5). However, critics are very sceptical when it comes to the application of formalised questionnaires within a specific organisation. Many quantitative instruments exist to measure culture using predetermined categories and questions. The main shortcoming is the inability to bring unanticipated findings to the surface. For this reason, the validity of questionnaires measuring organisational culture cannot necessarily be guaranteed.

This description of the strengths and limitations of the two research strategies implies, to some extent, that qualitative and quantitative assessments of organisational cultural complement each other. Cameron and Freeman (1991, p. 31) argue that the important and common ingredient in all methods is "the requirement for the researchers to provide a stimulus to organisation members which encourages them to interpret their organisation's culture". The stimulus in quantitative measurements is scenarios or statements, and respondents are expected to describe how these are similar to their own experiences. The design of scenarios or statements relies heavily on the results of initial inductive studies. On the other hand, the application of a questionnaire to a large sample helps validate broader generalisations of qualitative findings. The qualitative approach can also be used to explore the meaning of quantitative findings, so that the reliability of the questionnaires can be further verified. On this understanding, combined quantitative and qualitative approaches will provide a comprehensive understanding of investigations of organisational culture. This mixture of methods has been used, for example, by Siehl and Martin (1988), who construct questionnaires based on qualitative data derived from in-depth interviews, and Hofstede et al. (1990), who conduct qualitative interviews to enrich an existing questionnaire.

The above considerations indicate some of the advantages of mixed methods, but in a specific research setting one approach might have a higher priority than the other. The choice of research methods depends on the purposes of the study and the conditions for research. Cultural studies identified in the merger literature are often related to the topics of cultural fit or compatibility, which require an evaluation of similarities or differences between two different organisational cultures. In this circumstance, qualitative approaches may be limited, because they "do not readily lend themselves to such systematic comparisons" (Tucker et al. 1990, p. 5), and are too costly and time consuming to be used in studies of large and complex merged organisations such as universities. By contrast, pre-structured questionnaires have their merits in this respect.

The qualitative measurement in studies of organisational culture adopts either a typological approach or a dimensional approach (Scott et al. 2003, p. 928). The

former tends to identify types of organisational culture, while the latter describes a culture according to its position on a number of continuous variables. In spite of their differences, both approaches emphasise a number of important elements and provide concrete empirical measures for systematic comparisons. There is little agreement between researchers as to which instrument is the most appropriate when measuring the key elements of culture (Trice and Beyer 1984). This presents a considerable challenge if researchers are seeking to apply existing instruments to specific investigations. As Scott et al. (2003, p. 929) put it, "While a range of instruments is available, and researchers would have to justify developing yet another new tool from scratch, all of them have limitations in terms of their scope, ease of use, or scientific properties".

Currently no specific instrument is available to access cultures in post-merger universities. However, the existing assessments of cultures in business mergers or in higher education institutions may shed light on the design of a measurement tool suitable for analysing post-merger higher education institutions.

14.4 Measure of Cultures in Higher Education

14.4.1 Contributions from Qualitative Studies

Within the higher education literature dealing with organisational culture, material on qualitative methods tends to be dominant. Some of these studies have tried to conceptualise institutional culture into a number of categories, which not only enable potential comparisons across institutions or subunits, but also form an empirical basis for the development of quantitative instruments to assess culture. These studies fall along two tracks.

The first track emphasises the identification of certain key elements of institutional culture. Following the anthropological approach, Tierney (1988) has provided an initial attempt to identity the essential categories for studying institutional culture based on a case study, namely environment, mission, socialisation, information, strategy, and leadership. Although, this framework offers little in terms of assessing institutional cultures in a quantitative way (Maassen 1996, p. 40), it indicates that culture can be understood or potentially accessed by certain dimensions.

On the other track, researchers try to develop typologies of institutional culture. For instance, Bergquist (1992) outlines four types of culture that exist in the contemporary university: collegial culture, developmental culture, managerial culture, and negotiation culture. The collegial culture consists of values and beliefs that traditional universities believe they espouse, such as academic freedom and faculty (academic staff) autonomy in teaching, scholarship, and research. The developmental culture values teaching and learning as the heart of the academic enterprise, instead of scholarship and research. It focuses on collaboration, and has a real commitment to inclusiveness in decision-making and planning as well as an emphasis on conflict

resolution. As such, missions and goals are of particular importance. For the managerial culture, outcomes, and accountability are primary concerns. Therefore, fiscal responsibility and effective management are highly valued. The negotiation culture has two particular values: equity and egalitarianism. This type of culture is likely to lead to a collective bargaining process. The requirement of membership in the collective bargaining unit is antithetical to academic freedom. Bergquist contends that most higher education institutions may exhibit values of any of the four cultures in specific situations, but that collegial values dominate contemporary higher education institutions.

14.4.2 Quantitative Measures

Only a very few quantitative instruments have been developed to access culture in the higher education field. These measures often use dimensional approaches. In some early studies, Pace and Stern developed the College Characteristics Index as an instrument for measuring institutional cultures from the perspective of students (Pace 1962; Pace and Stern 1958). This index consists of 300 statements about college life concerning curriculum, college teaching and classroom activities, rules, regulations and policies, student organisations, activities, interests, and various other features of the campus. Students respond to these statements by indicating "true" or "false". The responses describe the culture of their institutions.

The culture of interest here, however, is concerned academic staff, not with the perception of students. In this respect, a relatively mature instrument has been developed and used in American higher education. The Higher Education Research Institute at the University of California initiated a triennial faculty survey in 1989. The survey emphasises academic staff procedures and practices, professional priorities, opinions, and perceptions about the institutions, and a satisfaction rating. Since 1989, over 300,000 academic staff at more than 1,100 2-year and 4-year colleges nationwide participated in this survey. Based on the 1998 survey (Sax et al. 1999), Lee (2004) studied the departmental cultures in five academic fields as well as their relationship with institutional culture. She found that the cultures in the five disciplines can be mostly distinguished in terms of institutional orientation, affective/multicultural orientation, interpersonal orientation, and reputation orientation.

In the European context, Maassen (1996) developed 13 items to measure institutional cultures, with an emphasis on the values and beliefs shared by academics, in his study of Governmental Steering and the Academic Culture. The instrument focuses on three dimensions, namely competition, evaluation, and decentralisation.

Some quantitative studies on higher education culture have been based on the typological approach. The measure is not derived from Bergquist's culture type, partly because the four types of culture categorised by Bergquist are arbitrary and lack epistemological roots (Maassen 1996, p. 41). Rather, some instruments developed in the business field are applied. The one used most commonly is related to

the Competing Values Framework, which was first introduced as a typological tool in empirical research on the question of what makes organisations effective (Quinn and Rohrbaugh 1981). It has since been largely applied to issues concerning leadership, management styles or organisational change. Although the framework is most often thought of as a leadership tool, it has also shown that it can be used as a tool for examining all aspects of organisations, and at all levels. The Competing Value Framework consists of the dimension of flexibility vs. control and the dimension of internal versus external. The cross hairs of this model result in four quadrants which represent four types of organisational culture: Clan, Hierarchy, Adhocracy, and Market (Fig. 14.2).

According to the higher education literature, Competing Value Framework has been applied to a range of purposes. To study the relationship between organisational culture and effectiveness, Cameron and Freeman (1991) surveyed and com-

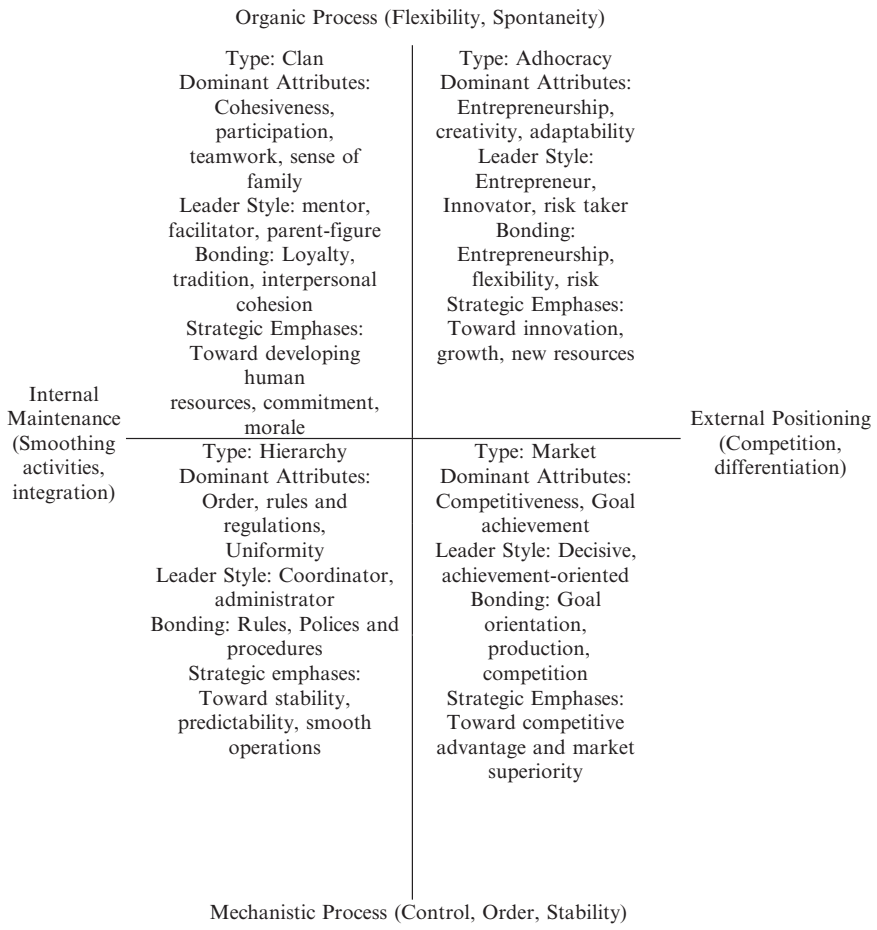

Fig. 14.2 A model of organisational culture type (Deshpandé et al. 1993, p. 23)

pared 334 higher education institutions. Their empirical results show that culture type was a significant factor in determining organisational effectiveness. Different types of culture were found to be associated with various aspects of organisational effectiveness. This measure of culture type focuses on four dimensions, namely institutional characteristics, institutional leadership, institutional glue, and institutional emphasis, and uses a 16-item, scenario-based questionnaire. Some other researchers (e.g., Smart 2003; Smart and John 1996) have re-examined this phenomenon by using similar instruments, but by adopting different sampling techniques. The results generally appear to be consistent with Cameron and Freeman's finding. These studies suggest that the clan culture and adhocracy culture are the most effective.

Culture type has also been thought of as being important for understanding organisational transformation or innovation in higher education. Obenchain et al. (2003), for instance, have empirically verified a clear relation between organisational culture and innovation in a large sample in which 1,912 institutions were involved. The instrument used to measure culture type consisted of a 12-item survey questionnaire adopted from Yeung et al. (1999). The results of their study suggested that an adhocracy culture is associated with higher levels of organisational innovation than other types of culture.

All of these studies suggest that no institution can be characterised by a single culture type. In some institutions one type is clearly dominant, while some institutions report no dominant culture type. Findings consistently suggest that the clan culture is the most frequent one among higher education institutions. In tune with these propositions, Berrio (2003) has attempted to describe the dominant culture type in a case study of Ohio State University Extension. The questionnaires used in this study were modified from the Organisational Culture Assessment Instruments (OCAI) developed by Cameron and Quinn (1999). Compared with the early Competing Value Framework instrument used by Cameron and Freeman (1991), the OCAI adds two additional organisational culture dimensions, namely management and criteria for success.

14.5 Measuring Cultural Differences in Merged Organisations

Numerous and consistent findings among merger studies demonstrate that the success or failure of mergers or acquisitions is dependent heavily on how compatible the cultures of the pre-existing organisations were (Buono et al. 1985; Cartwright and Cooper 1993b; Chatterjee et al. 1992; Datta 1991; Elsass and Veiga 1994; Olie 1994). This proposition suggests the importance of understanding cultural differences and managing cultures in specific merger processes. For such purposes, one must know first how to identity and assess cultures and the differences between them. While the measurement of cultures in merged higher education institutions has remained a blank area, the corporate realm has attempted to develop quantitative instruments for measuring cultures in merged organisations.

In a study on cultural differences in related mergers, Chatterjee et al. (1992) designed questionnaires and sent them to the top managers of 198 acquired firms, asking them to rate how they perceived the cultural differences between the acquiring and acquired firms on seven dimensions of cultural orientation. These dimensions were: innovation and action orientation, risk-taking, lateral integration, top management contact, autonomy and decision-making, performance orientation, and reward orientation. By analysing questionnaires from 30 selected firms, Chatterjee et al. empirically supported their hypothesis that mergers in which cultural differences were rated as large would be less successful. The same instrument was used in Weber's (1996) study of conflicts of management cultures in firm mergers or acquisition between 1985 and 1987 in the USA, and by Weber et al.'s (1996) empirical study on national and corporate cultural fits in mergers and acquisitions.

Datta (1991) examined the impact on post-acquisition performance of organisational differences between merger partners. The understanding of differences relies on two dimensions, namely management styles and organisational reward and evaluation systems. In particular, the former dimension is intertwined with organisational culture. The management styles were measured by a 17-item Likert-type questionnaire adapted from Khandwalla's (1977) instrument. The findings indicate that the differences in top management styles have a negative impact on performance in acquisitions.

While these studies tend to use dimensional approaches to measure the extent to which cultures are different between pre-merger groups, (particularly amongst top managers), some other researchers advocate a typological tool. For instance, Harrison's (1987) typology of organisational culture has been used by Cartwright and Cooper (1989, 1993a, 1996) to help in understanding cultural differences and cultural fit in post-merger organisations. According to Harrison, four types of organisational culture can be distinguished, namely power type, role type, task/achievement type, and person/support type, despite these types not necessarily being mutually exclusive in a single organisation. The instruments used to measure the culture types have been developed over time (J. R. Harrison 1987; R. Harrison and Stokes 1990, 1992). Normally it requires respondents to rate a number of statements on a six-point Likert-type scale. In a merger setting, the respondents are requested to complete the instrument as it applied to their pre-merger organisations and the present culture of the post-merger organisations.

14.6 The Relevance of Existing Approaches to Assess Cultural Differences in Post-merger Higher Education Institutions

Many merger studies using dimensional approaches (Chatterjee et al. 1992; Datta 1991; Khandwalla 1977; Weber 1996; Weber et al. 1996) have tended to measure cultural differences in merger settings. The convergent validity of such instruments is often checked by the within-group variance or consensus among multiple respondents for each item. The empirical results often demonstrate validity at a satisfactory

level. Some dimensional instruments, such as Chatterjee et al.'s (1992) questionnaires, have been repeatedly used with different samples, but have resulted in similar conclusions being drawn. This to some extent illustrates their reliability.

