



Disciplinary Barriers between the Social Sciences and Humanities

Comparative Report

**The Impact of the Relationship between the State
and the Higher Education and Research Sectors on
Interdisciplinarity in Eight European Countries**

June 2005

Nicky Le Feuvre with Milka Metso

**Equipe Simone-SAGESSE
Maison de la Recherche
Université de Toulouse-Le Mirail
5, allée Antonio Machado
31058 Toulouse Cedex 9
France**

CONTENTS

INTRODUCTION	4
Structure of the Report.....	5
1 THE STATE AND HIGHER EDUCATION IN HISTORICAL PERSPECTIVE	6
Table 1. Modes of Regulation of HE Systems in Eight EU Countries, 2005.....	6
1.1 The Humboldt Model: “Pure Knowledge Production” and the Integration of Teaching and Research in Multi-Disciplinary Universities	8
1.2 The Napoleonic Model: Multiple Higher Education Institutions and Autonomous Public Research Centres.....	9
1.3 The Anglo-American Model: Education and Research that is Responsive to “Market Needs”	10
1.4 Ideal-Type Models of the HE System and Interdisciplinarity	11
Table 2. Ideal-type Models of the HE and Research Systems and Interdisciplinarity	12
Table 3. Decision-Making Process for Creating New or Maintaining Existing Senior Academic Positions in Germany, France and the USA, 2003.....	14
Table 4. Recruitment Procedures of Senior Academic Staff (Professors) in eight EU countries, 2005..	15
1.5 New Models of Knowledge Production in Contemporary Societies	16
Table 5. Modes of Knowledge Production in Contemporary Societies	17
2 SOME GENERAL CHARACTERISTICS OF THE HIGHER EDUCATION AND RESEARCH SECTORS IN THE EU	18
2.1 Student Numbers	18
Table 6. Students in Tertiary Education (ISCED 5 and 6), 2000	18
2.2 Expansion Rates in Student Numbers.....	19
Table 7. Evolution of Number of Students in Tertiary Education (ISCED 5 and 6), 1975-2000	19
2.3 Age Profile of Student Population	19
Table 8. Median Age of Full-Time Students in Tertiary Education (ISCED 5/6), 2000	20
Table 9. Proportion of Population Aged 30-34 years with Tertiary Education Qualifications (ISCED 5 and 6), 2000	20
Table 10. Women per 100 Men Graduating from Tertiary Education (ISCED 5 and 6), 2000	20
2.4 Feminisation Rates.....	21
2.5 Gender Gaps in Types of HE Studies.....	21
Table 11. Proportion of Tertiary Education Qualifications (ISCED 5 and 6) Awarded to Women, by Field of Study, 2000	21
2.6 Variations in the Number and Type of HE Institutions	22
Table 12. Number and type of HE institutions in Eight EU Countries, 2005	22

3	THE IMPACT OF RECENT PUBLIC POLICY REFORMS IN THE HIGHER EDUCATION AND RESEARCH SECTORS ON INTERDISCIPLINARITY.....	24
	Table 13. Major HE and Research Reforms in Eight EU Countries, since 1968.....	25
3.1	Decentralised Management of HE Institutions	32
3.1.1	Reforms to HE Funding	34
3.1.2	“New Managerialism” and Interdisciplinarity	35
3.2	Selectivity and Conditions of Access to HE Institutions.....	37
	Table 14. Selectivity and Entry to Higher Education in 1997	38
	Table 15. Routes to HE for Mature Students without Traditional Qualifications in 1997.....	38
3.2.1	Selectivity, Access, and Completion Policies in Relation to Interdisciplinarity	39
3.3	Curriculum Development.....	40
3.3.1	The “Employability” of Graduates.....	42
3.3.2	Curriculum Development and “Employability” in Relation to Interdisciplinarity.....	42
	CONCLUSIONS	44
	BIBLIOGRAPHY	46

Introduction

This report aims at providing information on the relationship between the State and Higher Education (HE) and Research in eight European countries: Finland, France, Germany, Hungary, Norway, Spain, Sweden and the UK. All these countries are signatories to the Bologna Agreement and are partners in a specific targeted research project (STREP)¹ on 'Changing Knowledge and Disciplinary Boundaries Through Integrative Research Methods in the Social Sciences and Humanities', funded under the European Commission's Framework 6, Priority 7: 'Citizens and Governance in a Knowledge Based Society'. This project aims to understand the barriers to interdisciplinarity in the social sciences and humanities.

This report specifically centres on the question of how the relationship between the state and the HE and research sectors impacts on the development of interdisciplinary teaching and research in different national contexts. In exploring this issue, the report draws on the eight country-specific reports on *Disciplinary Barriers between the Social Sciences and Humanities* completed in January 2005. It also uses secondary data sources, including studies carried out by the European Universities Association (Conraths and Smidt 2005; Reichert and Tauch 2003; Tauch and Reichert 2005) and on data and analysis provided by the DG Education and Culture of the European Commission (Eurydice 1999; Eurydice 2000; Eurydice 2003a; Eurydice 2003b).

The report sets out to analyse the effects of the different models of higher education and research organisation and management on the development of interdisciplinary teaching and research in the different EU member states. There is obviously some degree of overlap between this topic and the themes developed in the other STREP Comparative Reports. In so far as it has been possible, we have tried to avoid lengthy discussion of the issues developed in more detail in the other Comparative Reports. For reference, it may be useful to note that the disciplinization process is analysed in detail in Jakab and Lukic (2005) and in Widerberg and Hirsch (2005). The question of interdisciplinary infrastructures and knowledge production processes are developed in Apitzsch and Siouti (2005), Holm and Liinason (2005a) and Krebs and Wenk (2005). The influence of a certain number of factors on reducing (or increasing) the barriers to interdisciplinarity in the humanities and social sciences are taken up in the remaining reports. The role of the disciplines in constructing the professional identities of academic staff is analysed in Griffin et al (2005a); the role of disciplinary boundaries and of funding in research is addressed in Keskinen and Silius (2005a) and the impact of the Bologna process on the development of interdisciplinary teaching and research activities is investigated in more depth in Carrera Suarez and Vinuela Suarez (2005).

¹ See www.hull.ac.uk/researchintegration for further details.

Structure of the Report

This report begins with a discussion of the ideal-type models of interaction between the state and the higher education and research sectors that can be identified from existing research. Here, we attempt to establish the degree to which the national HE and research sectors can be classified in relation to the historical modes of regulation of knowledge production and dissemination.

The second part of the report provides some general information on the characteristics of the HE sector in the eight countries covered by the project. Information on the size and composition of the student populations in these countries constitutes an important backdrop to understanding the context in which changes to the modes of state regulation of higher education and research are currently taking place and the impact they are likely to have on the development of interdisciplinarity in each national context.

The third and final part of the report addresses the reforms that have swept through the HE and research sectors of the EU member states over the past 25 years. We show that it is no longer possible to classify countries according to whether their HE institutions are regulated on “top-down” or “bottom-up” principles. In all countries, there are signs that the state is transforming its relationship to higher education and to research, against a back-drop of rising demand for higher education and limited public spending (principally due to the constraints of the Maastricht Treaty). On certain questions, such as the adaptation of higher education services to “market demand”, there are clear signs of convergence between the countries studied here (Dewatripont, Thys-Clement and Wilkin 2002). On other issues, such as the impact of “new managerialism” (Reed 2002) on staff recruitment and promotion, a considerable degree of divergence continues to exist between countries, that are clearly marked by the historical legacies of their national HE and Research systems.

We have selected three themes for exploring this question in comparative perspective: the introduction of more decentralised arrangements for the management of HE and research institutions; the changes introduced to the procedures for selection and entry of students to higher education institutions; the new modes of curriculum development within the HE sector. For each of these themes, we illustrate the rather ambiguous, not to say contradictory effects of EU and national or local policy measures on the development of interdisciplinary teaching and research activities in the different national contexts. Although there is a good deal of convergence in the type of policy objectives defined in each national context, the effects of these measures depend both on the historical legacy of the national HE and research sectors and on the precise policy implementation tools that have been adopted. Indeed, given the diverse national traditions that continue to influence the structural organisation and philosophical values of the HE and research sectors in the eight countries studied here, it is extremely unlikely that similar policy orientations that we have identified across all the countries will produce comparable effects (Lallement and Spurk 2003; Ragin 1991).

In the conclusion, we analyse the likely impact of recent changes to the relationship between the state and the HE and research sectors on the ability of European universities to overcome the existing barriers to interdisciplinarity in the humanities and social sciences teaching and research in the European Higher Education Area.

1 The State and Higher Education in Historical Perspective

The relationship between the State and the Higher Education system is a highly complex issue. In most countries the State defines and allocates the budget for HE and public-sector research activities and provides a general legal framework covering areas such as the planning of educational provision at national level, the accreditation of degrees and institutions and evaluation of the system. In some countries, like Germany, Spain and France, the State is still the employer of tenured academic staff, whilst this function has been attributed to the HE institutions themselves elsewhere.

Although it is possible to identify a limited number of “ideal-type” models of relationships between the state (either on a centralised level or more decentralised centres of state power, like the German *Länder* or the Spanish regions) (Schnapper 1999), countries may correspond to one ideal-type model on some aspects of their HE or research policy (e.g. curriculum content), but to another model on other issues (e.g. staff recruitment or remuneration). Furthermore, as we shall see in the following sections of this chapter, the nature of the relationship between the state and the HE sector is susceptible to considerable change over time and a model that may accurately describe a national “configuration” (Musselin 2001) at one point may be less useful following significant changes or reforms.

Several authors suggest that the relationship between the state and the HE sector can first be characterised by the degree of autonomy that universities have to determine their day-to-day activities (teaching, research, out-reach work, etc.). This first level of description of the different national HE and research systems generally leads to a continuum between those countries characterised by a centralised (top-down) mode of regulation, where the state plays a major role in defining the activities of the sector and a de-centralised (bottom-up) system, where universities themselves play a central role in determining their own activities (Heen 2002).

From this point of view, the partner countries in this STREP project can be characterised in the following manner:

Table 1. Modes of Regulation of HE Systems in Eight EU Countries, 2005.

Centralised Mode of Regulation (Top-Down)	Concerted Regulation ²	De-Centralised Mode of Regulation (Bottom-Up)
France	Finland	Norway
Spain	Germany	UK
	Hungary	
	Sweden	

² This term is used by Catherine Paradeise (1998, "Pilotage institutionnel et argumentation: le cas du développement du département SHS au CNRS." in *Sociologie et connaissance. Nouvelles approches cognitives*, edited by Anni Borzeix, A Bouvier, and P Pharo. Paris: Editions du CNRS)., to describe a situation where the state recognises the legitimacy of the academic profession and / or of the HE institutions, but where the rhetoric of the “public interest” is used to impose decisions on the academic profession that are not necessarily those that the profession would prefer. Cited in Musselin, Christine. 2003. "Dynamiques de construction de l'offre. Analyse comparée de la gestion des postes d'historiens et de mathématiciens en France, en Allemagne et aux Etats-Unis." Pp. 133-158 in *Les mutations actuelles de l'Université*, edited by Georges Felouzis. Paris: Presses universitaires de France.

It is, however, important to recognise that a “top-down” model of regulation of the HE sector does not necessarily imply that the academic community is passive and entirely dependent on the state. Quite the opposite is often true. Within such a model, the **disciplines** play a central role in the regulation process. These are organised on a national level and it is largely through the disciplines, rather than through the universities, that the state imposes its policy orientations.

However, as we shall see in more detail below, the call for increased “efficiency” from the HE and research sectors and the rise in competition for increasingly scarce resources between different HE institutions has undoubtedly contributed to bringing the different national models closer together with regard to the degree of direct control that the state places on their activities. There is some evidence to suggest that, in countries that have traditionally been characterised by a high level of centralised state control over universities, there are moves to increase the “self-regulation” of individual HE institutions (and, therefore, a loss of control by the disciplines). Some authors have analysed these tendencies as reflecting the move away from the “interventionist state” towards a more “facilitating state” (Neave and Van Vught 1991).

On the other hand, those countries where universities are traditionally seen as self-governing bodies, the state is increasingly adopting what some authors have called a “supermarket steering model” (Gornitzka and Maassen 2000), by introducing measures to promote the efficient use of resources within universities, often with reference to nationally determined policy orientations (the increase in student numbers or the promotion of degree programmes in specific fields, for example).

Before analysing the effects of these recent reforms on the development of interdisciplinary teaching and research activities within the HE sector, we would like to develop a more detailed typology of the historical “ideal-type” models of governance of these sectors in the EU member states. From an ideal-type perspective, there are three main “models” or ideal types of universities that have influenced the structure and the organization of the HE institutions in the countries studied in the STREP project: the model inspired by Wilhelm von Humboldt and his ideas of “pure knowledge production”; the model influenced by the structures created by Napoleon under the guise of the “Imperial University”, with a clear distinction between the “general” academic training provided by the universities and the more “vocational” training provided by a series of specialised, non-university “schools”, of which the *Grandes Écoles* represent the elite establishments; and the Anglo-American model, based on the idea that education and research represent “markets” that function in direct contact with a number of service users. The value of the services offered by the HE sector is thus determined by their “social usefulness”, measured by the willingness of user groups to purchase them on the market. Here, the state plays only a minor role, notably in increasing the financial solvency of certain user groups and in organising quality control procedures.

Many of the countries studied here have passed from one of these ideal-type models to another during their recent history and in most of the current national systems there are signs of influence from more than one traditional “model”. In fact, the national configurations appear more as specific combinations of these historical models than as a “pure” replica of one of the ideal-type models.

In the following section of this chapter, we shall first present a typology of the “models” or “configurations” of the HE and research sectors that can be identified from the existing literature and then attempt to see to what extent the eight EU countries studied here can be accurately described and classified according to this typology.

1.1 The Humboldt Model: “Pure Knowledge Production” and the Integration of Teaching and Research in Multi-Disciplinary Universities

The Humboldt tradition of higher education is marked by a number of basic principles that date back to the university reforms of the early 19th century and to the university ideal formulated at that time by the German diplomat Wilhelm von Humboldt. This ideal was constructed around several principles; the autonomy of HE institutions, despite their being financed exclusively by the state; the freedom of academics “to choose the questions and the methods within the defined subject methodology, and to publish [their] results, even if these were uncomfortable” and the freedom of the lecturers to “plan the content and methods of their own teaching” (Krebs et al. 2005). Finally, the Humboldtian model was based on the idea of the university as a site that should bring together teaching and research activities in all existing disciplines (i.e. multi-disciplinary universities).