However, these measures are often used in the business sector and focus particularly on management cultures. There are considerable challenges in trying to apply them to post-merger universities.

First, this type of cultural difference instrument is normally based on five-point Likert-type scales, ranging from very similar to very different. It usually measures the extent to which cultures differ between two pre-merger groups. However, this technology will be less methodologically effective if more than two partners are involved in a merger, which occurs frequently in the higher education context. It will be cumbersome for respondents to compare differences between the culture of their own pre-merger institution with that of each other group, item by item. In this situation, one solution might be to ask respondents to indicate their agreement with the statements of cultural attributes of their own group on Likert-type scales, for example, anchored at 1 = strongly disagree and 5 = strongly agree. Based on the original data, the researchers should be able to figure out the cultural difference between each pair partners by using statistical tools.

Second, there are few valid dimensional instruments in the higher education setting. There is no evidence to show that cultural dimensions or items developed in the business realm can also be relevant in the study of cultures differences in post-merger higher education institutions. One possible solution is to apply the instruments which have already been used to measure cultures in higher education institutions, such as the survey initiated by the Higher Education Research Institute of University of California or the instrument for measuring academic culture in Dutch and German higher education institutions designed by Maassen (1996). However, a common challenge is that both the validity and reliability will be examined when using these instruments to higher education mergers.

Third, the dimensional instruments normally consist of a large number of items and require respondents to spend a long time to complete them.

Compared to the dimensional approach, typological measurement has advantages. These include its high face validity, the limited time required from respondents, and the concrete understanding of the cultural orientation. In merger settings, Harrison and Stokes' instrument has been strongly proposed (Harrison and Stokes 1990). However, it was originally designed for use in the industrial context and therefore it might not match the cultures in higher education institutions. In higher education studies the Competing Value Framework is often applied, although it is not often used in merger settings. However this instrument could be relevant for assessing cultures in post-merger higher education institutions. In the higher education context, a large number of institutions have been investigated in a variety of contexts by using Competing Value Framework-based instruments (Berrio 2003; Obenchain et al. 2004; Zammuto and Krakower 1991). The results of these studies indicate that culture type can be used to identify differences between higher education institutions. At the minimum, the cultures of higher education institutions can be distinguished by the extent to which the different cultural types are manifested. In addition, the reliability

and validity of Competing Value Framework-based instruments has been tested by a number of studies in a business context (Quinn and Spreitzer 1991; Yeung et al. 1991) and in the higher education field (Berrio 2003; Obenchain et al. 2004; Zammuto and Krakower 1991). Moreover, the generic features of the Competing Value Framework instrument have been verified by a large number of samples, so it might be a convenient choice when there is a lack of pre-empirical understanding of cultural elements in specific higher education institutions. Finally, this kind of instrument requires less of respondents' time, compared to dimensional questionnaires.

The Competing Value Framework also has its shortcomings. It requires the application of a set of predetermined cultural attributes. This allows comparisons with other organisations to be readily made. However, the predetermined set of attributes limits the scope of cultural findings to those found in the measurement tool.

Another limitation of using Competing Value Framework is that it is a tool which is primarily concerned with management values and styles, while other aspects of institutional culture are neglected. In most mergers, arguably, the cultural differences affecting integration are mainly those concerned with management cultures. Therefore, the Competing Value Framework-based instruments might be relevant for accessing the cultures of each pre-merger institution, at the department level in particular.

This study has focused only on the issues related to institutional or organisational culture rather than disciplinary culture. In this study, mergers between academic departments from different institutions, but in the same disciplinary areas have been examined. The aim in developing a culture instrument is to assess the cultures of pre-merger departments and compare their differences. As has been discussed, the cultural differences between two pre-merger departments are to a large extent attributed to the different traditions and values of the institutions in which the departments were originally located. The study of disciplinary culture is also important in higher education mergers, especially in the managerial effort to promote cultural integration, because the academic staff from the two departments will usually share a similar disciplinary culture. Given the limited scope of this study and the profound differences between disciplinary and institutional cultures, the assessment of disciplinary culture should be addressed in a separate study.

It is worth noting that when a cultural instrument is designed for a new area, it is important to start with an inductive mode of inquiry, such as by conducting qualitative studies, including in-depth inquiry interviews or issue-focused interviews. At the minimum, researchers should learn from previous qualitative findings in similar research settings. By using a combination of qualitative and quantitative methodologies, validity can also be improved. As such, it is possible to work out the right questions to put in the questionnaire.

References

Austin, A.E. (1992). Faculty cultures. In Clark, B.R. and Neave, G. (eds.) *The encyclopedia of higher education*, Vol. 3. Oxford: Pergamon Press, pp. 1614–1623.

Becher, T. (1981). Towards a definition of disciplinary culture. *Studies in Higher education*, *6*, 109–122.

Becher, T. and Trowler, P.R. (2001). *Academic tribes and territories*, 2nd edn. Buckingham: SRHE and Open University Press.

Bergquist, W.H. (1992). *The four cultures of the academy: Insights and strategies for improving leadership in collegiate organisations*. San Francisco, CA: Jossey-Bass.

Berrio, A.A. (2003). An organisational cultural assessment using the competing values framework: A profile of Ohio state university extension. *Journal of Extension*, *41*(2).

Buono, A.F. and Bowditch, J.L. (1989). *The human side of mergers and acquisitions*. Washington, DC: Beardbooks.

Buono, A.F., Bowditch, JL., and Lewis, J.W. (1985). When cultures collide: The anatomy of a merger. *Human Relations*, *38*(5), 477–500.

Cameron, K.S. and Freeman, S. (1991). Culture, congruence, strength and type: Relationship to effectiveness. In W.R.W. and Pasmore, W.A. (eds.) *Research in organisational change and development*, Vol. 5. London: JAI Press, pp. 23–58.

Cameron, K.S. and Quinn, R.E. (1999). *Diagnosing and changing organisational culture*. Reading, MA: Addison-Wesley.

Cartwright, S. and Cooper, C.L. (1989). Predicting success in joint venture organisations in information technology. *Journal of General Management*, *15*(1), 39–52.

Cartwright, S. and Cooper, C.L. (1993a). The psychological impact on merger and acquisition on the individual: A study of building society managers. *Human Relations*, *46*, 327–347.

Cartwright, S. and Cooper, C.L. (1993b). The role of culture compatibility in successful organisational marriage. *Academy of Management Executive*, *7*(2), 57–70.

Cartwright, S. and Cooper, C.L. (1996). *Managing mergers, acquisitions, and strategic alliances: Integrating people and cultures*, 2nd edn.) Oxford/Boston, MA: Butterworth-Heinemann.

Chatterjee, S., Lubatkin, M.H., Schweiger, D.M., and Weber, Y. (1992). Cultural differences and shareholder value in related mergers: Linking equity and human capital. *Strategic Management Journal*, *13*(5), 319–334.

Clark, B.R. (1983). *The higher education system: Academic organisation in cross-national perspective*. Berkeley, CA: University of California Press.

Daniel, T.A. and Metcalf, G.S. (2001). *The management of people in mergers and acquisitions*. Westport, CT, London: Quorum Books.

Datta, D.K. (1991). Organisational fit and acquisition performance: Effects of post-acquisition integration. *Strategic Management Journal*, *12*(4), 281–297.

Deshpandé, R., Farley, J.U., and Webster Jr., F.E. (1993). Corporate culture customer orientation, and innovativeness in Japanese firms: A quadrad analysis. *Journal of Marketing*, *57*(1), 23–37.

Elsass, P.M. and Veiga, J.F. (1994). Acculturation in acquired organisations. *Human Relations*, *47*(4), 431–453.

Greenwood, R., Hinings, C.R., and Brown, J. (1994). Merging professional service firms. *Organisation Science*, *5*(2), 239–257.

Harrison, J.R. (1987). *Organisational culture and the quality of service*. London: Association for Management Education and Development.

Harrison, R. and Stokes, H. (1990). *Diagnosing organisational culture*. Berkeley, CA: Harrison & Associates.

Harrison, R. and Stokes, H. (1992). *Diagnosing organisational culture*. San Francisco, CA: Jossey-Bass/Pfeiffer.

Hofstede, G., Neuijen, B., Ohayv, D.D., and Sanders, G. (1990). Measuring organisational cultures: A qualitative study across twenty cases. *Administrative Science Quarterly*, *35*(2), 286–316.

Khandwalla, P.N. (1977). *The design of organisations*. New York: Harcourt Brace Jovanovich.

Kuh, G.D. and Whitt, E.J. (2000). Culture in American colleges and universities. In Brown, M.C. (ed.) *Organisation & governance in higher education*, 5th edn. Boston, MA: Pearson Custom Publishing, pp. 160–169.

Lee, J.J. (2004). Comparing institutional relationships with academic departments: A study of five academic fields. *Research in Higher Education*, *45*(6), 603–624.

Maassen, P. (1996). *Governmental steering and the academic culture: The intangibility of the human factor in Dutch and German universities*. Utrecht: De Tijdstroom.

Obenchain, A.M., Johnson, W.C., and Dion, P.A. (2004). Institutional types, organisational cultures, and innovation in christian colleges and universities. *Christian Higher Education*, *3*(1), 15–39.

Olie, R. (1994). Shades of culture and institutions in international mergers. *Organisation Studies*, *15*(3), 381–405.

Pace, C.R. (1962). Methods of describing college cultures. *Teachers College Record*, *63*, 267–277.

Pace, C.R. and Stern, G.G. (1958). An approach to the measurement of psychological characteristics of college environments. *Journal of Educational Psychology*, *49*, 269–277.

Quinn, R.E. and Rohrbaugh, J. (1981). A competing values approach to organisational effectiveness. *Public Productivity Review*, *5*, 122–140.

Quinn, R.E. and Spreitzer, G.M. (1991). The psychometrics of the competing values culture instrument and an analysis of the impact of organisational culture on quality of life. In Woodman, R.W. and Pasmore, W.A. (eds.) *Research in organisational change and development*. London: JAI Press, pp. 115–142.

Sax, L.J., Astin, A.W., Korn, W.S., and Gilmartin, S.K. (1999). *The American college teacher: National norms for the 1998–1999 heri faculty survey*. Los Angeles, CA: Higher Education Research Institute, UCLA.

Schein, E.H. (1985). *Organisational culture and leadership*. San Francisco, CA: Jossey-Bass.

Scott, T., Mannion, R., Davies, H., and Marshall, M. (2003). The qualitative measurement of organisational culture in health care: A review of the available instruments. *Health Services Research*, *38*(3), 923–945.

Siehl, C. and Martin, J. (1988). Mixing qualitative and quantitative methods. In Jones, M.O., Moore, M.D., and Synder R.C. (eds.) *Inside organisations: Understanding the human dimension*. London: Sage.

Smart, J.C. (2003). Organisational effectiveness of 2-year colleges: The centrality of cultural and leadership complexity. *Research in Higher Education*, *44*(6), 673–702.

Smart, J.C. and John, E.P.S. (1996). Organisational culture and effectiveness in higher education: A test of the 'culture type' and 'strong culture' hypotheses. *Education Evaluation and Policy Analysis*, *16*(3), 219–241.

Sporn, B. (1996). Managing university culture: An analysis of the relationship between institutional culture and management approaches. *Higher Education*, *32*(1), 41–61.

Tierney, W.G. (1988). Organisational culture in higher education: Defining the essentials'. *Journal of Higher Education*, *59*(1), 2–21.

Trice, H.M. and Beyer, J.M. (1984). Studying organisational cultures through rites and ceremonials. *Academy of Management Review*, *9*(4), 653–669.

Tucker, R.W., McCoy, W.J., and Evans, L.C. (1990). Can questionnaires objectively assess organisational culture? *Journal of Managerial Psychology*, *5*(4), 4–11.

Välimaa, J. (1998). Culture and identity in higher education research. *Higher Education*, *36*(2), 119–138.

Weber, Y. (1996). Corporate cultural fit and performance in merger and acquisitions. *Human Relations*, *49*(9), 1181–1202.

Weber, Y., Shenkar, O., and Raveh, A. (1996). National and corporate cultural fit in mergers/acquisitions: An exploratory study. *Management Science*, *42*(8), 1215–1227.

Yeung, A., Brockbank, J., and Ulrich, D. (1991). Organisational culture and human resources practices: An empirical assessment. In Woodman, R.W. and Pasmore, W.A. (eds) *Research in organisational change and development*. Greenwih, CT: JAI Press, pp. 59–82.

Zammuto, R.F. and Krakower, J.Y. (1991). Quantitative and qualitative studies of organisational culture. In Woodman, R.W. and Pasmore, W.A. (eds.) *Research in organisational change and development*. Greenwich, CT: JAI Press, pp. 83–114.

Chapter 15
The Bologna Process in Academic Basic Units: Finnish Universities and Competitive Horizons

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15.1 Introduction

The aim of this study is to analyse the extent of influence the Bologna Process has had on Finnish higher education. This qualitative multiple case study analyses changes which are related to or caused by the implementation of policy objectives associated with the Bologna Process in different disciplinary cultures. Following Becher and Kogan (1992), our selection of the basic unit illuminates a variety of different translations which are taking place in Finnish higher education.

The Bologna Process provides an interesting and crucial topic to be studied because it aims to create a European area of higher education which has standardized degree structures and quality assurance systems. It was started as a declaration signed by European ministers of education in 1999 after which it has spread all over Europe and neighbouring countries. In principle, it challenges all the countries concerned, higher education institutions and academic disciplines in the same way. In practice, however, this is not necessarily the case as earlier studies have shown (Tomusk 2006). To place our analysis in context, we will first describe key policy measures which were undertaken with respect to the Bologna Process in Finland. The impact of the Bologna Process is then empirically elaborated at the level of academic basic units found in different disciplinary cultures. We conclude with a cross-case analysis and critical discussion of the strengths and weaknesses of conceptually approaching this topic.

15.2 The Bologna Process in Finnish Context

The implementation of higher education reforms takes place in certain times and places. The context of the implementation is important if we wish to understand the reform in a national system of higher education. Finnish higher education became

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a mass higher education system in the 1970s. There are currently 20 universities and 31 polytechnics in Finland: one higher education institution per 100,000 inhabitants. This ratio indicates that education, especially higher education, is highly appreciated in Finland and the expansion of this system in the 1960s through the 1990s was closely linked with a strong welfare-state agenda (Välimaa 2001). The Finnish tradition of higher education is rooted in the Nordic ideology of a welfare state in which citizens and permanents residents may pursue a place in the tuition-free higher education system.

The Bologna Process potentially challenges these principles because of the economic logic which underpins the globalization of higher education in Europe. In addition, the intended harmonization implies new standardizing criteria and procedures for European higher education institutions and national systems of education. Therefore, we begin by analyzing the way in which definitions of the Bologna Process have changed in the Finnish higher education policy field.

In the initial phase of the Bologna Process (1999–2000), the Finnish Ministry of Education had to "sell" the idea by focusing on general Finnish and European problems in higher education. The Bologna Process was presented as an answer to these problems. This initial step was necessary as Finnish academics were sceptical of the Bologna Process.

After the Prague Meeting in 2001 and the Berlin Conference in 2003, nationally expressed policy objectives of the Bologna Process changed. The focus and policy instruments adopted were expressed in terms of adoption of comprehensive structure of degrees (ECTS and the Diploma Supplement), unified degree structures (Bachelor–Master–Ph.D. sequence), student and staff mobility (identifying and removing obstacles), the European dimension of quality assurance (ENQA), and the promotion of the European dimension of higher education, increases in international cooperation, networking, and more training in languages and cultures (MinEdu 2004; see also Välimaa et al. 2006).

After the Prague and Berlin conferences, the main challenge in Finland has been adapting to changes of focus during the evolution of the Bologna Process. The challenges of adaptation are threefold: (1) articulating and incorporating changes in national legislation, (2) inducing change in both the contents and structures of curricula, and (3) creating national and institutional systems of accreditation, certification, or comparable procedures. Finnish implementation of the Bologna Process has subsequently been based on three main areas: national committees nominated to prepare strategic policy and changes in legislation, national seminars on the Bologna Process, and national coordination groups to make national curricula plans for each discipline. This pattern follows the Finnish tradition of higher education policymaking, where the Ministry of Education is the central actor in planning and implementing reforms (see Välimaa 2005).

A focus on policy research, however, reveals nothing about how individuals in academic basic units interpret the challenges or necessities to change which have been articulated by policymakers. For this reason it is necessary to change the level of analysis. Therefore, we now interpret the Bologna Process from the perspective of

academic basic units each rooted in their own disciplinary cultures. We try to understand how and what the Bologna Process is changing in Finnish higher education.

15.3 Multiple Case Study of Basic Units

A qualitative multiple case study was selected as the methodological strategy for empirically approaching this topic. This is because this approach is suited to research problems where several types of methods need to be coherently focused on emerging phenomena. In addition, theories of the middle range, which apply to higher education, can be used in the design stage to develop analytical focus likely to illuminate the research topic (Creswell 1998; Merton 1968; Yin 1994; Stake 1995).

Our principle data was the thematic group interviews of personnel from 19 academic basic units and four administrative teams selected from seven of the 20 Finnish universities in 2004/5. The group interview protocol was piloted in the University of Jyväskylä (Välimaa et al. 2006) to test our theoretical and substantive assumptions and develop analytical focus (Yin 1994). Following the pilot case, six other universities were purposefully selected for inclusion in the multiple case study based on their size, functional type, regional location, and linguistic traditions. Because the pilot study interviews were integral to the development of the analysis, they have been included in the cross-case analysis of this multiple case study (cf. Yin 1994). The interview themes can be found in Appendix 1. Other sources of data include direct observation, which was recorded in field notes, records, and documents.

The pilot study (Välimaa et al. 2006) supported the assumption that the academic basic units (Becher and Kogan 1992) provide a sound analytical starting point when seeking data indicative of change directly or indirectly linked to the Bologna Process. The theoretical basis for this proposition is rooted in studies of different academic cultures (Becher and Trowler 2001); therefore 19 of 23 units chosen for interviews were based primarily on these disciplinary categories. Disciplinary cultures provided the basis for understanding and taking into account the cultural variety in academia. Accordingly, four basic units from soft and pure disciplines (e.g., sociology, history) were chosen, as were six basic units from soft and applied (e.g., social work, teacher training), five basic units from a hard and pure discipline (e.g., physics, mathematics), and four basic units from a hard and applied discipline (e.g., medicine, engineering, information technology). An additional aspect of our purposeful selection regarded the distinction between high profile units in which significant activity was associated with internationalization, in general and the Bologna Process in particular. In contrast, units were contacted in which no outside indications of any type of internationalization could be detected in publicly available data.

One important addition in group selection was four administrative units or teams responsible for the international and/or strategic aspects of their university's operations. These units, teams, and their members are clearly implicated in the Bologna

Process policy implementation. These groups helped illuminate a different level of analysis: the higher education institution. Institutions are important in this regard because institutional traditions and resources play a role in the implementation of reforms and the way in which administrators regard the Bologna Process sheds considerable light on the process as a whole.

To facilitate the interviews, department or unit heads were contacted and we requested groups of 4–7 people from their unit. It was indicated that a variety of perspectives be included in the interviews, e.g., junior and senior teaching, research, and administrative staff. The total number of interview participants was 80 persons belonging to the following groups: 26 professors (including 11 department heads), 14 lecturers and university teachers, 5 senior researchers, post docs and docents, 3 senior assistants, 7 assistants, 11 amanuenses and other administrative personnel (e.g., study counsellors and educational planners), 4 researchers, 5 doctoral students, and 6 students. Of the interview participants 52 were male and 28 female, which reflects the gender balance among senior staff in Finnish universities. Regarding gender balance, it should be noted that this was not a criteria we asked the department heads to consider when assembling their groups.

The interviews lasted from 30 min to 2 h and they were carried out on the premises of the basic unit concerned. In addition to taping the interviews and taking substantive notes, field notes were made concerning the physical location and social interaction between the interview participants. This provides an additional source of information. It also helps to balance the textual information gained in the interviews by paying attention to social relationships between the group members (see Välimaa 2006). Direct quotations from participants have been edited for clarity, i.e., the reformulations and redundancies that characterize spoken language have been removed. In addition, titles, place names, genders, and other specific data that would tend to identify an individual or particular unit have been edited in a way as to make identification highly unlikely (Poland 2002).

Particular attention was paid the social interaction in the interviews and was documented in our field notes. In some interviews, quite an "official face" was portrayed with a clear hierarchy of participants evident, in others, quite lively, spontaneous debate broke out amongst faculty and staff from all levels. Other units, profound conflicts were recounted, while personnel in some units seemed baffled by both our interest in the Bologna Process – as well as the process itself.

15.4 Cross-case Analysis: The Competitive Horizons of Basic Units

Profound differences regarding the Bologna Process emerge at the level of the basic unit. The preparation phases for implementation of the reform have produced a wide variety of reactions and responses by university faculty and staff in a relatively short period of time. The most interesting questions to pose regarding this level of analysis are: How do individuals in basic units perceive the aims, purposes,

and recommended changes associated with the Bologna Process? Do significant general features and issues manifest in these basic units? If so, what are they?

Although we facilitated 23 group interviews there were basically only three qualitatively different types of ways in which the Bologna Process had been translated and acted upon. These translations can be imagined along a spectrum. On one end there were type 1 units (9 units) which have been operating consistently with – or surpassing – Bologna Process objectives for quite some time. In the middle of this spectrum, there were type 2 units (5 units) using the reform objectives in instrumental or novel ways to improve their operations. And there were several type 3 units (5 units) openly resisting the ideas and goals of the Bologna Process.

In the presentation of the distinguishing features of each type of unit that follows, the concept of competitive horizon is introduced. The competitive horizon of an individual academic, in general, and of a basic unit in particular hinges on their perception of the location of their most serious competitor. We assert that differences in competitive horizons empirically illuminate the global division of academic labour as it manifests within the basic units in which interviews were done during this study. As this analysis reveals, there are fundamental differences between the personnel in basic units whose competitive horizons correspond to globally dynamic and profitable occupational sectors and personnel whose competitive horizon extents no further than the hallway or building we visited. What follows is a description of these units and what distinguishes them from one another in terms the Bologna Process reforms outlined above.

15.4.1 Type 1: The Bologna Process as the Object of the Game

Type 1 basic units (9 units) could be characterized as well beyond the issues which have been giving staff in other units "Bologna headaches". This is mainly because continual curriculum adaptation and program review are "*business as usual*" as one senior lecturer in a hard-applied unit asserted. Meaning and change in these units are based on robust linkages between disciplines and their context of application (Nowotny et al. 2001) whether considering the labour-market students are headed for, occupational sectors in which research is conducted, or both. A department head in a hard-applied unit sums up the perception of the Bologna Process in type 1 units:

> I have stated several times that when we started this process the decisions made in Bologna (…) does not immediately mean that we should change our curriculum, because we have actually built up the curriculum in our department during the last seven or eight years. We've been continually refining and we have evaluated it step-by-step (…) We only have to change our study program following the rules which have been laid out. That was not so difficult, because our education is based very strongly on natural sciences. (…) The Bologna process suits us very well and does not demand very much change in our former program. For our unit, it has been quite easy.

These basic units were not "Bologna cheerleaders". There was often healthy scepticism expressed, particularly at the bureaucratic nature of the exercise, as opposed

to the disciplinary or occupational sector logic which was normally used as a legitimate basis for program change. Interview participants in these types of units also voiced pointed criticism regarding a lack of leadership in this process at the level of the Ministry of Education. This criticism centred on the lack of information about efforts underway in other universities in the same field and participants were fairly sure this lack of information would result in overlap because of too many new programs were being designed. One professor commenting on the man-hours required by the planning procedures and reporting methods required by his university: "You cannot do it a more difficult way."

Regarding the way in which the Bologna Process had generated understanding and expectations, there had been minimal translations within these units. Interview participants understood and could articulate the way in which the intentionality of European-level policy goals were congruent with the operation of their units. The implications of adopting a two-tier degree system and adapting for academic mobility were understood as main goals of the process. The competitive situation regarding North America and Asia was explicitly identified as points of specific reference, the former as a source of the model Bologna Process emulates and defined as a primary competitor, while the latter was seen as a pivotal source of human and economic resources – the potential "stakes" this policy situation addressed.

"Mobility is the key point in the Bologna process, it's easier to change from one university to another" said one professor from a hard-applied unit. He added the Bologna Process was necessary to cement the idea of mobility within the EU that the USA already had and that mobility on this scale probably could not have occurred without the Bologna Process.

Changes needed because of the Bologna Process were described as minimal or technical one department head quipping: "In our case we have not changed anything". This type of comment was echoed by a lecturer in a hard-pure unit who stated: "The Bologna process brings nothing new in terms of the subject material which is taught, it's mainly how it is organised." In these units the discipline will remain untouched – only the manner of provision is changing. It was clear that the curriculum had been developed with respect to the occupational context in which students seek jobs and which research is done, not by university-generated (or any other type of formal) policy.

Important variation does exist within type 1 units regarding the implementation of changes in their basic units. In contrast to the previous units, which articulated a response to Bologna Process as "the system catching up with them," efforts by participants from other type 1 units are captured by a department head who conveyed the difficulty experienced by two hard-applied units. They took the reforms seriously, but had to invest a substantial amount of time making considerable changes, including creating the bachelor's degree from scratch: "Nobody has a clue what it should be (…) What kind of person is somebody who is called Bachelor of Science? We didn't know it (…) but now, at least we have a curriculum." Constructing a bachelor's degree which indicated anything other than a stage of study – as opposed to an indication of employability had been a difficult exercise in these units.

The interview participants focused primarily on the structural or technical changes that had been addressed in terms of degree-structure, conversion to the ECTS system, and generating the module structure of course delivery. Unit personnel in one hard-applied unit said that implementation had resulted in "real" study-tracks which precisely identified the amount of time it would take to complete the bachelor–master's sequence. Although the participants did not agree about whether or not the internal reforms were strictly related to the Bologna Process, they did agree that the university-based reforms would benefit the transition to the Bologna system. Regarding the change in curriculum planning, the changes had been even more dramatic. According to a professor in hard-applied unit:

> If I compare the old system (…) a professor said 'I'd like to have my lectures over there – that time' – or 'I'd like to have that class.' So, the schedule was quite optimal for the professors and lecturers. But it was quite random, if you think about the student's point of view. So, it (the curriculum) was rebuilt based on the student's view and one of the phenomena it caused is that is we now say 'You have your lectures on that time – on that place'. I was quite astonished that there was only one person who was really irritated by this (…) Most people accepted this, even though it was a huge change in the way that we do things.

These aspects of the discussions often led to what were portrayed as negative features of the changes. In another hard-applied unit these included the fact that other departments had restricted their minor subjects, meaning a loss of potential interdisciplinary flexibility for students. Depth of knowledge was felt to be a probable "casualty" as most of the *credit shedding* necessary to fit into the new framework had occurred in the area of basic theoretical studies. It was also pointed out that students needed to make up their mind and commit to tracks of studies much earlier than previously, and that the opportunity to follow-up emerging areas of interest would be greatly reduced because of the new emphasis on specific periods of study.

The person responsible in a soft-applied basic unit said that the restructuring of the curriculum mainly involved stretching out the work normally done in the final year of studies into the 2-year master portion of the sequence. The senior person in this interview remarked: "In the end, we found out we did not need to change very much. It was more a matter of re-structuring and re-packaging." In this soft-applied unit, only six courses were affected. The most recent major change in this unit had been the addition of a structured doctoral program. However, it was observed that it was coincidental to the Bologna Process, not a result of it. This change seemed to be of more importance than the Bologna Process. The future of the process in this type of unit was basically "wait and see".

Units like this will offer considerable insight to Bologna Process outcomes, as the participants agreed that the bachelor's degree studies are adequate for labour-market entry in this soft-applied field. The participants were unanimous that there was considerable demand for the basic skills acquired in bachelor-level. One early-stage researcher said the critical thinking skills which were the objective of thesis work in fact pushed students out the door if labour-market entry was really their goal of studies.

Regarding the future of the Bologna Process, personnel from type 1 units generally articulated more potential than problems, taking a long-term view, most often

from their students' perspectives, as to how the labour market would adjust to the new combinations of qualifications and mobility possibilities in various parts of Europe. Personnel mentioned the potential of taking qualified students with bachelor degrees from polytechnics and did not perceive the degree availability existing elsewhere in the system as a threat to their status, another distinguishing feature from other type 2 and type 3 units. Participants added that more thought had probably been given to international students that the new demand which would be generated by local students with polytechnic degrees, saying that this increase in demand from two directions could be problematic. A department head in a hard-applied unit expressed what might now be the overall feeling of this type of unit:

> It [the Bologna process] was something we had to do. But (…) I'm proud of our department in that sense that when we realized we had to do it, we began to do it as good as possible. (…) I'm quite satisfied with the result and also quite satisfied with the discussion we had. It wasn't easy, but I'm very glad we did it. (…) We are talking about the Bologna process – it's somewhere 'outside' – but, we had a process really, "within".