Academic freedom is traditionally held in high esteem in this model and the legacy of the Humboldtian idea of the university, with its implication that the state should guarantee independence from economic and political interests, can clearly be seen in the German case today: “After the capitulation of the National Socialist State, academic freedom (the freedom of research and teaching) was incorporated in the constitution of the Federal Republic” (Krebs et al. 2005: 4).

The roots of this model can obviously be found in the Enlightenment ideology of education, emphasizing the neo-humanistic ideal of “disinterested” learning and academic enquiry (Krebs et al. 2005: 2). The *Lern- und Lehrfreiheit* principles adopted by von Humboldt were in opposition to the French “Imperial University” and the Napoleon model, which restricted the role of universities and left the training of the nation’s elites to the specialised institutions, the *Grandes Écoles*. It also developed publicly-funded research centres outside the universities. On the contrary, in the Humboldtian model, the universities were, and to a certain extent still are, considered as the institutions at the pinnacle of the higher education sector. According to Erhard Friedberg and Christine Musselin, German universities still serve as “normative, institutional and structural references for the other higher education institutions” (Friedberg and Musselin 1992b: 317).

The influence of this model is thus still evident in Germany today (Krebs et al. 2005), but we also find traces of it in the history of the HE sector in many of the Nordic countries (Holm and Liinason 2005b; Keskinen and Silius 2005b; Widerberg et al 2005). In this model, academic freedom enabled individual academics to develop interdisciplinary perspectives in their teaching and research activities, although these were not necessarily associated with any form of institutionalised interdisciplinary structures within the university. In the same vein, the tradition of the “*studium generale*” enabled Master students to combine courses from two or more subject areas. Again, this produced a form of “individual interdisciplinarity” that was not reflected in the institutional structures of the universities. However, as we shall see in more detail below, this ideal-type has come under increased pressure and criticism at a time of

demands for a more “democratic” and “open” university system and when issues of efficiency and accountability are placed on the political agenda.

In the German case, there is some evidence of a loss of autonomy on the part of the academic community, with responsibility for defining the content and objectives of university degree courses and research projects increasingly being taken over by the governments of the *Länder* (Musselin 2003), notably through the creation of independent accreditation agencies and various “peer review” decision-making processes at regional level. To a certain extent, the country which historically exemplified the Humboldtian tradition is slowly moving to a hybrid model that includes some aspects of the Napoleonic tradition (state control over academic activities via negotiations with the disciplines) and some aspects of the Anglo-American model (accountability and tailoring academic activities to “market needs”).

1.2 The Napoleonic Model: Multiple Higher Education Institutions and Autonomous Public Research Centres

The Napoleonic model differs greatly from the Humboldtian ideal of universities as it is based on direct state control over the HE institutions and on a separation between teaching and research activities in the public sector. In this model, universities do not have a monopoly over public research activities. They share this activity with a large number of public sector establishments, involved in particular thematic areas of research. Thus, research activities are divided between different types of public sector organisations. On the one hand, national public research bodies employ full-time research staff and other professional groups, such as research technicians, administrative staff, etc. On the other hand, university-based academics are expected to participate in research activities, usually within their own disciplines.

The roots of this model which was implemented at the end of the 19th century in France can actually be found as far back as 1808, in the structures created by Napoleon under the guise of the “Imperial University”. In this model, higher education is seen as a legitimate arena of public intervention and universities are expected to conform to a series of nationally defined norms and rules with regard to the content of their courses, the organisation of examinations, their administrative status, etc. (Musselin 2001: 24).

This model is characterised by the strong level of centralisation and direct state control over HE institutions and by the weight of the disciplines. This means that universities were actually little more than the grouping together of disciplinary “Faculties”, with little autonomous institutional identity or development strategy. In so far as identical rules applied to the whole of the national territory, with a state monopoly over the content of teaching and examination procedures, universities had no room to develop a specific local profile.

This second ideal-type model can thus be characterised by: the institutional separation of the disciplines; the creation of centralised and hierarchical structures for the management of academic careers and the partial separation of teaching and research. Firstly, although universities may effectively cover more than one discipline, they tend to be organised by broad disciplinary fields. Thus, in a given geographical location, one will find separate universities for the ‘hard’ sciences (sometimes including medicine and pharmacy), for Law and Economics and for the Arts and Humanities. The development of “pluri-disciplinary” universities is, for example, a recent practice in a country like France. Secondly, universities do not have a monopoly over tertiary education, since they exist alongside other – often more

prestigious institutions – which provide the training of the countries elites (particularly high level civil servants, as with the *Ecole Nationale de l'Administration* or ENA). Thirdly, universities organised along this ideal-type model are not directly responsible for the career progression of the academic staff who work there. Discipline-based, national bodies are more involved in the recruitment and promotion of academics than are the universities themselves (Friedberg and Musselin 1992a). Finally, although universities maintain a monopoly over doctoral training and the awarding of PhDs, they are not the most important centres of research, since they exist alongside other publicly-funded autonomous research institutions.

As Christine Musselin has stressed, the “double centralisation” associated with this ideal-type model - that of the state and that of the disciplines - has made it difficult to create universities as autonomous, federate institutions for producing applied or inter-disciplinary knowledge. Thus, until the 1990s, it was generally held that France stood out from the rest of the Western world in so far as it had no equivalent to the universities that existed elsewhere in Europe or North America (Musselin 2001).

Furthermore, this model was traditionally characterised by the distinction between universities that provide “basic” training in the disciplines and specialised tertiary-level HE Institutions that train people for jobs. Thus, apart from training for the academic profession itself (French universities have always had a monopoly on doctoral degrees) and for some of the learned professions, universities were usually expected to provide the first stages of higher education, with specialisation taking place in non-university institutions, which often require students to have obtained a discipline-based university degree before admittance to what are essentially interdisciplinary vocational courses of study.

This model is still influential in France today (Le Feuvre and Metso 2005), but it also corresponds to the type of HE system that existed in many of the ex-Soviet bloc countries (Jakab et al 2005) and in the Southern European States (Italy, Portugal, Spain) (Carrera Suarez et al 2005). As with the Humboldtian model, countries whose HE systems have historically been closest to this model are experiencing various degrees of change and reform. There are signs of increasing de-centralisation of the regulation of both teaching and research activities (see below).

As in the Humboldtian model, the central states are increasingly devolving their power over the HE and research sectors to local or regional-level government (Filâtre 2003; Filâtre 2005), driven by the desire to make universities more “responsive” to the needs of different sectors of society. At the same time, universities are becoming more and more responsible for certain aspects of their activities that previously came under direct state control (curriculum development, for example). In some ways, countries that have traditionally been closest to the French-Russian model are now moving towards the Anglo-American model of university management.

1.3 The Anglo-American Model: Education and Research that is Responsive to “Market Needs”

The Humboldtian and the Napoleonic models stand in stark contrast to the Anglo-American model, based on the idea of universities as centres of education and research in accordance with the requirements of the society. In this third ideal-type model, universities are expected to carry out teaching and research, but the content of both these activities is expected to be

tailored to the “needs” of society, rather than to the intellectual interests of the academic community itself (as in the Humboldtian model) or to the requirements or policy objectives of the state (as in the Napoleonic model). The way these societal “needs” are defined varies from country to country and over time.