In type 1 basic units the competitive ideology driving the Bologna Process is understood as "the object of the game". Personnel in these units have academic identities which are neither threatened nor challenged by this reform. This understanding explains the perception of the reforms that range from "business as usual" to "a headache that was worth it" to nothing more than "a paper exercise".

The competitive horizon of most of these units is global in scope. These units are not that disturbed by the reform specifics because they perceive concrete gains for their students. This understanding is rooted in the fact that the system structure they are putting in place (e.g., a defined bachelors degree as a labour-market qualification) corresponds more closely to the labour market their students are headed for than they system they had. Again, some units seem aware of this, others less so. The bottom line in type 1 units is that the reforms or aspects of the reforms made a lot of sense for their students.

15.4.2 Type 2: Bologna Process as Novelty

In type 2 basic units (five units) the Bologna Process has been perceived mainly instrumentally or as a novelty by academics. Substantive topics or administrative reforms perceived as coming from "outside" Finland are causing a re-think of just what constitutes "business as usual" in type 2 units. The aim of increasing student mobility as suggested by the Ministry of Education, increasing new programs and subjects provide examples of the benefits articulated by staff in these units. In this type of unit, the competitive horizon is changing, but in ways that does not threaten or challenge the expertise, practices, and identity of the academics, who seem genuinely interested and engaged in aspects of the changing global landscape.

Interview participants in type 2 units seemed generally positive about the Bologna Process and had responded to it seriously in what could be termed a holistic manner with wide participation by all levels of faculty, staff, and students.

In terms of participants, what distinguished these units were that committed personnel participated in the interviews – but fewer of them – than either type 1 or type 3 units. The participants generally agreed that the reform – after an initial period of anxiousness, scepticism, and serious conflict in one case – now enjoyed general support from the staff. Regarding the level of commitment, at the beginning of the interview one participant asked his colleagues to start the discussion saying: "Perhaps somebody else should start. I have been most involved in it [Bologna process] (…) perhaps I have the strongest feelings about it (…) I think it's wise that you start because I could keep going forever on this theme." The intensity of the reaction to the Bologna Process the professor went on to describe in his unit was extremely even-handed and diplomatic, but it underscored the seriousness with which unit personnel regarded the process and the collateral issues that the discussion of implementation ignited.

Regarding an understandings and expectations, interview participants spoke of several levels of abstraction, sometimes invoking perceived political expectations and motives underlying the policy reforms, e.g., stating that the Bologna Process serves as "a counter strike" to Japan and the USA in the name of the European ethos in higher education. They seemed to have a general grasp of policy aims mainly highlighting the degree structure and the implications these had in their unit. One doctoral student said the Bologna Process would "unite Europe more because it's easier to work and study".

Personnel in type 2 units seemed to adopt positive attitudes towards the Bologna Process because of concrete gains they perceived directly connected to the reform measures. They viewed aspects of the Bologna Process as an opportunity, one administrator of a soft-pure unit stating: "Hiring the planner to improve the planning of the Bologna process reflects the attitude of the department that this is a good opportunity to improve the structure and contents of the program". What distinguished this type of unit from type 1 units was their claims that a master degree was a genuine prerequisite for labour-market entrance, which seemed more credible as the occupational contexts their students were bound for were both local and in tightly regulated public-sector domains (Forsander 2004) in which professions could set normative criteria, based on whatever was deemed appropriate, e.g., cultural expectations, academic, and professional tradition. The job market for some of these students, particularly in the soft-pure department and the soft-applied unit are both in areas in which the labour market for students appeared quite rocky compared to the fertile terrain of the private-sector in which students from most type 1 units were bound.

The most important changes type 2 units had made were characterized as inevitable – a core content analysis for their curriculum and review of teaching methods in the first instance and a critical decision of substantive departmental focus in another. Both underscored that the Bologna Process was seen primarily in terms of the structural changes associated with the reforms.

Interview participants gave the impression that no systematic method of program or course review existed in these units, that changes were driven by specific persons based on their current interests and limited in scope. These units had taken

the planning for Bologna Process seriously, organizing committees, hiring planners, and assembling various development teams to prepare for specific issues. They had trained their staff and discussed the changes in a pragmatic matter and worked through the details associated with credit unit conversions, adjusting the academic year into new periods, and shifting the amount of work-per-course so that student workload would be balanced. Regarding technical changes, none of these units had implemented their plans, stating there was no motivation to do so yet, but they appeared as ready as could be expected at the time of interview.

In one soft-pure unit, it was hoped the transition with respect to changes would be eased by a 3-year faculty-wide transition phase in which the students would be free to design course-plans based on either the old or new curriculum. Personnel in these units viewed the reforms as a profound change to the way they had carried out operations in the past. As one professor in a soft-applied unit stated: "I started this process sceptical, saying 'Will it change anything?' (…) Now it seems 'It will change almost everything!'" Another lecturer from a soft-pure unit stating: "I think most people would have been happy if we would have not had to make these changes." One comment regarding the difficulty of change within these types of basic units is reflected by a university lecturer whose unit can be described in terms of the soft-pure nature:

> In my discipline, it's somewhat different than many other fields, for example the natural sciences, because the very nature of my discipline is a disputed problem. People may have quite different views on the essence of this discipline, what constitutes research, and the most important problems of our discipline. Of course, there are basic issues everyone has to know and must be taught in introductory classes, but still there is quite a lot of individual freedom in the discipline.

On a larger scale, participants in one soft-applied unit mentioned that they had already planned on increasing their participation in the type of joint, topic-centred, and English-language master's degree programs, which allowed each course prepared, multiple opportunities to be taught. This change was viewed as an important because the unit was small and had to make efficient use of their scarce human resources. They also recognized these programs attracted international students.

Regarding the future of the Bologna Process, interview participants articulated some fundamental challenges that would be required by offering a wider variety and amount courses in a compressed time frame, while trying to deliver the same depth of knowledge they had achieved before. One professor stated that it would require more individual work – particularly self-study and reading by students. Because of the substantial work which had been done, some unit personnel seemed anxious about the transition to the new system, hoping that they had foreseen matters in a way that would keep the workload to a minimum and avoid duplication of effort.

A uniting feature across the various disciplinary backgrounds of type 2 units was their belief that the bachelors they would offer might not be relevant to the local labour market. This combined with their limited views on internationalization could be interpreted as an indication of a strong connection to local occupational settings in the tightly structured Nordic labour market (Forsander 2004). Specifically,

their students were mainly bound for civil-service positions and tightly controlled professions that are influenced much more by politics, labour unions, professional associations, or their combination, rather than market logic. At the end of the day one lecturer in a soft-pure unit stated "I hope we can just return to business as usual. (…) In substantial issues, and in teaching. I think and hope that nothing will really change, it will be the same kind of work, with a little bit different structure and some different titles for courses."

In type 2 units, the Bologna Process reforms had perceived benefits although they caused a lot of work for the participants. The structurally based reforms created an opportunity to review programs that participants themselves admitted needed reviewing. In addition, the reforms gave space to new topics emerging in their fields. The mobility possibilities particularly for their own students are seen as positive and the participants see other possibilities in new collaboration opportunities within and outside Finland. The key issue here will be the relevance of the new bachelor's degree which may or may not have relevance locally as anything other than a mobility point.

15.4.3 Type 3: Resistance, Relevance, and Resonance

The broad issues which discussed in type 3 units (five units) were not different than in any other type of unit. However, participants in these well-attended interviews fundamentally questioned the reform rationale and process as an example of a "typical top-down process" in the European Union, forcing Finnish university departments to change in the name of European unity.

The Bologna Process was defined as useless, even harmful. It would be incorrect to say the Bologna Process reforms were dismissed out of hand, as there were normally one or two participants articulating probable benefits associated with the reforms. These included participants who estimated that the Bologna Process could lead to new opportunities, for students, forcing departments to reflect on their activities critically, to improve their curricula and functioning. In addition, it was noted that the reforms provided the opportunity to take stock of unit features which were particularly appreciated. However, the central distinction of type 3 units was that the participants were almost exclusively self-referential, i.e., they saw themselves in the best position to judge, change, or question the way in which they had taught in the past, or should do so in the future. References to other higher education stakeholders, social fields of action (Bleiklie et al. 2000), or to the dynamics in other disciplinary contexts were not as common as the other as in other types of units.

Meanings and understandings assigned to the Bologna Process reforms in this type of unit was based on the participants' estimation of underlying motives of the process. According to participants in one recently merged unit made up of soft-pure and soft-applied disciplines the real meaning of the "new liturgy from Brussels" was designed to improve the cooperation between universities and private-sector

which forced them to adopt rhetoric and ways of thinking which did not really have anything to do with the real needs of their unit.

In a soft-pure unit one of the most revealing discussions began from the participant's point of departure that the Bologna Process meant "A lot of work – maybe for nothing." This cynical answer was elaborated in terms of the idea that the Bologna Process meant that the Anglo-American model "which is not necessarily best for us" was being foisted on a system that was already functioning at an excellent level.

Participants in type 3 units held a firm belief that the bachelor degree has no labour-market relevance for their students, characterizing the degree as "absolutely useless" in social science and humanities. This belief was normatively justified in the case of the soft-applied unit which devoted most of their resources to producing teachers in a system which mandated the master degree for employment. As to the other units, the probable labour-market outcome for the majority of students was in public service. Again, as in some type 2 units, this belief was somewhat credible in that the labour market for students from these units is primarily civil-service occupations.

One interesting case was encountered in a soft-pure basic unit, where personnel conveyed the impression that they have basically ignored the Bologna Process. Participants stated they would do what is required by the university, but frankly expressed that the departmental merger which combined their operations a couple of years ago was influencing them to a much greater degree than the Bologna Process. The participants in this unit seemed barely touched by the process, with no group definitions, understandings, meanings, or opinions existing, except for a sense that the world of Bologna, internationalization, evaluation, and quality assurance were far away and had little resonance with the participants in this unit. While only one unit was of this type was found, the interview discussion suggested it would not be difficult to locate others.

Specifically, like the sceptics above, these participants primarily teach their students disciplines in the local language with reference to the national context and labour market. It is difficult to conceive of the circumstances in which they need to lift their gaze beyond the well-defined local horizon established by their predecessors. The circumstances in which exchange students would visit this unit are by definition exceptional, as are non-Finnish personnel.

While the competitive horizon of the Bologna framers is the globe, the competitive horizon of academics in type 3 units is frankly, a hallway. The type of capital needed to survive in type 3 units is academic capital (Bourdieu 1988), essentially the reward structures, stakes, and mechanisms which determine the composition of the next generation of faculty and staff.

The important thing to realize about the perception and reception of the Bologna Process in type 3 units is that there is considerable value in their criticisms. The value is not strictly to be found in the perceptions of Bologna rationale or pejorative labels participants attach to the nature of the process. The value is attached to the idea that policy and reform measures based on international competitiveness, e.g., the Bologna Process or Lisbon strategy are only one way to estimate the value of personnel and their academic basic unit.

Personnel in most of type 3 units had already been told the nature of their discipline and/or the way they are practicing it, is not sufficient to warrant their former departmental status. They have already been told "what" they do is not that important in today's Finland. During the Bologna Process, they are now being told "how" they have been doing things is no longer relevant in tomorrow's Europe.

When combined with their disciplinary predispositions and possibilities to criticize existing social arrangements, it should come as no surprise that these academics have invoked the choice to resist or to ignore the Bologna Process. Pointing out that the real capacity or potential of these units is not appropriately estimated by their response to the Bologna Process is not the same as saying the Bologna Process does not have major implications for these units. The most important aspect that an examination of competitive horizons of basic units reveals is this: before the reform, the nature of competitive horizons was irrelevant to many Finnish academics because their horizon (especially in type 3 units) extended no further than the national border. Now it is hard to ignore the European influence or global competition in any disciplinary field.

15.5 Discussion: Competitive Horizons and the Bologna Process

We began our study by utilizing disciplinary cultures as an intellectual device with respect to the variety of the academic world. The disciplinary map was an explicit guide for our purposeful selection of units selected for interviews. Analytically, the map proved to be a useful checklist in which the variety of epistemic traditions in universities was accounted for. It also helped to focus attention on the variety of ways in which academic work is organized, differences in relationships with the labour market, and society in general. However, it became apparent that disciplinary cultures as an intellectual device is not sufficient when analysing the variation of responses to a reform, in this case the Bologna Process and the wider constellation of neo-liberal reforms faced by Finnish higher education (See Välimaa and Hoffman forthcoming). There is a need to develop concepts that address the complex variation of the academic world and the different ways that relationships with the outside world manifest. Traditionally, "the outside world" used to refer to the nation state. However, with the Bologna Process this situation is changing because of emerging global competitive logic, which extends to and through higher education. Therefore, there is a need to introduce new concepts which aid in the analysis of emerging relationships.

Our conceptualization of competitive horizon explains the variation of responses to the Bologna Process in the Finnish context. The concept is an explanatory metaphor which illuminates why individual academics in units on the same campus perceive the same set of reforms in such different ways. In addition, the concept illuminates the extent to which competitive logic has penetrated some areas of the academic area thoroughly, some partially, while at the same

time leaving others virtually untouched. Finally, the concept focuses attention on the fact that the social role of higher education is changing during the Bologna Process. This is not to say that the changes occur because of the Bologna Process but to focus attention to the nature of social changes taking place in a globalizing higher education landscape.

The tension evident in the higher education system is also regarded differently by various higher education stakeholders. As observed by a strategic manager:

> One thing that might be coming more and more is inter-European ranking of universities. Previously, this was dismissed by saying: 'Oh, we're all so different you cannot compare.' But now, with these [Bologna] structures, we might have seen the last of that.

International indicators for comparing the capacity of a university's research programs have existed for a number of years. The feature the Bologna Process introduces is a structure that enables comparability with the other higher education systems in a way that forms an instant matrix in which stratification, differentiation, and ranking can occur. In addition, the current emphasis on quality assurance may provide nearly simultaneous mechanisms to compare teaching and learning outcomes, alongside research output.

Different competitive horizons are not hard to explain when considering the fact that some units were born amidst disciplinary and interdisciplinary development which could be fairly characterized as thoroughly global in nature at the time of their founding. For these units, their competitive horizon has never been *anything except global* in nature. The faculty, staff, and students know no other reality.

On the other hand, some units have enjoyed a long-term legal monopoly on degree-conferring status, which in many cases was an exclusive route to a second national monopoly, i.e., certification, in the case of school teachers or social workers. These units were geared to producing master's degrees students, whose education indicated nationally based norms of competence had been taken into account during their education. There was no compelling reason for the horizon to *be anything but national* in scope. To go beyond that meant something outside the scope of what majority of the students were showing up to accomplish. This shaped a national competitive horizon.