In some cases, as in the USA, universities are seen primarily as the elite institutions for training for the labour market, whilst they are also the source of “expert knowledge” required by the decision-making bodies of society (including central and local government). As such, they are able to sell their services to a wide range of service users: students (who are expected to pay for the opportunity to improve their own “educational capital” and thus their chances of employment and / or promotion), professional bodies interested in continuing education courses for their members, private enterprise and other economic groups and national and local government agencies. As with the learned professions in the functionalist tradition of sociology (Parsons 1939), they are seen as mediating structures between the state and the market and are rewarded according to their ability to provide valued services to a wide range of (solvable) recipients. The state may intervene to make some service users more solvent (through student grants, for example), but is not directly involved in the day-to-day management of the universities.

In this model, the universities tend to be organised according to a “problem-solving” logic. There is, in theory at least, quite a lot of room for interdisciplinarity, since the expertise of the academic community and its ability to communicate with a vast range of social actors tends to be evaluated on the basis of their capacity to address and, if possible, solve a certain number of “social problems”.

Universities in the UK and Ireland have traditionally been associated with this model, but, once again, there are signs of change here too, as governments attempt to increase their control over the activities carried out by universities, notably with regard to accountability for the use they make of public funds (Griffin et al 2005b).

In the Nordic countries, we find a modified version of this model, with universities acting as major players in the “social welfare” policies of the state. In this case, they are indeed involved in solving a major “social problem”; that of inequalities between different social categories. However, less importance has traditionally been given in this version of the “social usefulness” model of universities to their ability to attract external funding. As we shall see below, this is also changing (Holm and Liinason 2005b; Keskinen and Silius 2005b; Widerberg et al 2005).

1.4 Ideal-Type Models of the HE System and Interdisciplinarity

As we can see from the preceding sections, each of these ideal-type models of the HE and research systems is associated with a different pattern of development of the traditional academic disciplines and of interdisciplinary teaching and research.

Table 2 attempts to synthesise the main characteristics of these ideal-type models with regard to the disciplines. The Humboldtian and the Napoleonic models share a binary system of higher education, where “professional training” is generally placed outside the universities, in specialised, usually multidisciplinary, “schools” (the *Fachhochschulen* in Germany and the *Grandes écoles*, in France). Within the university sector, the disciplines are central to the

organisation of the academic community (Griffin et al 2005a) and to the infrastructural organisation of the universities (Apitzsch and Siouti 2005). However, the two models vary with regard to the influence of the disciplines on teaching programmes and on research. In the Humboldtian model, teaching and research are unified within the universities. Thus, the discipline-based principles of regulating the university institutions tend to spill over to research activities, which are also organised principally around disciplinary research schools. However, the principles of academic freedom associated with this model allow considerable space for individual academics to develop interdisciplinary perspectives, in their teaching and research activities. In the Napoleonic model, on the other hand, the partial separation between the research carried out inside universities and the research carried out in the autonomous public-funded research bodies usually means that both disciplinary and interdisciplinary research projects are promoted. In principle, although the autonomous public research bodies are also organised along disciplinary lines, they are encouraged (by the state) to produce “applied” research, which will address a series of “social problems” and interdisciplinary collaboration is therefore more frequent than in the university sector (Le Feuvre and Metso 2005).

Table 2. Ideal-type Models of the HE and Research Systems and Interdisciplinarity

	Napoleonic Model	Humboldtian Model	Anglo-American Model
University Sector	Disciplinary principles on both individual and institutional levels	Disciplinary institutional organisation, but space for individual interdisciplinary initiatives	Interdisciplinary principles on both individual and institutional levels
Non-University Sector	Interdisciplinary	Interdisciplinary	Interdisciplinary
Research	Disciplinary (university-based) & Interdisciplinary (public sector research institutions)	Disciplinary institutional organisation, but space for individual interdisciplinary initiatives	Interdisciplinary

Finally, in the Anglo-American model, the distinction between the university and the non-university sectors of the HE system is less sharp than in the two previous models.³ Here, all sections of the HE sector, including research, are organised in relation to a “problem-solving” logic. The need to address a “market” for teaching and research activities often implies the need for knowledge produced within different disciplinary traditions. Since the universities based on this model benefit from a high level of autonomy from the state, they are able to adopt internal infrastructures (faculties, departments, research institutes, etc.) that span more than one discipline and / or to encourage inter-departmental collaboration, both in teaching and in research. The criteria for the creation of these multidisciplinary units are not based on

³ Indeed, as we shall see below, in the EU countries whose HE system is most closely organised around this ideal-type model, the UK and Norway, recent policy initiatives have aimed at producing an integrated HE sector through the upgrading of the polytechnics to full university status in 1992 in the UK and through the creation of the integrated Norway Network of HE institutions in the mid-1990s.

academic interests (although these evidently continue to weigh on the internal decision-making process), but rather on the “market niche” they can find.

In order to compare the effects of these different ideal-type models on one aspect of the HE system, Christine Musselin carried out a comparative study of the recruitment procedures in universities in three different countries: Germany, France and the USA. She was particularly interested in understanding the relative influence exerted by different institutional actors in the process of creating or maintaining an academic position in each of these national contexts. Musselin specifically studied history and mathematics departments in a range of universities in the different countries. Although there were a certain number of discipline-related questions, the overall picture was one where the societal “configuration” of the HE sector determined to a large extent the type of regulation of academic positions. The results of this study are summarised in Table 3. This analysis shows the different styles of regulation associated with each of the ideal-type models of State-HE sector relationships presented above.

Table 3. Decision-Making Process for Creating New or Maintaining Existing Senior Academic Positions in Germany, France and the USA, 2003

	Germany	France	USA (private universities)
Relative influence of the following institutional actors on the decision-making process:			
State authorities	Strong	Limited to determining the number of academic positions created / maintained	None
Universities	Marginal, within the limits set by the state authorities	Rather limited, although signs that they may increasingly adopt priorities	Stronger for new positions than for replacements and variable according to the financial strength of the university
Departments (disciplines)	Weak and defensive	Strong	Initiate proposals
Sources of influence on decision-making process	Principally external and imposed by state authorities	Low consideration of external factors, with the exception of staff/student ratios	External factors important, but tempered by institutional circumstances
Dominant mode of legitimating the final decision	State: the <i>Länder</i> represent “public interest”	Disciplinary: despite signs of increasing influence of the university	Institutional: the universities define their strategies according to the general context and to their specific strategies
Style of Regulation	Authoritarian	Incremental	Flexible

Source : (Musselin 2003: 152)

Table 4. Recruitment Procedures of Senior Academic Staff (Professors) in eight EU countries, 2005

Staff recruitment procedures	FIN	FR	D	HU	NO	E	S	UK
Job creation decisions	University	State	State	University	University	State	University	University
Civil servant status for senior academics	Yes	Yes	Yes	Yes	No	Yes	No	No
Pre-qualification necessary in a discipline	No	Yes	Yes	Yes	No	Yes	No	No
Habilitation required for professorship	No	Yes	Yes ⁴	Yes	No	No	No	No
National guidelines for recruitment criteria	Yes	No	No	No	Yes	No	Yes	Yes
Pay and conditions negotiable at university level	Yes	No	Yes	No	Yes	No	Yes	Yes
Promotion possible in the same university	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Final nomination	University	State	State	State	University	State	University	University

Source: STREP National Reports www.hull.ac.uk/researchintegration

⁴ With the exception of the newly created “junior professorships”

1.5 New Models of Knowledge Production in Contemporary Societies

In order to understand the degree to which the different national HE systems analysed here correspond to the ideal-type models presented above, we have attempted to use the data provided in the national reports to synthesise the main characteristics of the academic staff recruitment procedures currently in existence in the different member states. As shown in Table 4, there are considerable variations in the degree to which the creation of and recruitment to academic positions come under the remit of the state or of the universities themselves in the different EU Member states (Griffin et al 2005a). In some countries (Spain, France), the state is responsible for all decisions concerning the creation of academic positions in universities, whilst other countries see this as the direct responsibility of the universities, who receive lump-sum budgets from the state which they are then free to spend according to their own priorities (Finland, Norway, Sweden, UK). Secondly, the nature of these priorities also varies from country to country. In some cases, positions are created and candidates selected on the basis of criteria that are specific to a particular discipline and / or to a particular thematic field of teaching or research that the institutions want to promote for purely academic reasons. In other cases, the ability of the position / candidate to respond to the external demands placed on the institution may be given greater precedence, as has traditionally been the case in the Anglo-American model. The type of selection criteria used will obviously depend on the legitimacy given to different models of knowledge production and dissemination in a given, historical, HE system “configuration”. On this point, the findings of a study carried out under the auspices of the Swedish Research and Planning Council in the mid-1990s are particularly interesting for the topics addressed in this report, since they relate directly to the question of interdisciplinarity (Scott et al 1994). As Arlid Tjeldvoll has stressed in reference to this work: “The public university institution internationally is today facing a need for transformation in order to survive as an institution balancing individual academic freedom, institutional autonomy and relevance to certain stakeholder and user groups” (Tjeldvoll 2002: 93).

To a certain extent, one could argue that none of the ideal-type HE models presented in the preceding chapters of this report are perfectly suited to the requirements of the “knowledge economy” (OECD 1998). On the one hand, the university of the Humboldtian model rests strongly on academic freedom and institutional autonomy, but remains relatively impervious to the needs and interests of its user groups. Secondly, the university of the Napoleonic tradition is far too dependent on state control and suffers from a lack of institutional autonomy. As we have already seen, there are even suggestions that this model rests on the “impossible university” (Musselin 2001). Finally, the ideal-type of the Anglo-American university is highly dependent on certain stakeholders and user groups for survival. Although it benefits from the largest degree of institutional autonomy, it nevertheless raises questions about academic freedom, particularly with regard to external research funding.

In order to understand the dynamics behind the changing relationship between the state and the HE and research sectors and their potential effects on the existing barriers to interdisciplinarity between the humanities and the social sciences, it is useful to consider the two modes of knowledge production that have been identified in recent research (Cummings 1995; Scott et al 1994; Scott et al, 2001; Tjeldvoll 2002). They distinguish between the traditional modes of knowledge production (Mode 1) and those that are currently emerging in what they call the “service university” (Mode 2).

Table 5. Modes of Knowledge Production in Contemporary Societies

Mode 1	Mode 2
Problems of knowledge are set and solved in a context governed by academic interests ⁵	Knowledge is produced and carried out in a context of application
Knowledge is based on disciplines	Knowledge is cross/trans-disciplinary
Homogeneity of knowledge production locations	Heterogeneity of knowledge production locations
Hierarchical and durable knowledge production structures	Heterarchical and transient knowledge production structures
Quality control through peer review	Reflexive quality control through stake holders and user groups

Source: Adapted from: (Tjeldvoll 2002: 93)

In addition to the information included in Table 5, Tjeldvoll stresses the fact that Mode 2 knowledge production also implies several other questions:

- 1) Knowledge production starts from practical problems and not from theoretical or discipline-based problems;
- 2) Knowledge is produced in a « project organisation », not in a fixed or permanent structure like a department or institute. When the project is finished, the organisation disappears;
- 3) Problem-solving knowledge production includes both theoretical and empirical components and thus contributes to fundamental knowledge, but not on a disciplinary basis;
- 4) The dissemination of “new knowledge” involves all those involved in the project / production process (Tjeldvoll 2002: 107).

One could undoubtedly argue that many of the recent changes brought to the relationship between the state and the HE and research sectors in the EU aim precisely at creating the institutional conditions necessary for knowledge production to develop along Mode 2 lines. From the STREP National Reports, it is quite striking to note the consensus that exists in **all** the EU member states studied here as to the desirability of interdisciplinarity in teaching and research. Although the National Reports tend to insist on the barriers that exist to the development of interdisciplinarity in the different national contexts, particularly (but by no means exclusively) in those countries whose academic traditions are closest to the Humboldtian and Napoleonic models, they also all provide detailed information on the various policy documents that have been adopted in favour of promoting a more multi-, pluri-, or interdisciplinary⁶ approach to knowledge production and dissemination in each national context. Given the diverse nature of the HE and research sectors in these countries, such a degree of consensus and convergence is quite astounding. Despite their divergent historical legacies, all the national HE and research sectors are currently faced with unprecedented pressures to adapt to the new “knowledge economy” that has become the cornerstone of the sustained development policies that are currently being promoted by the EU (European Commission 2000) and adopted by the different member states.

Before analysing the degree to which these reforms have met their objectives (section III), the second section of this report will present some background data on the main characteristics of

⁵ One could add here, from the Napoleonic ideal-type model, “or in the interests of the state”.

⁶ For a discussion of the differences between these terms, see Holm and Liinason (2005a) *STREP Comparative Report: Interdisciplinarity*. Göteborg: STREP Research Integration Project.; Krebs and Wenk (2005). *STREP Comparative Report: Current Debates about the Construction of Knowledge in the Social Sciences and Humanities and the Impact of these on Disciplinization*. Oldenburg: STREP Research Integration Project.

the HE sector in the eight EU countries studied here. This contextual data is important for understanding the conditions under which debates around the development of interdisciplinarity in teaching and research have appeared on the political agenda in recent years in all the eight EU countries studies here.

2 Some General Characteristics of the Higher Education and Research Sectors in the EU

Before considering in more detail the impact of the relationship between the state and the HE sector on the development of interdisciplinary teaching and research in different national contexts, it is important to include here a general overview of the main characteristics of the HE sector in the eight partner countries of the STREP project.

2.1 Student Numbers

In 2002, there were more than 16 million tertiary-level students in Europe, of which 78% were studying in a European Union member-state (Eurydice 2003b: 5). The student population of the countries included in this project varies from over 2 million (in France, Germany and the UK) to under 350 000 (in the Nordic countries and Hungary) (Table 6). However, the proportion of students in tertiary education, as a percentage of all pupils and students, is not necessarily the highest in those countries with the most students. In our project, three countries have a student population that is proportionally higher than the EU average of 15% (Finland, Norway and Spain), whilst the other partner countries are below this average. As we shall see below, increasing the proportion of the population who has access to higher education is at the heart of the EU education policies adopted over the past decades (Eurydice 2000).

Table 6. Students in Tertiary Education (ISCED 5 and 6), 2000

Country	N° of students (in thousands)	Students in tertiary education as a % of all pupils and students
Finland	270	21%
France	2 015	14%
Germany	2 055	12%
Hungary	307	14%
Norway	191	17%
Spain	1 829	21%
Sweden	347	14%
UK	2 024	13%
EU	12 563	15%

Source: (Eurydice 2003b: 5)

2.2 Expansion Rates in Student Numbers

The disparities in student numbers between the EU member states reflect the differing rates of expansion of the HE sector over the past three decades. Although all the countries studied here have seen their student populations increase significantly since the mid-1970s, this increase has been particularly spectacular in Finland, Spain and the UK (with more than a three-fold increase in the first two cases) and much less so in the other countries (Table 7).