The Bologna Process reforms have not fundamentally changed academic work per se by creating "new" competitive horizons, because these horizons already existed. It is more precise to say the Bologna Process challenges traditional differentiations mainly because it illuminates them. The real issue is whether or how one's competitive horizon is or remains valued, and by whom.

The interesting aspect of the Bologna Process is not the fact that it is proceeding faster than anyone expected (Lourtie 2001; Haug and Tauch 1999), but the extent to which the process is changing the European landscape of higher education. It is changing the dynamics of national higher education systems because it has introduced alternative and multiple rationales and perspectives for the way in which academic work can be approached. In this way, the competitive horizon of an individual, basic unit, faculty or university illuminates different perspectives to which academic personnel can orientate their efforts. To the academics in type 1 units the

competitive horizon is clearly the globe. However, the competitive horizon of academics in type 3 units most likely extends no further than colleagues sharing the same building.

In the Finnish case, what has escaped notice is that in type 1 units, students received instruction and research guidance from scientists who routinely discovered new knowledge, "living" at the cutting edge of state of the art in their field. These global disciplines include the usual hard-applied suspects: science, technology, engineering, and math. Type 2 units were mainly soft-applied units whose work directly or indirectly supports an economy in which competitive, hard-applied industries can flourish. Examples of these disciplines include commercial law, general education, and accounting. The state of the art affects these units, but their personnel have little need to produce new knowledge themselves, instead, priority is on adapting new topics to the national situation. Personnel in type 3 units on the other hand, with national horizons, carried out a different task in soft pure disciplines. This function has been geared towards producing students for a small labour market and reproducing enough scholars needed to get the next cohort of students into academia. Examples of these units include history and sociology.

It would be an oversimplification to say that that the Bologna Process reforms reward hard applied disciplines more so than soft pure disciplines. It would be more precise to say reforms like the Bologna Process are geared to the state-of-the-art knowledge production in competitive occupational sectors. The main conclusion that the concept of competitive horizons supports is that the state of the art exists and is rewarded in all disciplines, fields of study, and specialities. The concept of competitive horizons implies that locating where state of the art exists may also be an indication of where it does not.

One question our empirical analysis illuminates is the extent to which any higher education system will be able to prioritize the differentiated values of the concrete settings, especially basic units, which form the building blocks of national higher education systems. As this study indicates there are several ways in which large-scale reform, like the Bologna Process, illuminate the actual differentiation that exists in the higher education systems. The second and final question the analysis leaves us with would be the extent to which we as academics are aware of the extent and implications of this differentiation.

Appendix 1 Themes for the group interview

- **Bologna Process**
  - What is your impression of the Bologna Process?
  - What does the Bologna Process mean?
  - What are its central themes?
- **Changes due to the Bologna Process**
  - Have you made changes because of the Bologna Process? (to study programs or structures, student selection, etc.)

  - Are you planning to carry out other changes before 1 Aug 2005?
  - Why these changes in particular?
- **Curriculum Revision**
  - Has there been a standard curriculum revision process in your subject?
  - What characterizes this process?
- **Effects of the Bologna Process**
  - Have there been other effects regarding the Bologna Process in your department/subject?
  - Has it affected your evaluation practices or quality assurance? How?
- **Department Evaluation Practices**
  - What kinds of evaluation practices does your department use?
  - Has the Bologna Process changed your evaluation or quality assurance needs?
- **Internationalization**
  - Is there a connection between the Bologna Process and the internationalization of your department?
  - To the recruitment or mobility of staff?
  - To student mobility?
- **The Future**…
  - What do you see in the future regarding the Bologna Process?
- **Other?**
  - Are there other issues which are relevant to what we have been speaking about anything we did not cover that we should have?

References

Becher, T. and Kogan, M. (1992). *Process and structure in higher education*, 2nd edn. London/New York: Routledge.

Becher, T. and Trowler, M. (2001). *Academic tribes and territories. The intellectual enquiry and the cultures of disciplines*, 2nd edn. Ballmoor: Society for Research into Higher Education.

Bleiklie, I., Hostaker, R., and Vabo, A. (2000). Policy and practice in higher education. Reforming Norwegian universities. (Higher Education Policy Series 49). London/Philadelphia, PA: Jessica Kingsley.

Bourdieu, P. (1988). *Homo academicus*. Cambridge: Polity.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Forsander, A. (2004). Social capital in the context of immigration and diversity: economic participation in the Nordic welfare states. *Journal of International Migration and Integration*, *5*(2), 207–227.

Haug, G. and Tauch, C. (1999). *Toward the European higher education area: Survey of main reforms from Bologna to Prague*. Retrieved May 28, 2007, from http://ec.europa.eu/education/programmes/socrates/erasmus/trendssum.pdf

Lourtie, P. (2001). *Furthering the Bologna process*. Report to the Ministers of Education of the signatory countries. Retrieved May 28, 2007, from http://www.aic.lv/ace/bologna/bol_prg/rep_prg.htm

Merton, R. (1968). *Social theory and social structure*, enlarged edn. New York: Free Press.

MinEdu (2004). *Opetusministeriö*. Ministry of Education. Retrieved May 28, 2007, from http://www.minedu.fi/OPM/?lang = en

Nowotny, H., Scott, P., and Gibbons, M. (2001). *Re-thinking science: Knowledge and the public in an age of uncertainty*. Cambridge: Polity.

Poland, B. (2002). Transcription quality. In Gubrium, J. and Holstein, J. (eds) *Handbook of interview research: Context & method*. Thousand Oaks, CA: Sage, pp. 629–649.

Stake, R.E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Tomusk, V. (ed.) (2006). *Creating the European area of higher education. Voices from the periphery*. (Higher Education Dynamics 12). Dordrecht: Springer

Välimaa, J. (2001). A historical introduction to Finnish higher education. In Välimaa, J. (ed.) *Finnish higher education in transition – Perspectives on massification and globalisation*. University of Jyväskylä, Jyväskylä: Institute for Educational Research, pp. 13–54.

Välimaa, J. (2005). Social dynamics of higher education reforms: The case of Finland. In Amaral, A., Gornitzka, Å., and Kogan, M. (ed.) *Reform and change in higher education*. DordrechtSpringer, pp. 245–269.

Välimaa, J. (2006). Komisario Maigret ja Bolognan mysteeri [Chief Inspector Maigret and The Mystery of Bologna]. In Mäntylä, H., Tiitula, P., and Waager, M. (eds) *Pää hetkeksi pinnan alle. Akateeminen melontamatka* (Publications B-65). Helsinki: Helsinki School of Economics, pp. 29–42.

Välimaa, J. and Hoffman, D. (forthcoming). *The future of Finnish higher education challenged by global competitive horizons*.

Välimaa, J., Hoffman, D., and Huusko, M. (2006). The Bologna process in Finland. Perspectives from basic units. In Tomusk, V. (ed.) *Creating the European area of higher education. Voices from the periphery*. (Higher Education Dynamics 12). Dordrecht: Springer, pp. 43–68.

Yin, R.K. (1994). *Case study research: Design and methods*. Newbury Park, CA: Sage.

Chapter 16
How Does the Bologna Process Challenge the National Traditions of Higher Education Institutions?

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16.1 Introduction

In the European Union, the dispersion of authority away from the central government resulting from reallocation of power upwards (to the EU), downwards (to the regions, local authorities) and sideways (to public/private networks) (Hooghe and Marks 2001) has led to the development of the notion of multi-level governance and to the use of soft law to coordinate the implementation of European policies.

The implementation of the Bologna Process also uses soft law procedures to coordinate what are complex, multi-level and functionally interdependent governance systems (Borras and Jacobsson 2004). This makes it difficult to understand the change processes taking place at the local level (e.g., higher education institutions) as the Bologna Process moves into the implementation phase. In this chapter an attempt is made to use the grid/group Cultural Theory to better understand the course of those local level changes using the implementation of the Bologna Process in Portugal as a case study.

This chapter also refers to the cultural dimension that is becoming embedded in the implementation of the Bologna Process. The lens of the Cultural Theory is used to better understand both the course of the changes at the local level and the web of interactions that take place in the *pays réel* (Neave 2005) trying to capture the cultural bias of different arguments emerging within the course of Bologna. At the European level (e.g., the Ministers responsible for higher education, the Bologna Follow-up Group) the implementation of the Bologna Process has been presented as a success story: "We take note of the significant progress made towards our goals, as set out in the General Report 2003–2005" (Bergen Communiqué 2005, p. 254), and:

> The key message is that the Bologna Process is working. Almost all participating countries have embarked upon the reform process along the lines articulated by Ministers in Bologna in 1999. The great majority of countries fall within the categories of "Excellent Performance" or "Very Good Performance". (Bologna Follow-up Group 2005, p. 26)

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However, despite these triumphant statements, the perception at the local level is somewhat different and there is a need to analyse the changes that actually take place and to consider the argument that "although change in one part affects the other parts, there is no automatic causal link from the policy level via institutions to professional practices" (Bleiklie and Henkel 2005, p. 3).

At the European level the implementation of the Bologna Process is often viewed as a linear process of policy reform implementation, which is an outdated perspective. While at European level it is assumed that "decisions are made, laws passed, suitable adjustments made to finance where necessary with the corresponding implementation, elaboration and operational consequences put into play at the appropriate level and translated into practice" (Neave 2005, p. 17), organisations, on the contrary, interact with their environment and define their own strategies for change. In other words, although there is a connection between changes in the environment and changes at the local level, one must be aware that:

> Due to the indirect relationship between governmental change strategies and academic behaviour and culture, it can never be guaranteed that governmental steering will affect the social institutional contexts of individual academics in such a way that most, if not all, academics involved will move to the alternative way of life promoted by the government. (Maassen and Stensaker 2005, p. 218)

Recognising that organisations are dependent on their environment, the implementation of reforms "is seen as a case of organisational change in higher education institutions" (Gornitzka, Kyvik, and Stensaker 2005, p. 49), in the sense that probably "the outcomes are joint products of organisational performance and environmental response" (Scott 2003, p. 145).

These insights will guide the present analysis of institutional change, allowing for a better understanding of the interplay between these features and the environment that is perceived in different ways at different levels of analysis.

16.2 Cultural Dimension in Policy Analysis

Maassen and Stensaker (2005) refer to the relevance of the Cultural Theory for higher education research. Based on the premise that the Cultural Theory "represents an attempt to integrate the cultural notion of individual values and beliefs, and the structural organisation of the social and professional relations of individuals" (Maassen and Stensaker 2005, p. 217), there is an increasing awareness of the cultural dimension in policy analysis. Nonetheless, the cultural argument should be used neither as a simplistic compact description nor as an apparent justification that "the dead ends of particularism and uncaused causes can be avoided" (Thompson and Ellis 1997, p. 11).

As argued by Thompson et al. (1999) the grid/group scheme is a way to categorise an individual's social context (see also Thompson et al. 1990). This analytical tool was proposed by the anthropologist Mary Douglas in developing the Cultural

Theory (1987 cited in Thompson and Ellis 1997; Thompson et al. 1990; Thompson et al. 1999); she also formulated a typology of social cultures.

The concept of social culture or ways of life comprises two dimensions, sociality and social incorporation. Sociality corresponds to the "grid" dimension, defined as the set of rules and norms that regulates individual interactions, which corresponds to social regulation using Durkheim's terms (Thompson et al. 1999). Social incorporation corresponds to the "group" dimension defined as the extent to which the "individual's life is absorbed in and sustained by group membership" (Thompson et al. 1999, p. 4). The combination of the grid and group dimensions generates four ways of life: *fatalism* – high grid/low group – involuntary exclusion; *individualism* – low grid/low group; *hierarchy* – high grid/high group; *egalitarianism* – low grid/high group (see Fig. 16.1).

Mary Douglas identified a fifth way of life at the intersection of the two axes, which is the autonomous or hermit's way of life. This way of life is characterised by deliberate withdrawal. Few people fit this description, and by definition it is not a viable basis for a society. Therefore it is often ignored in Cultural Theory analyses and for that reason is excluded from this social map (Thompson and Ellis 1997).

The ways of life are viable combinations of social relations (patterns of interpersonal relations) and cultural bias (shared values and beliefs that generate attitudes) (Thompson et al. 1990). These viable combinations are a mutually exclusive and jointly exhaustive set of categories, which means that these ways of life depend on a mutually supportive relationship between social relations and cultural bias (Thompson et al. 1990). Adding to the compatibility condition, these ways of life cannot be mixed and matched. On the formation of preferences, the premise is that

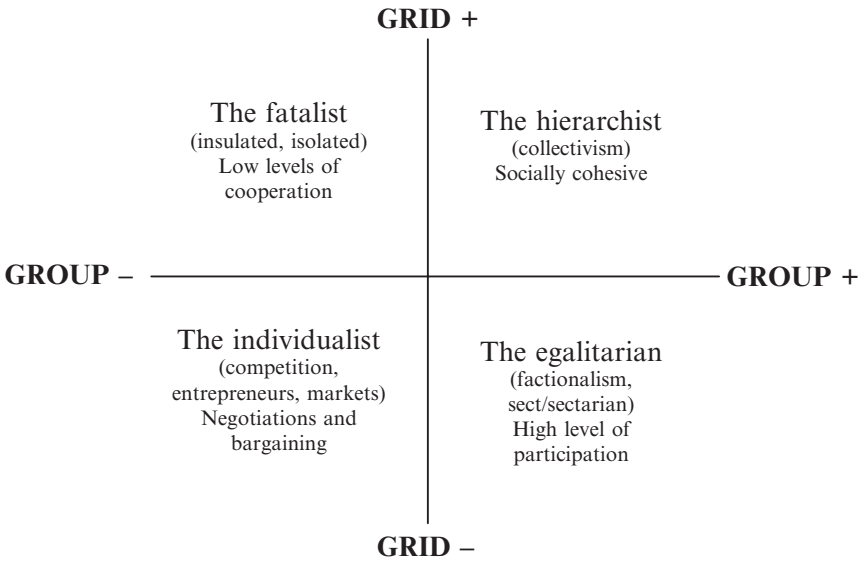

Fig. 16.1 Two dimensions of sociality generating four cultural types

preferences are derived from the ways of life as "mental activity is embedded in and justifies social relations" (Thompson et al. 1990, p. 58). And change is understood as the basic requirement for stability and to hold cultural patterns:

> Each way of life, we have argued, is a vigorous and precarious dynamic process. It constantly has to generate within itself the behaviour and the convictions that will hold it together. Stability is not like being in limbo, suspended, motionless, with no energy required. Rather, stability requires constant energy, running, as it is said, just to stay in place. Change is thus stability's permanent accompaniment. (Thompson et al. 1990, p. 66)

The features of the five ways of life are described below. Figure 16.1 overlaps the boundaries between political and non-political spheres to characterise the political cultures that correspond to these five ways of life.