Table 7. Evolution of Number of Students in Tertiary Education (ISCED 5 and 6), 1975-2000

Country	1975	1980	1985	1990	1995	2000
Finland	1.0	1.3	1.4	1.8	2.4	3.0
France	1.0	1.1	1.3	1.6	2.0	1.9
Germany	1.0	1.1	1.4	1.5	1.6	1.5
Hungary	-	-	-	-	1.0	1.5
Norway	-	-	1.0	1.6	2.0	2.1
Spain	1.0	1.3	1.7	2.2	2.9	3.3
Sweden	-	-	1.0	1.1	1.4	1.9
UK	1.0	1.1	1.4	1.7	2.5	2.8
EU	1.0	1.2	1.4	1.7	2.1	2.2

Source: Eurydice (2003b: 6).

This increase in student numbers may, however, be due to different factors in each national context. In some cases, universities may simply have been through a process of “democratisation”, offering the opportunity of higher education to people from social backgrounds that were previously excluded from the “ivory towers” of the academy. In other cases, it may simply be that students from the traditional recruitment groups of universities (young, white, male, middle-class) are spending more time in the higher education system and are increasing their levels of qualification in order to maintain their privileged position on the labour market.

2.3 Age Profile of Student Population

As shown in Table 8, there are considerable discrepancies across Europe with regard to the average (median) age of full-time students in tertiary education. Those countries with an older than average university student population may have been particularly successful in attracting mature students on a path of “life-long learning”. Alternatively, they may simply be retaining younger generations of students for longer than universities in other countries. This would seem to be the case in Finland which has the highest median age of full-time students. There would seem to be at least two explanations for this: 1) the university sector operates a highly selective admissions procedure and students may sit the university entrance exams several times before finally obtaining a place on the degree course of their choice. They are therefore relatively ‘old’ at the beginning of their university degree course; 2) degree programmes have traditionally been based on the Master level (with no equivalent to the BA/BSc before the adoption of the Bologna process) and students usually graduated after 6-7 years of study (Silius, personal correspondence). Unfortunately, the Eurostat data on this topic do not enable us to take this comparative analysis any further. However, some interpretation of the age differences of students may be gleaned from the data on the proportion of the adult population with tertiary education qualifications (Table 9).

From this data, we can clearly see that the Nordic countries (particularly Finland) seem to have been particularly successful in promoting the “knowledge-based society” that is at the heart of the EU education policy, by increasing the proportion of the 30-35 year old age group with tertiary qualifications. Indeed, with the exception of Hungary, all the STREP partner countries are above the EU average on this question.

Table 8. Median Age of Full-Time Students in Tertiary Education (ISCED 5/6), 2000

Country	Median Age (in years)
Finland	25.0
France	21.6
Germany	25.4
Hungary	21.4
Norway	24.5
Spain	22.2
Sweden	24.4
UK	20.9
EU	22.7

Source: Eurydice (2003b: 12).

Table 9. Proportion of Population Aged 30-34 years with Tertiary Education Qualifications (ISCED 5 and 6), 2000

Country	% with Tertiary Education Qualification
Finland	40.7%
France	27.4%
Germany	25.7%
Hungary	14.5%
Norway	37.7%
Spain	28.9%
Sweden	31.8%
UK	28.8%
EU	24.6%

Source: Eurydice (2003b: 17).

Table 10. Women per 100 Men Graduating from Tertiary Education (ISCED 5 and 6), 2000

Country	Women per 100 Men Graduating
Finland	150
France	124
Germany	101
Hungary	124
Norway	150
Spain	134
Sweden	140
UK	122
EU	123

Source: Eurydice (2003b: 20).

2.4 Feminisation Rates

The European HE sector also has an important role to play in promoting gender equality. Comparative research has clearly shown that women's access to tertiary education determines to a large extent their relationship to the labour market throughout their adult lives (Le Feuvre and Andriocci 2004).

Women with higher education qualifications are far more likely to adopt continuous, full-time activity patterns than their less well-qualified compatriots and increasing women's access to tertiary education thus represents an important tool in meeting the objectives of the Amsterdam Treaty with regard to increasing the female activity rates in the member states. In this respect, the Nordic countries again stand out as the most effective in attracting women into higher education. On the contrary, France, Germany, Hungary and the UK are around or even below the EU average for the rate of feminisation of their higher education systems (Table 10).

2.5 Gender Gaps in Types of HE Studies

However, even in those countries where women's access to tertiary education has been promoted, there are still signs of a significant "gender gap" in the types of qualifications they gain. In all the STREP partner countries, women make up the vast majority of graduates in Education, the Arts and Humanities and in Health and Welfare. They are less well represented in the Social Sciences, Business and Law and in the "hard" Sciences, Maths and Engineering (Table 11).

Table 11. Proportion of Tertiary Education Qualifications (ISCED 5 and 6) Awarded to Women, by Field of Study, 2000

Field of Study	FIN	FR	D	HU	NO	E	S	UK	EU
Education	82.3	69.4	78.6	71.9	78.6	78.3	78.5	72.0	71.3
Humanities	73.5	74.0	66.9	68.9	62.8	62.2	61.9	61.5	68.1
Soc Science, Business & Law	67.0	62.9	43.2	54.5	51.1	61.6	58.1	55.0	57.1
Science, Maths & Computing	45.2	41.8	31.4	31.8	30.8	42.5	47.5	41.5	41.4
Engineering	19.1	18.7	16.4	20.5	22.7	23.9	24.8	18.1	20.2
Agriculture	45.9	53.3	31.0	41.7	46.4	45.0	54.7	49.5	42.7
Health & Welfare	85.9	78.9	70.0	70.4	81.6	76.9	79.4	79.1	73.8
Services	66.8	51.3	50.7	34.8	42.6	58.2	57.0	-	53.5

Source: Eurydice (2003b: 23).

2.6 Variations in the Number and Type of HE Institutions

More detailed analysis of the number and type of HE institutions (Table 12) in each country reveal interesting differences between the countries. In most cases, we find a dual system, with universities existing alongside other, usually less prestigious, higher education institutions. However, the history of these “dual systems” varies considerably between countries. In some cases (the UK, France), there is a long tradition of the co-existence of universities and other HE institutions. However, in the UK the 1992 Further and Higher Education Act effectively served to integrate almost all the nation’s HE institutions under the university model. By creating “old” and “new” universities, this legislation actually increased the pressure on all the HE institutions to respond to “demand” and to position themselves on an increasingly competitive education and research market. In France, on the other hand, there has been no attempt to unify the highly complex network of HE institutions, but the implementation of the Bologna Agreement has involved making mobility between these institutions easier, notably through the mutual recognition of qualifications. In this case, there seems to have been an attempt to bring universities closer to the other HE institutions, notably by encouraging them to offer directly vocational degree programmes (Le Feuvre and Metso 2005) and more “flexible” or modular training paths for students.

In the Nordic countries, the national governments have been more preoccupied with creating new non-university HE institutions (e.g. university colleges) and by encouraging them to offer shorter, more vocational courses than those organised by the universities themselves. To a certain extent, these policy initiatives have also put pressure on the universities to adapt their degree programmes to a more “applied” profile and have increased competition for the increasingly scarce resources available to the HE and research sectors as a whole (Keskinen and Silius 2005b).

Table 12. Number and type of HE institutions in Eight EU Countries, 2005

Country	Number and Type of HE Institutions
Finland	<ul style="list-style-type: none"> • Dual system: 20 public universities, either Finnish or Swedish speaking + 29 polytechnics (<i>ammattikorkeakoulu</i>), offering more vocational training
France	<ul style="list-style-type: none"> • Complex system: 82 public universities, which account for 65% of all HE students + several public / private vocational schools • Only 1 private university, but many private vocational HE institutions
Germany	<ul style="list-style-type: none"> • Dual system: 117 universities + 160 <i>Fachhochschulen</i> + 56 other vocational institutions, almost all publicly funded
Hungary	<ul style="list-style-type: none"> • Dual system: 18 public and 7 private universities + 13 public and 34 private vocational colleges
Norway	<ul style="list-style-type: none"> • Dual system: 4 public universities and 6 public university institutions + 26 public and 17 private university colleges, offering shorter more vocational courses
Spain	<ul style="list-style-type: none"> • Unitary system: 48 public + 20 private universities
Sweden	<ul style="list-style-type: none"> • Dual system: 13 public and 3 private universities + 16 public and 6 private university colleges + 12 more specialised vocational institutions
UK	<ul style="list-style-type: none"> • Unitary system: 177 higher education institutions, of which 115 are universities • Only 1 private university

Source: STREP National Reports, www.hull.ac.uk/researchintegration.

Finally, the last decade has also seen the creation or development of private HE institutions in a number of EU countries (Spain, Hungary). In most cases, these institutions have played an important role in increasing the capacity of the HE sector, without putting too much pressure on the already over-stretched education budgets, although most private HE institutions do receive some form of financial support from the state. In other countries, any attempt to “privatise” the HE sector has met with such strong resistance from the academic community and from the general public that initiatives have been few and far between.

However, as we shall see in more detail below, many member states have nevertheless experienced other forms of “marketization” of the HE systems, notably through increased pressures to attract “external” sources of funding, particularly for research (Keskinen and Silius 2005a). The introduction of student registration fees in countries where access to education has traditionally been free-of-charge and based solely on “academic merit” (Krebs et al. 2005) is yet another sign of significant changes to the philosophy behind the HE systems in many EU Member states.

In conclusion to the second part of this report, we now have a clearer picture of the context within which repeated calls for the development of interdisciplinarity in teaching and research have appeared on the political agenda of all the EU countries studied here. In the third and final part of this report, we will go on to analyse the diverse ways in which recent public policy reforms of the HE and research sectors have had (or are likely to have) a direct or indirect impact on the barriers to interdisciplinarity that were identified in the STREP National Reports.

3 The Impact of Recent Public Policy Reforms in the Higher Education and Research Sectors on Interdisciplinarity

As a recent European Commission report has stated: “Although education policy is primarily the responsibility of individual member states according to the principle of subsidiarity, Article 126 of the Maastricht Treaty recognised for the first time the responsibility of the European Community to promote cooperation in education between European countries. In 1991, a Memorandum on Higher Education in the European Community was published by the European Commission as a contribution to the ongoing debate in Member states on the policies necessary to develop their higher education systems to meet the changing needs of the 21st century. The Memorandum identified the five critical areas for the future development of higher education: participation in and access to higher education; partnership with economic life; continuing education, open and distance learning and the European dimension in higher education. The importance of student mobility, the international role of higher education, the need for strategic management at institutional level as well as the issues of quality and finance were addressed in this Memorandum (Eurydice 2000: 13).

In Table 12, with data provided by the STREP National Reports and European Commission reports (Eurydice 1999; Eurydice 2000; Eurydice 2003a; Eurydice 2003b), we have attempted to summarise the main legislative changes that have been introduced in the eight EU member states over the past decades. It is clear that not all these changes will have a direct effect on the ability of European universities to develop and promote interdisciplinary teaching and research. However, in this chapter, we propose to review the main tendencies that can be identified from the available data and to consider their – confirmed or potential – effects on this particular aspect of HE teaching and research activities.

We will focus on the 4 main themes related to HE and Research policies that seem to have the most bearing on the barriers to interdisciplinarity in the humanities and the social sciences⁷:

- Decentralised management of HE institutions
- Quality assessment, accountability and funding
- Selectivity, access and completion rates in HE institutions
- Curriculum development and the “employability” of graduates

⁷ The other issues related to HE and research policy measures are dealt with in the other STREP Comparative Reports.

Table 13. Major HE and Research Reforms in Eight EU Countries, since 1968

Country	Year	Type of Legislation	Antecedents and Implementation
Finland	1969	Financial Aid for HE Students	Introduction of state guaranteed student loans
	1986	Higher Education Development Act	Replaced the 1966 Act. Implementation of “budgeting by results” phased in until 1994: funding split between “operational expenditure” and “investment”
		-	Lump-sum budgeting for all expenditure except academic positions introduced without legislation
	1991	Development Plan for Education and University Research	Delegation of more powers to the institutions, in order to increase efficiency and promote high quality and international recognition in HE and research. Introduced national evaluation process for both programmes and institutions
	1991	Experimental Polytechnics Act	Creation of a non-university sector parallel to the universities > up-grading of vocational training. Access to all sectors of HE extended to students with post-secondary level vocational qualifications
	1993	Development Plan Amendment	Reform of degree structure and course content in order to meet labour market needs and reduce graduate unemployment rates. Promotion of R&D with a view to strengthening the national innovation structure. Promotion of international cooperation. Lump-sum budgeting extended to include the creation of academic positions
	1994	Financial Aid for HE Students	Reformed student grant / loan system (larger proportion of funding through grants). Funding for a Masters course limited to 55 months
	1995	Permanent Polytechnics Act	Established the vocational Polytechnics alongside traditional universities
	1995	Education and University Research Development Plan	Ten priority areas: life-long learning, labour market orientation, international cooperation, language teaching, national strategy for research and education, sustainable development, maths and science skills, cultural mission of the universities, centres of excellence and quality evaluation procedures.
	1996	Finnish Council for HE Evaluation	To assist universities and polytechnics in self-evaluation and to promote Finnish HE and research
	1997	Universities Act	Replaced all existing legislation on curriculum, research activities, administration, etc. with a loose framework giving more autonomy to each university. Introduced tripartite government of universities (academic staff, administrative staff, students)

Sources: Eurydice (2000); Keskinen and Silius (2005b); Silius (1987).

Country	Year	Type of Legislation	Antecedents and Implementation
France	1968	Higher Education Act (Faure Law)	Replaced Napoleonic faculties with multi-disciplinary teaching and research units (UERs). Was never totally implemented
	1984	Higher Education Act (Savary Law)	Replaced the 1968 Faure Law. Increased the self-regulation of universities by giving them the right to enter into 4-year contracts with the state, based on development plan addressing both national objectives and local raining needs. Creation of the National Evaluation Council (CNE). No student selection, but procedures for better student guidance. Changes to university democracy (staff and student representatives on decision-making bodies). Changes to student grants
	1985	Decentralisation Laws	HE remained under state responsibility, but the regions were invited to contribute to funding vocational training, which became a regional responsibility, and research
	1989	Education Act (Jospin Law)	Created autonomous teacher-training institutes
	1989	National Forum on HE (Plan U2000)	Plans to build several new universities, co-funded by the state and by the regions
	1992		Under-graduate reform order: more counselling, information and guidance for students in an aim to reduce high drop-out / failure rates
	1994	Decree on HE and Research Funding	Reinforced management control on HE and Research funding (so-called “management funding”), but also encouraged the devolution of decision-making with regard to financial priorities to the institutions
	1996	National Forum on HE	Modernisation of degree courses and teaching evaluation. Only limited implementation
	2003	Bologna Reform	Introduced three-tier degree system. Encouraged partnership with “social partners” and continued to promote state contracts.