Individualists stress autonomy, freedom and experimentation. This way of life corresponds to low group incorporation and to low regulation. As acknowledged by Thompson and colleagues: "Because individualists seek to replace authority with self-regulation, they are continually accusing others of politicising issues. Their interest is in defining politics as narrowly as possible so as to maximise behaviour that is considered private, and thus beyond the reach of governmental regulation" (Thompson et al. 1990, p. 216).

Hierarchists focus on clarity and balance. This way of life corresponds to strong group and compulsory prescriptions. The justification to use authority relies on allocating different roles to different people, which enables "them all to live together more harmoniously than do alternative arrangements" (Thompson et al. 1999, p. 4). Hierarchists differentiate the public and private spheres and insist that "politics is not for everyone and everyday for the rest of us, but rather reserved for a qualified and privileged few full-timers and for one day every four or five years" (Thompson et al. 1990, p. 217).

Egalitarians seek to abolish the distinction between the political and the non-political: "The public sphere – where all participate and all give their consent to collective decisions – is where the good life can best be lived" (Thompson et al. 1999, p. 7). This way of life emphasises group membership with minimum external regulation. Egalitarians "view the public sphere, in which all can actively participate and give their consent to collective decisions, as the realm in which the good life can best be realised" (Thompson et al. 1990, p. 216).

Fatalists "make no effort to discriminate between public and private spheres. Both are regarded with fear, dread and distrust" (Thompson et al. 1999, p. 7). They are accidentally excluded from membership and do not participate in decision-making processes. The "fatalists do not discriminate sharply between the private and public spheres. Whether called public or private, the blows come without apparent pattern or meaning. The task of fatalists becomes personal or at most familial survival, and they cope as best they can without trying to distinguish between the sources of their difficulties" (Thompson et al. 1990, p. 217).

Autonomous individuals deliberately withdraw from coercive social involvement. They are seen as hermits and are often viewed as irrelevant as they reject social involvement (Thompson et al. 1999). This chapter will not include the autonomous way of life.

To understand the difficulties of the Bologna Process implementation, one needs to focus on the multi-level interchanges and relationships that are being established between the European, national and local levels and between their institutions.

To understand institutional dynamics the grid/group analytical tool could be used to explain how values are instilled in the course of the Bologna Process implementation and what might be its impact on justifying or legitimising the choices made. Arguments put forward to implement the Bologna Process may impact processes and structures in higher education institutions. The implementation of shared preferences under the Bologna Process can be seen through the arguments put forward in each higher education institution's context that is characterised by an ongoing and dynamic process.

The grid/group Cultural Theory will be used to specify the cultural bias of policymaking cultures in order to understand "which policies are likely to reproduce and reinforce existing cultural configurations and which are likely to challenge and reshape them" (Swedlow 2002, p. 275). Culturally biased higher education institutions have a proportion of individualists, hierarchists, fatalists and egalitarians.

Apparently the European, national and local levels have different perceptions about the university. Using the typology introduced by Olsen (2005) it might be argued that along a continuum the European Commission sees the university as a service enterprise embedded in competitive markets that may correspond to the individualist way of life; the State sees the university as an instrument for national political agendas that matches the hierarchist way of life; and the local level sees the university as a self-governing community of scholars that fits the egalitarian way of life.

Of course, perceptions vary and there are higher education institutions that fit one category better than another and the solution

> is to be found in a diversity of models, reflecting the diversity of European cultures and perspectives. Diversity is an asset and imposing a single model will threaten the diversity. … One should not aspire for a hierarchy of excellence but a system of excellence in diversity, and there is a need for a massive effort to raise the level of universities' missions in training and research across Europe. (Olsen 2005, p. 24)

The European level and the national level conform to the classical pattern of relationships between individualists and hierarchists. Hierarchy is seen as a mode of governance very close to the structural coupling between the public and private levels with central coordination, the control being exercised by government. In contrast, markets are a form of regulation resulting from the relationships between a number of autonomous agents located in the public and private domains, with no central coordination. This approach does not recognise "the fatalist's position, a vital ingredient in any robust policy" (Thompson 1997, p. 206). To avoid simplistic explanations about institutional change that is "therefore deterministic and predictable (and boring): if hierarchies are gaining ground then markets will be losing ground, and vice versa" (Thompson et al. 1999, p. 10), one needs to move beyond States, markets and institutions to overcome the simplistic discussions between markets and hierarchies.

The different constituencies involved in the implementation of the Bologna Process move according to different ways of life, in the sense of sharing values and beliefs responsible for generating an attitude and establishing different interpersonal relations to pursue different agendas. This framework is used to characterise

and understand policy implementation variables. While cultural bias affects decision-making and policy implementation, it is not possible to aggregate individual values to arrive at social choice (Thompson and Ellis 1997). Social choice in opposition to central decision-making refers to outcomes that are "rooted in the interested groups, they may result in new viable structures that become permanent solutions" (Clark 1983, p. 137). Hence, ways of life generated by the combination of social relations and cultural bias provide the underlying assumption of different arguments developed to hold each position.

The expectations of European Ministries by signing the Bologna declaration were to build a European Higher Education Area (EHEA). In this sense, the motivation beyond this idea is a process of Europeanisation or integration of national policies. The Lisbon strategy's message from the perspective of higher education systems is to increase the investment in research and to improve the quality and effectiveness of the education and training systems. The latter objective was clearly expressed in the European Council of Barcelona, in 2002, through the endorsement of the *Detailed work programme on the follow-up of the objectives of education and training systems* aiming at making European education and training a world quality reference by 2010, and implies that EU Member States set and are aiming at common quality standards for education and training (Deane and Watters 2004).

The open method of coordination used for the implementation of the Lisbon strategy was conceived as a learning process to endorse emulation of best practice and to help Member States improve their own policies (Veiga and Amaral 2007), inducing movement towards the individualist way of life as far as it promotes "competitive emulation" (Neave 2005, p. 19).

However, since the coordination capacity relies on convergence of ideas, the movement towards convergence is the main driver for change (Gornitzka 2005). The open method of coordination might also induce movement in the direction towards the egalitarian way of life where group membership is stronger. Nonetheless, as pointed out by Kok (2004), the open method of coordination, although producing movement, might not guarantee good levels of coordination or the enlarged participation of all stakeholders to ensure that those involved are aware of and share the same goals. And several authors refer to the frailty of the open method of coordination to coordinate policies (Dehousse 2002; Goetschy 2004; Radaelli 2003). The policy instruments used in the Bologna Process clearly produce changes at the national level but there is no evidence that these reforms share common explanatory frameworks and "it remains to be seen if the coordination difficulties of soft law policies can deal with the present wave of transformation flooding European higher education to create in the long term a coherent policy framework" (Veiga and Amaral 2007, p. 23).

16.3 European and National Perspectives

The analysis of the Bologna Process as a policy process should take into consideration that the policy objectives defined at the European level can be understood as choices embedded in attitudes rooted in different ways of life.

The action lines of the Bologna Process can be categorised under different arguments held by the ways of life, which correspond to social choices embedded in different social relations and cultural bias (Table 16.1).

The promotion of the attractiveness of the EHEA and lifelong learning can be located in the individualist way of life as the market can be viewed as the rationale supporting those action lines from a perspective of safeguarding individual employability.

Within the hierarchist way of life, one may insert the promotion of the two-tier structure and the promotion of quality assurance and accreditation systems, as far as these actions can contribute to strengthen social cohesion and the social capital that "facilitates coordination and cooperation, and encourages the emergence of social trust. When individuals are embedded in dense networks of social interaction, incentives for opportunistic behaviour are reduced" (Dill 1995, p. 104).

Within the egalitarian way of life it is possible to include the adoption of instruments associated to the legibility and comparability of degrees and the establishment of a system of credits and all recognition mechanisms, including the qualifications framework, as well as the more recent "social objective" of granting access to higher education to all those qualified or capable of profiting from it.

Interestingly, this range of arguments associated with the Bologna Process fits the notion that "those political systems that promote a diversity of ways of life are likely to do better than those that repress the desirable variety. Governments need not let a thousand flowers bloom, but they may do well not to nip any of the five cultural biases in the bud" (Thompson et al. 1990, p. 96).

At this point of reflection it is possible to observe that the Bologna Process is very complex, with different objectives and lines of action integrating cultural categories located in different ways of life. This evidence aligns with the Cultural Theory, which suggests that different ways of life coexist in weak and shifting coalitions.

In addition, the implementation of the Bologna Process entails ambiguity and conflict. Severdrup (2005, p. 21) argues that implementation "will vary according to the degree of ambiguity and the level of conflict related to the decision that is supposed to be implemented". Assuming that Bologna is a process that flows between high ambiguity (it deals with a considerable number of social, political, economic

Table 16.1 Mapping ways of life supporting Bologna action lines

Ways of life and predominant logics	Bologna action lines
Individualist	Attractiveness of EHEA
Market	Employability
	Lifelong learning
Hierarchist	Adoption of two-tier structure
State organization	Promotion of quality assurance and accreditation systems
Egalitarian	Promotion of mobility
No discrimination	Legibility and comparability of higher education systems
	Credit system based on student workload
	Adoption of qualifications framework
	Promotion of social dimension

and cultural institutions and actors) and high conflict (there are a number of actions to be taken based on non-stated consensus as those involved should all be aware of and share the same goals, and there is a subjective frame of reference), it is likely that implementation will "be symbolic, rather than actual, and depend to a large degree upon the strength of specific domestic coalitions" (Severdrup 2005, p. 21).

Making the Bologna Process dependent on the ongoing processes of argumentation increases the awareness about connections or ties among political and non-political spheres involved in its implementation. The Cultural Theory can contribute to an explanation of political change by identifying "the attractors and repellents that underlie shifting coalitions among cultures" (Lockhart 1997, p. 97). The connections are socially constructed and socially negotiated among political and non-political spheres. The implementation of Bologna is navigating across networks steered by policy tools that stress group dimension and decrease the relevance of regulation to establish the EHEA, thus giving the impression that institutions at the European and national levels are promoting some features of the egalitarian way of life.

This opens "windows of opportunity" (Swedlow 2002, p. 274) for national governments to use Bologna as a lever for the implementation of national agendas rooted in different ways of life. Member States have been concentrating their efforts in solving national problems, thus allowing national specificities to prevail over the European dimension (Clancy 2004; Frølich and Stensaker 2005; Fulton et al. 2004; Schwarz-Hahn and Rehburg 2004), a behaviour that the adoption of policy tools such as the stocktaking exercise is unable to counteract (Veiga and Amaral 2007).

The tension between the European/national levels and the local level is reinforced by the European level assumption that the Bologna Process is a linear process implemented by using tools that stress group membership and somehow reduce the set of rules that establishes the framework of the EHEA. From the point of view of policy implementation the pressures emanating from the European institutions (e.g., the European Commission, the Council of the European Union) impact on the Member States (De la Porte 2002, p. 43) turning academic time into political time which Neave (2005, p. 19) argues is "another way of bringing academic time in line with its political or productive counterpart. Expressed slightly differently, leverage over academic time demands transparency or its surrogates. That is what performance indicators are about". Changes or adaptations needed for the full implementation of the EHEA have a time cycle that is not compatible with political time. On the other hand, academic time may not allow the process to meet the 2010 deadline. "Trends IV" recognises that:

> Institutions were also significantly affected by the speed prescribed by national actors for the full implementation. A rushed process was reported to take away room for "creative manoeuvre" or a more fundamental redesign of some programmes. (Reichert and Tauch 2005, p. 18)

The rush imposed by "political time" is not compatible with "academic time" and the difficulties of implementing a very complex multi-level reform impacting on all constituencies of higher education institutions.

16.4 Local Perspectives

This section focuses on the perceptions of Portuguese higher education actors on the implementation of the Bologna Process. This chapter was initially written before the legal framework to implement the Bologna-type degree structure was passed. However, at the time, ongoing discussions and information contained in the two reports commissioned by the Portuguese Ministry for Science and Higher Education provided evidence of possible tensions between different ways of life generated by shared values.

The first report contained the results of a survey conducted by CIPES for the Ministry of Science and Higher Education and showed that, although there was a high level of awareness of the implementation of the Bologna Process, there were also strong disagreements about the details of its implementation. Among academics there was no consensus either about the length of the two components of the two-tier structure or about the criteria defining which kind of degrees each type of institution should be entitled to confer. The proposal presented by the government at the time created a first cycle leading to a degree of licenciatura,[1] thus replacing both the degree of *bacharel* (bachelor) conferred by the polytechnic system and the degree of *licenciatura* already conferred by the university system, which in the long run might cause the convergence of the present binary system of universities and polytechnics into a unitary system.

The second report contained the main findings of the specialised commissions appointed by the Ministry of Science and Higher Education for each discipline or disciplinary area, to make proposals on the implementation of the two-tier Bologna type structure across the whole system. The findings revealed a high level of discrepancy in the proposals made by the different disciplinary commissions, which could contribute to corroborate the idea that it is not wise to impose a single structure across the whole higher education system. Both the "Trends IV" report and the conclusions of a research project with CIPES participation corroborated the statement that one size does not fit all (Luijten-Lub et al. 2005; Reichert and Tauch 2005), not only in the context of different disciplines but also across countries. The objectives of Bologna and of the creation of the EHEA would be best satisfied if the discussions in different disciplines produced conclusions shared by fields of specialisation.

It was not until 2006 that a different Minister passed the legislation adapting the degree structure to Bologna (Decree-Law 74/2006 of 24 March). Although it also adopted the designation of licenciatura for the first cycle degree, the new law tries to maintain the binary system by creating different conditions for degrees offered by universities and polytechnics.

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[1]In the traditional degree system polytechnics conferred a first degree (*bacharel*) after three years of study, which could be followed by an additional period of up to 2 years leading to a degree of *licenciatura* with the same legal value as the degree of *licenciatura* conferred by universities. Therefore, even before Bologna the Portuguese polytechnics had a 3 + 2 structure, although they were not allowed to confer postgraduate degrees (*mestrado* and *doutoramento*).

16.4.1 Mapping Ways of Life within the Portuguese Higher Education System

The Portuguese higher education system (seeTable 16.2) is binary and the Humboldtian model is still assumed as the dominant paradigm. There is a strong sense of institutional autonomy and the governance system is based on traditional academic values with the predominance of collective decision-making bodies. The rector is elected and is viewed mainly as a *primus inter pares*. This corresponds to the hierarchist way of life with a strong incorporation identity. By contrast, the dominant feature could be related to the fatalist way of life if the impact of the country's geographical location in the semi-periphery of Europe was considered. This geographic location associated with a rather small population and a weak economy leads to the fatalist view that Portugal cannot afford to become isolated and as such must demonstrate compliance with Brussels' policies. As suggested by Hespanha (2001, p. 182):

> Portugal is a good example of a society very vulnerable to the negative impacts of economic globalisation. Due to its semi-peripheral condition in the world context, the country presents some characteristics such as the weakness of regulation mechanisms – economic, social or cultural – and a high degree of social heterogeneity, favouring a wide openness to the penetration of hegemonic forms of globalisation. (Santos 1993)

For Portuguese higher education institutions the main challenges of the Bologna Process are related to the lack of organisational capacity and of effective State regulation and the pressure to meet the agreed deadlines – the fatalist way of life – despite the fact that passing the legislative framework was delayed until 2006, and that institutions need time to deal with the complexity of the reforms.

There are elements of the fatalist way of life present in some aspects of the proposed Bologna reform, namely in the tendency to follow the main European trends. This fatalist element is visible in the new legislation regulating the implementation of the Bologna Process passed in 2006, which requires that proposals for new degree structures be justified by using examples of good practice from other European countries. For instance, the proposals for the Bologna type, 5-year psychology masters were based on a comparable situation in other European countries, and are in tune with a European Diploma in Psychology that is under discussion.

Table 16.2 Mapping ways of life within the Portuguese higher education system

Ways of life and predominant logics	Portuguese higher education system
Individualist	Attractiveness of the Portuguese higher education
Market	system
Hierarchist	Binary system (universities and polytechnics)
State organization	Humboldtian system as dominating paradigm
Egalitarian	Credit system based on student workload
No discrimination	Education as a public good
Fatalist	"Geographical" location. Small country
Involuntarily excluded	

However, there are a number of trends that can be associated with an increasing predominance of the individualist way of life, grounded on increasing competition for students, financing and research projects.

In the Portuguese case some of the major preoccupations associated with the implementation of Bologna are the fear of a decrease in the per capita funding and capital investment, a decrease in the number of candidates to higher education and the increase in tuition fees that is strongly opposed by students. The EU imposition of the 3% State budget deficit together with a difficult economic situation has created a situation of financial stringency. A decrease in the number of candidates to higher education due to decreasing birth rates has forced the institutions, both public and private, to enter into competition for students. To tackle this situation some academics are in favour of taking the opportunity of the Bologna reforms to widen access to new publics and lifelong education having in mind the reinforcement of qualifications of both students and workers (Amaral 2003).

The 3 + 2 structure proposed under the framework of the Bologna Process fits the interests of polytechnic institutions much better, as it requires no change to their present two-tier structure. However it remains to be seen if polytechnics will accept to provide only vocational first cycle degrees, thus abandoning their present trend towards academic drift. Apparently, polytechnics tend to offer specialised vocational first cycle awards. For universities it will be a challenge to introduce the 3 + 2 structure and it is possible their offerings will concentrate on 4–5 year degree programmes.

The two reports indicated that the final structure to be implemented by higher education institutions would be strongly influenced by the public financing system, the competition for students and the acceptability of the new degrees by the labour market. This observation highlights another question that crops up in many of these reports produced for the Ministry, that is, the need to distinguish between employability and professionalisation. The Bologna Process wants to promote employability and does not refer to professionalisation, but professional associations and academics insist on the need to make this distinction. The report on exact sciences (Gomes 2004) states that employability refers to generic competencies that are acquired after a 3-year degree and have a value for the labour market, while professionalisation refers to specific qualifications that need special education and training. The arguments voiced by professional associations that are refusing professional accreditation to new degree courses shorter than the traditional length of studies before the Bologna implementation also prevent conciliatory political measures. For example, the Professional Association of Engineers supports the idea that only after 5 years of study corresponding to 300 credits is it possible to have the capacity and the responsibility to act as a chartered engineer (Conselho Directivo Nacional 2004).

To some extent, one can foresee that if governments financed higher education to achieve employability only, and not to achieve the professional licence to practice, then the tendency would be to increase the length of studies, thus blurring the concepts of employability and professionalisation.

Despite the emerging relevance of the individualist way of life there are still those who resist, either because of deeply rooted academic traditions and values

(hierarchist way of life) or because they favour a movement towards the egalitarian way of life. Based on egalitarian attitudes toward widening access to higher education and limiting competition, the opinions expressed by a number of student unions favoured a unitary system and the abolition of tuition fees. By the same token students wanted to abolish the bachelor degree, arguing that the majority of students follow the studies to get the licenciatura degree (Amaral 2003). This attitude shows low acceptance of the bachelor degree among students compared to the licenciatura degree, probably reflecting concerns about social and labour market recognition and favouring a more egalitarian view of the first degree.

16.4.2 Resistance to Change

The CIPES study commissioned by the Ministry of Science and Higher Education presents examples of resistance to change. There are academics who still believe in the "sacred idea" of the Humboldtian university and view any hint of market forces as a threat to established academic norms and values (thus remaining in the hierarchist way of life), or want to see a more egalitarian system in its social component – access equity to higher education, abolition of tuition fees, no competition (thus moving to the egalitarian way of life).

However, there are an increasing number of academics and external stakeholders who are very critical of academic corporatism and would like to see a move towards market values, competition and efficiency as the new values supporting academic governance, thus moving to the individualist way of life. These academics consider that Bologna and its implementation are a unique opportunity to implement the changes that will replace the slow, inefficient decision-making processes of academic collegiality with the "fast, adventurous, carefree, gung-ho, open-plan, computerised, individualism of choice, autonomous enterprises and sudden opportunity" (Ball 1998, p. 124). For them, higher education institutions should be forced to explicitly demonstrate to society that they make effective and efficient use of their resources and that their activities are relevant to the economy and the labour market.

The belief component of an academic organisation reflects its symbolic side and "outsiders generally know a formal organisation more through its symbols than its technical structure, since they principally encounter official image and public reputation" (Clark 1983, p. 72). Among these beliefs it is possible to integrate the culture of the discipline, the culture of the enterprise, the culture of the profession and the culture of the system. The understanding of grounded norms within academic organisations would enable the depiction of different ranges of the ways of life.

The authority component relies on the question of who sets the roles. Becher and Kogan (1992, p. 72) observed the existence of two modes: hierarchy referring to the role that affects the behaviour of the others and collegium where actors have "equal authority to participate in decisions which are binding on each of them". Both forms coexist in academic organisations and could be framed under the

hierarchist way of life and the egalitarian way of life, respectively. As a consequence *the executive structure* and *the systems committees* are supposed to

> resolve the overlaps and conflicts between them in any logical way. The executive structure links the head of the institution, the heads of basic units and individual members of teaching staff. This structure of mainly part-time academic managers is closely interlocked with the full-time administrative system staffed by career administrators and headed by such senior permanent officials as the registrar and bursar. (Becher and Kogan 1992, p. 72)

As noted by these authors, external pressures reinforce the authority of middle management representatives "as the mechanism through which institutional policies are implemented, but with a sufficient degree of knowledge about the subject-matter to make the decision making plausible" (Becher and Kogan 1992, p. 73). However, as pointed out by Clark (1983) and corroborated by Becher and Kogan (1992) the authority within higher education remains fragmentary.

Within organisations there are basic units that help support traditional peer-group norms and values, as well as provide students/organisations with curriculum and research to respond to social, economic and cultural requirements (Becher and Kogan 1992). Discussing the interplay between basic units and the individual level it is possible to consider the performance of academic roles under somewhat fragmented liaisons. Academic freedom is a very crucial element of higher education but it is important to be aware that there are constraining requirements of collective activity and limitations of resources that drive the performance of academic roles. On the other hand, as noted by these researchers, higher education systems as a whole

> were not sufficiently concerned with accountability to the taxpaying public for the significant sums spent on keeping the enterprise going. In such a situation, the opportunities for political intervention were evident, and were duly seized, in the decade culminating in the 1988 Education Reform Act. The net result has been both to focus and to amplify the demands made on those working in universities, polytechnics and colleges in the name of enhanced social and economic responsibility. (Becher and Kogan 1992, p. 118)

In this perspective, changes in the environment may trigger changes of norms and shifts within the organisation's basic units. As stated by Becher and Kogan (1992), academic values are not self-contained and academic freedom may not be as strong as it has been suggested. Analysing the impact of the Bologna Process on organisations it has been fairly accepted that there were higher education institutions resistant to change. In the words of Becher and Kogan (1992, pp. 135–136): "Anything which can be seen as threatening to devalue this professional investment will be naturally resisted; its eventual acceptance will depend on overcoming the initial resistance by one strategy to another". It could be argued that the Bologna Process threatens the hierarchical and egalitarian ways of life dominant in higher education institutions in favour of an individualist way of life. These authors analysed the process of change and support the idea that innovations "which originate in planned changes or deliberate coercion are more likely to arouse conflict or contention" (Becher and Kogan 1992, p. 137). To this account the Bologna Process could be seen as a coercive force in the sense that it has been passed in the wake of a political statement following functional and normative pressures. This is confirmed by the report commissioned by the Follow-up group of the Bologna Process (2003) considering that the status of Bologna shifted

from voluntary action to a set of commitments for the EU Member States and for the candidate Member States under the framework of Lisbon strategy.

16.4.3 Mapping Prospective Scenarios Promoted by Different Ways of Life

In examining possible scenarios under the dominant ways of life in the Portuguese higher education system (see Table 16.3), it can be argued that the influence of the individualist way of life may drive the Portuguese higher education system towards stratification based on performance indicators; the impact of the hierarchical way of life will preserve the binary system by implementing differentiation policies; the egalitarian way of life will promote the unification of the system; and the fatalist way of life will foster the adoption of the most influential model resulting from the construction of a specific picture of reality. The latter way of life seems to be relevant within the Portuguese context. Marçal Grilo (former Minister of Education and subscriber of the Bologna Declaration) considers that the involvement of Portugal in the Bologna Process was meant to place Portuguese higher education institutions in European networks, giving them conditions to offer compatible and legible programmes to compete with their European counterparts (Marçal Grilo 2004).

The implementation of the Bologna Process has created what is seen as an increasing and time-consuming bureaucracy and has emphasised the incompatibility between academic time and political time. The demands upon research, teaching and administrative tasks of the academic professionals are multiple and "are more

Table 16.3 Prospective scenarios and the influence of ways of life

Ways of life and features of the Portuguese higher education system	Prospective scenarios
Individualist *Attractiveness of the Portuguese higher education system*	Stratified system built on performance indicators
Hierarchist *Binary system (universities and polytechnics)* *Humboldtian system as dominating paradigm*	Binary system (universities and polytechnics) differentiated according to the institutional mission
Egalitarian *Credit system based on student workload* *Education as a public good*	Unified system built on equality
Fatalist *"Geographical" location*	Adoption of the most influential model built on the communication flow about successful achievements

commonly seen as incompatible rather than integral aspects of what it means to be an academic" (Henkel 2004, p. 174). Under this perspective, both the introduction of a credit system supposedly to act as a common currency in student mobility and the Diploma Supplement could be seen by academics as distracting obligations and highly bureaucratising mechanisms tuned with the need for accountability, new management rhetoric and quality assessment and accreditation objectives. In addition, administrators, who are becoming increasingly professionalised, are also imposing more intense pressure on academics by asking for input to achieve the requirements set by external stakeholders, such as the European Commission in the case of the ECTS – European Credit Transfer System and Diploma Supplements. As advocated by Clark (2003, p. 109): "The growth of the new bureaucracy is aided and abetted by the efforts of the new units on the periphery of the changing university that regularly and systematically link up with the outside world". The new university managers work together with the academics to produce better outputs and "if they start out on the periphery, they do not remain there. They move toward and into the centre affairs" (Clark 2003, p. 109).

Moreover, as the Portuguese legislation introducing the recognition mechanisms was passed before the introduction of the degree structure (which required a new law passed by the parliament), political time is increasing the pressure to meet the agreed deadlines no matter what the substance of reforms will be. Corroborating this argument, a spokesman from the European Commission claimed that "all these matters [allegedly more fundamental issues beyond Bologna] need urgent attention, next to the rapid implementation of the Bologna reforms" (Van der Hijden 2005, p. 125). Therefore, Portugal runs the risk of the formal implementation of the trappings of the Bologna reform without any real substantive change. To understand how far the implementation process will be only formal, it is necessary to analyse if the very fast implementation process taking place in Portugal following the passing of Decree-Law 75/2006 is compatible with academic time and institutional strategies. It would be wise to recognise that "to understand an organisation fully, and to make sense of its strategic choices, the mission it pursues and the plans it adopts, it is necessary to elucidate its temporal culture" (Lee and Jonathan 1999, p. 1048) associated to the particular context of action.

16.5 Conclusions

The economic, political and cultural rationales beyond the Bologna Process create a complex environment for higher education institutions. Therefore, the Cultural Theory can be used to help understanding the reasons behind the difficulties of the implementation of the Bologna Process at the local level.

European institutions (e.g., the European Commission, the Council of the European Union, the Bologna Follow-up Group) "are always looking for opportunities to enhance their powers . . . to frame issues, design packages, and structure the sequence of proposals in ways that maximise their room for independent initiative"

(Pierson 1996, p. 133). These institutions are aiming at promoting a way of life that ranges from two opposite biases – the hierarchist promoting social cohesion and the individualist that contributes to foster the role of the market, lowering the impact of the group and grid dimensions.

At the national level, States have their own agendas and do not hesitate to use the Bologna Process as a lever to foster them. Hypothetically, it is possible to find in different States diverse cultural categories promoting in Europe different ways of life for each State.

At the local level, higher education institutions and their constituencies (professors, researchers, non-academic staff and students) are "able to influence local practice and undertake initiatives for their units to compete in international higher education markets" (Marginson and Rhoades 2002, p. 289). They also have different ways of life that interact and might produce movements fostering or hindering the way of life supported by the State.

Changes in higher education are, in Clark's words, piecemeal, experimental and adaptive; this incremental perspective points to cumulative results that should be better understood if the cultural lens is used. As argued by Clark (2003, p. 112): "Elements of transformation become elements of sustainability as their cumulative incrementalism produces a perpetual momentum. Their interlocking interaction acquires a forward impetus. The university leans toward the future." However, it can be observed that political time is not compatible with academic time, with the slow and complex process of change that needs to take place before the Bologna Process is fully implemented in higher education institutions. Therefore, it may well happen that Bologna will get stuck in the bureaucracy swamp or that most changes will be implemented in form, not in substance.

To some extent, the Portuguese case confirms that the implementation of Bologna deals with different ways of life. Within the individualist way of life (dominated by the logic of the market) it is possible to find the arguments of those who want to promote the capacity of attraction of higher education institutions, with the aim of having vertical mobility. Within the hierarchist way of life (dominated by the logic of the organisation of the State) there are the arguments of those who are in favour of preserving the binary system and the Humboldtian paradigm. Within the egalitarian way of life (dominated by the logic of no discrimination) there are the supporters of the credit system and qualifications framework with the aim of providing the same conditions to all. Within the fatalist way of life (dominated by the logic of involuntary exclusion) the argument is that Bologna is being steered by policy tools, such as the stocktaking exercise inspired in the open method of coordination methodologies, which create an irresistible compulsion to follow the front-runners.

Whatever the future may hold, the present social model for Europe is under challenge:

> Europeans have made choices about how to express the values they hold in common: a commitment to the social contract that underwrites the risk of unemployment, ill-health and old age, and provides opportunity for all through high-quality education, commitment to public institutions, the public realm and the public interest and that a market economy

> should be run fairly and with respect for the environment. These values are expressed in systems of welfare, public institutions and regulation that are expensive in a world where low cost and highly efficient producers are challenging the old order. If Europe cannot adapt, cannot modernise its systems and cannot increase its growth and employment fast enough then it will be impossible to sustain these choices. Europe, in short, must focus on growth and employment in order to achieve the Lisbon ambitions. (Kok 2004, p. 16)

And there is an obvious confrontation between two opposing views on Europe's development: a neo-liberal view based on competition and market values and a social view based on the traditional welfare State model.

The difficulty in the further development of the EHEA lies in the process of how changes brought about by Bologna can contribute to produce stability and hold cultural patterns.

References

Amaral, A. (ed.) (2003). *Avaliação, Revisão e Consolidação da Legislação do Ensino Superior*. Matosinhos: CIPES.

Ball, S. (1998). Big policies/small world: An introduction to international perspectives in education policy. *Comparative Education*, *34*, 119–130.

Becher, T. and Kogan, M. (1992). *Process and structure in higher education*. London: Routledge.

Bergen Communiqué. (2005). *The European higher education area – Achieving the goals*. Conference of Ministers Responsible for Higher Education.

Bleiklie, I. and Henkel, M. (2005). Introduction. In Bleiklie, I. and Henkel, M. (eds.) *Governing knowledge*. Dordrecht: Kluwer, pp. 1–10.

Bologna Follow-up Group. (2005). *From Berlin to Bergen*. Bergen.

Bologna Follow-up Group. (2003). *Bologna Process between Prague and Berlin*. Berlin.

Borras, S. and Jacobsson, K. (2004). The open method of coordination and governance patterns in the EU. *Journal of European Public Policy*, *11*(2), 185–208.

Clancy, P. (2004). The non-university sector in Irish higher education. Paper presented at the International Seminar about the Role of Polytechnics in Higher Education. Leiria.

Clark, B. (1983). *The higher education system*. California: University of California Press.

Clark, B. (2003). Sustaining change in universities: Continuities in case studies and concepts. *Tertiary Education and Management*, *9*(2), 99–116.

Conselho Directivo Nacional. (2004). Posição da Ordem dos Engenheiros relativamente ao processo de Bolonha. Retrieved from www.ordemengenheiros.pt.

De la Porte, C. (2002). Is the Open Method of Coordination appropriate for organising activities at European level in sensitive policy areas? *European Law Journal*, *8*, 38–58.

Deane, C. and Watters, E. (2004). Towards 2010 – Common themes and approaches across higher education and vocational education and training in Europe. Irish Presidency Conference, Dublin, OH.

Dehousse, R. (2002). The Open Method of Coordination: A new policy paradigm? Paper presented at the First Pan-European Conference on European Union Politics. Bordeaux.

Dill, D. (1995). Through Deming's eyes: A cross-national analysis of quality assurance policies in higher education. *Quality in Higher Education*, *1*(2), 95–110.

Frølich, N. and Stensaker, B. (2005). Academic, economic and developmental strategies – Internationalisation of Norwegian higher education institutions. In Huisman, J. and van der Wende, M. (eds.) *On cooperation and competition II: Institutional responses to internationalisation*, *europeanisation and globalisation*. Bonn: Lemmens Verlags, pp. 39–65.

Fulton, O., Amaral, A., and Veiga, A. (2004). Report of site visits of an external monitoring team to the University Ca' Foscari (Venice) and the University of Urbino. In *Monitoring the harmonisation process of tertiary education systems in some countries of the European Union (follow up of the Bologna and Prague Conferences) with specific reference to the Italian reform*.

Goetschy, J. (2004). The Open Method of Coordination and the Lisbon Strategy: The difficult road from potentials results. Paper presented at the IRA 7th European Congress. Estoril.

Gomes, J.F. (2004). Implementação do processo de Bolonha a nível nacional: grupos por área do conhecimento - ciências exactas. Mimeo, Lisboa: Ministério da Ciência e do Ensino Superior.

Gornitzka, A. (2005). *Coordinating policies for a "Europe of Knowledge": Emerging practices of the "Open Method of Coordination" in education and research*. University of Oslo: ARENA – Centre for European Studies.

Gornitzka, A., Kyvik, S., and Stensaker, B. (2005). Implementation analysis in higher education. In Gornitzka, A., Kogan, M., and Amaral, A. (eds.) *Reform and change in higher education*. Dordrecht: Springer, pp. 35–56.

Henkel, M. (2004). Current science policies and their implications for the formation and maintenance of academic identity. *Higher Education Policy*, *17*(2), 167–182.

Hespanha, P. 2001. Mal-estar e risco social num mundo globalizado. In Santos B.S. (ed.) *Globalização – Fatalidade ou Utopia*. Porto: Edições Afrontamento, pp. 163–193.

Hooghe, L. and Marks, G. (2001). *Multi-level governance and European integration*. Lanham, MD: Rowman & Littlefield.

Kok, W. (2004). *Facing the challenge – The Lisbon strategy for growth and employment*. Luxembourg: European Communities.

Lee, H. and Jonathan, L. (1999). Time in organizational studies: Towards a new research direction. *Organization Studies*, *20*(6), 1035–1058.

Lockhart, C. (1997). Political culture and political change. In Ellis, R. and Thompson, M. (eds.) *Culture matters – Essays in honor of Aaron Wildavsky*. New York: Westview Press, pp. 91–104.

Luijten-Lub, A., Huisman, J., and Van der Wende, M. (2005). Conclusions, reflections and recommendations. In Huisman, J. and van der Wende, M. (eds.) *On competition and cooperation II: Institutional responses to Europeanisation*, *internationalisation and globalisation*. Bonn: Lemmens Verlags, pp. 235–240.

Maassen, P. and Stensaker, B. (2005). The black box revisited: The relevance of theory-driven research in the field of higher education studies. In Bleiklie, I. and Henkel, M. (eds.) *Governing knowledge*. Dordrecht: Kluwer, pp. 213–226.

Marçal Grilo, E. (2004). Interview by Amélia Veiga conducted for the Ph.D. project. Lisbon.

Marginson, S. and Rhoades, G. (2002). Beyond national states, markets, and systems of higher education: A glonacal agency heuristic. *Higher Education*, *43*(3), 281–309.

Neave, G. (2005). *On snowballs*, *slopes and the process of Bologna: Some testy reflections on the advance of higher education in Europe*. University of Oslo: ARENA – Centre for European Studies.

Olsen, J.P. (2005). *The institutional dynamics of the (European) University*. University of Oslo: ARENA – Centre for European Studies.

Pierson, P. (1996). The path of European integration: A historical institutionalist analysis. *Comparative Political Studies*, *29*, 123–163.

Radaelli, C. (2003). *The Open Method of Coordination: A new governance architecture of analysis*. Oslo: SIEPS.

Reichert, S. and Tauch, C. (2005). *Trends IV: European universities implementing Bologna*. Belgium: European University Association.

Schwarz-Hahn, S. and Rehburg, M. (2004). *Bachelor and master degrees in Germany: A true reform or just partial changes?* University of Kassel: Centre for Research on Higher Education and Work.

Scott, W.R. (2003). *Institutions and organizations*. London: Sage.

Severdrup, U. (2005). Implementation and European integration: A review essay. University of Oslo: ARENA – Centre for European Studies.

Swedlow, B. (2002). Towards cultural analysis in policy analysis: Picking up where Aaron Wildavsky left off. *Journal of Comparative Policy Analysis: Research and Practice*, 267–285.

Thompson, M. (1997). Rewriting the precepts of policy analysis. In Ellis, R. and Thompson, M. (eds.) *Culture matters – Essays in honor of Aaron Wildavsky*. Colorado: Westview Press, pp. 203–216.

Thompson, M., and Ellis, R. (1997). Introduction. In Ellis, R. and Thompson, M. (eds) *Culture matters: Essays in honor of Aaron Wildavsky*. Colorado: Westview Press, pp. 1–20.

Thompson, M., Ellis, R., and Wildavsky, A. (1990). *Cultural theory*. Colorado: Westview Press.

Thompson, M., Grendstad, G., and Selle, P. (1999). *Cultural theory as political science*. London: Routledge.

Van der Hijden, P. (2005). Towards a global qualifications framework? Bologna as a model for global cooperation in higher education. In Muche, F. (ed.) *Opening up to the wider world: The external dimension of the Bologna Process*. Bonn: Lemmens Verlags, pp. 121–125.

Veiga, A. and Amaral, A. (2007). Policy implementation tools and European governance. Paper presented at the 6th Douro Seminar.

Chapter 17
Future Challenges

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The articles of this book speak for a large diversity of the ways in which a cultural perspective is understood and utilized in higher education studies. A cultural perspective does not form a single, uniform theoretical and methodological framework, but allows various starting points. Likewise, the topics covered in the articles vary substantially, ranging from a particular student culture and the construction of specific academic identities to recent large-scale reforms tied to doctoral education and the Bologna Process.

In spite of the internal variety, all articles share some common premises. Above all, these include a shared understanding of the functioning of higher education as a context-dependent, temporally and spatially embedded phenomenon. This holds true at the level of individuals, groups, institutions, and national (and international) actors (Becher and Kogan 1992). Hence, the key questions are: what meanings do the actors attach to things, how do they interpret them, and consequently, what kinds of practices and identities are thus upheld and strengthened? In this sense a cultural perspective is not a separate, detached dimension, but internally intertwined with all levels and aspects of higher education.

This sort of cultural embeddedness of higher education is often dismissed both in academic research and policymaking in the field. In fact, in some cases cultural sphere is perceived as an obstacle, something that stands against a smooth way of functioning. The notion behind this sort of view follows basically the traditional stimulus-response model according to which an external influence causes a predetermined effect in the object. For instance, a change in the quality assessment system is introduced and then the academics, departments, and institutions are expected to take the new initiatives into account in the same manner, leading to a planned outcome. Everybody who has been engaged in the university life knows that this seldom happens. The actors are not passive targets of external steering, but active actors who, drawing upon the historically and socially constructed local culture, interpret the new situation and act accordingly. Hence, it is impossible to avoid cultural elements even if one wished to do so. Rather, the question is how to

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take a cultural perspective into account in the best possible way, and how to appreciate it.

One of the lessons learnt with the making of this book is that cultural aspects of higher education institutions are helpful as analytical maps, which provide useful check lists for the variety of epistemic traditions in universities. Cultural perspectives also help to focus attention on the variety of ways in which academic work is organized and managed and the differences in the relationships with the labour market and society in general. Cultural perspectives are also useful when conducting comparative studies on higher education, or when trying to understand the processes of change in higher education. Taking into account national cultural contexts is also crucially important in international comparative studies.

Although a cultural perspective is vital for the understanding of higher education, it is not enough alone. One of the future challenges is integrating a cultural perspective more closely to the structural and policy analysis of higher education – combining the views from inside with those from outside academia. Exploring the diversity of small worlds of the university life in detail, a fascinating area as such, entails the danger of losing the structural framework in which the small worlds operate. The profound changes in higher education environment in recent years make this particularly acute.

It can be claimed that the relationship between higher education and society is changing. In an increasing manner, higher education is perceived and evaluated from a purely economical angle: its main functions include producing new knowledge and workforce to increase the competitiveness of the local, regional, national, and multinational (like European) environments. At the same time the management and funding of higher education has altered towards the models adopted in the private sector, as illustrated in terms such as academic capitalism and the entrepreneurial university. The new environment challenges and sets pressures on academic cultures, practices, and identities. It is necessary to analyse higher education as a part of society, taking into account the managerialistic perspectives, which emphasize economic, efficient, and effective technologies together with knowledge society discourses which focus attention mainly on the innovative capacities of universities.

There are, however, evident dangers if and when one looks at academic "small worlds" only from outside. These outside approaches – while using their specific technological and ideological languages – may not grasp the essential dynamics of higher education institutions revolving around the processes of the knowledge production and dissemination. There is a need to combine these glonacal dimensions (see Rhoades and Marginson 2002) of the academia also with the cultural studies focusing on the internal lives of higher education institutions. This requires empirical research: what is actually happening within different sectors and fields of higher education, what are the outcomes, and especially the non anticipated outcomes of the change processes?

As an academic research tradition, a cultural perspective on higher education has gained a well-established position. However, in policymaking its role seems to be much more limited. There is a constantly growing number of studies, which

point to the importance of a cultural perspective related to a wide variety of core processes in higher education, for instance, to policy reforms, student learning, job satisfaction, and so on. Yet, it seems that this research tradition is not known or taken into account in higher education policymaking. Hence, one of the future challenges is to search for ways of promoting dialogue between higher education researchers involved in cultural studies and policymaking actors at different levels.

There is also an intellectual challenge for cultural studies in higher education to stay dynamic, to create fresh insights, and to develop new theoretical and methodological tools for a better understanding of higher education. It is vital that research in the area does not isolate itself intellectually, but stays in contact with research carried out and new ideas emerging both within cultural studies at large, and with other neighbouring fields. Otherwise, faced with the current university funding and management trends, cultural studies on higher education may well transform into a mere instrument of university management and policymaking, lacking ambitious scientific goals. As a dynamic intellectual pursuit, a cultural perspective on higher education would foster critical understanding of the functioning of higher education, and offer means for self-reflection of academics and academic units themselves.

References

Becher, T. and Kogan, M. (1992). *Process and structure in higher education*, 2nd edn. London: Routledge.

Marginson, S. and Rhoades, G. (2002). Beyond national states, markets, and systems of higher education: A glonacal agency heuristic. *Higher Education*, *43*(3), 281–309.

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