Sources: Eurydice (2000); Le Feuvre and Metso (2005).

Country	Year	Type of Legislation	Antecedents and Implementation
Germany	1976	Higher Education Framework Act	The Act introduced a system for the nation-wide recognition of exam results and provided for university democracy, based on participatory management. Organised devolution of education issues to the <i>Länder</i> , within the federal framework laid out in the Acts
	1985	Amendment	Revision of application procedures for HE courses; introduction of a multi-stage procedure for selective courses
	1985		Law on procedures for employing temporary academic staff
	1989	Special Higher Education Programme I	Created 17 000 extra study places (3 200 additional posts) for high demand courses, especially in management
	1990	HE in the New <i>Länder</i>	Basis principles for organising HE in the New <i>Länder</i>
	1990	Special Higher Education Programme II	Creation of 2 500 new academic posts and procedure for accelerated promotion of young academics
	1996	Special Higher Education Programme III	Improvement of HE infrastructures (tutoring, ICTs, teaching evaluation, international cooperation, promotion of women and support for post-docs)
	1998	Amendment	Preparation for the Bologna process. Wide-reaching reforms, including performance-related allocation of funds, evaluation of teaching and research, tutoring for students, ECTS, new selection procedures for students, redefinition of standard period of study.

Sources: Eurydice (2000); Krebs et al. (2005).

Country	Year	Type of Legislation	Antecedents and Implementation
Hungary	1985		Self-governance for universities
	1990		Creation of private HE institutions
	1993		Doctoral training re-instated in the universities, alongside the Hungarian Academy of Science

Source: Jakab et al (2005).

Country	Year	Type of Legislation	Antecedents and Implementation
Norway	1970	Examinations and Degrees Act	First step towards a more integrated HE system; introduced unified rules for the regulation of examinations and degrees in universities and university colleges
	1981	Royal Decree	The 1970 Act was extended to regional colleges and to colleges of engineering, teacher training, social work, journalism and library studies, which became degree-awarding HE institutions in their own right.
	1985	Financial Support Act	Regulated loans and grants to students
	1986	Private HE Act	State Funding and recognition of study programmes in private HE institutions
	1987	Green Paper	Review of the HE sector, used as the basis of the 1989 Royal Decree
	1989	University and Colleges Act	Replaced the 1970 Act on examinations and degrees. In addition to simplifying legislation, delegation of powers and increased self-regulation of institutions, including the right to appoint staff
	1990-1991	Royal Decrees	Upgrading of non-university HE institutions to degree-awarding institutions. Included: maritime colleges, colleges of music, hotel management, nursing and other paramedical professions
	1991	White Paper on HE	Suggested reorganising and merging all HE institutions. The term “Network Norway” was coined to denote a national HE and research network based on the principle of specialisation of each institutions within a national network.
	1992	Green Paper on HE	Served as a draft for a new Act covering the whole of the public HE sector
	1993	Royal Decree	Reorganisation of the non-university sector by merging 98 regional and vocational colleges into 26 state colleges
	1995	Universities and Colleges Act	Replaced the 1989 Act by covering all higher education institutions
	2003	Quality Reform	Aimed to increase the quality of HE through changes to teaching and examinations; interdisciplinary actively promoted in teaching and research

Sources: Eurydice (2000); Widerberg et al (2005).

Country	Year	Type of Legislation	Antecedents and Implementation
Spain	1983	University Reform Act	Implemented the provisions of the 1978 Constitution, including equal rights to higher education. Established the devolution of education issues to the Autonomous regions and increased autonomy of universities with respect to staff selection procedures
	1986	Promotion and Coordination of Scientific and Technical Research Act	Defined the National Plan for Scientific Research and Technological Development. Established the Centre for Technological and Industrial Development in order to promote the introduction of ICTs
	1989	Royal Decree on Degree Recognition	Laid down general guidelines for the planning, structure and content of university courses and for the national recognition of degrees.
	1990		Law recognising private universities
	1993	Royal Decree on Vocational Training	Laid down general guidelines for qualifications and curricula for higher level vocational training
	1994	Report on University Funding	Recommended increases in spending on HE, especially in the non-university sector, and in self-financing of the public universities, through tuition fees and contract-based funding. Student loans. Drive for more efficiency through institutional management of universities.
	1995	Royal Decree on Quality Assessment	Established the National Plan for the Quality Assessment of Universities in order to promote and harmonise the evaluation process. Aims to give all user groups “an objective view of the quality of higher education”.
	2001	University Law	Some return to a centralised system, particularly with regard to staff recruitment procedures. Only partly implemented to date.

Sources: Eurydice (2000); Carrera Suarez et al (2005).

Country	Year	Type of Legislation	Antecedents and Implementation
Sweden	1985	Amendment to 1977 HE Act	Introduced a simplified system for teaching posts in HE. All academics have to undertake teaching, research and administrative tasks as part of their duties.
	1987	Amendment to 1977 HE Act	Move towards more emphasis on self-management of the HE institutions, with participation of social partners and local authorities in HE decision-making bodies
	1988	Student Grant Reform	Proportion of grants increased (in relation to loans). Annual loan repayments limited to 4% of income.
	1992	National Agency for HE	The National Swedish Board of Universities and Colleges abolished. Quality control devolved to University Chancellors
	1992	Higher Education Act	Replaced the 1977 Act. Introduced measures in favour of the autonomy of universities and university colleges. Performance-based funding introduced. Better student representation on decision-making bodies, improved student guidance and counselling. Course planning devolved to the universities
	1995	National Agency for HE	New procedures for quality control and student admissions
	1996a	Amendment to 1992 HE Act	New national rules for eligibility, selection and admission to universities and university colleges
	1996b	Amendment to 1992 HE Act	Cooperation and interaction with society defined as a “3 rd task” of universities and university colleges, besides teaching and research
	1997	Amendment to 1992 HE Act	Reorganisation of management of HE institutions and increase in the number of professors. Requirement of an independent (i.e. non-academic) Chair of the governing Board of universities

Sources: Eurydice (2000); Holm and Liinason (2005b)

Country	Year	Type of Legislation	Antecedents and Implementation
UK	1981	White Paper	Plans to reduce expenditure on HE by 8% over 3 years. Heralded broad changes in HE policy under conditions of severe financial restraint
	1987	White Paper	Change in policy: Commitment to increase participation rates and widening access to HE for mature entrants and those without entry qualifications. Need for further efficiency gains stressed.
	1988	Education Reform Act	Following the 1987 White Paper proposed funding changes for polytechnics and a revised policy on access to higher education
	1990	Student Loans Act	Introduced loans as part of a student aid package comprising a means-tested grant, a loan and the payment of fees.
	1991	White Paper	Abolished the binary system between university and non-university institutions, leading to a unified sector composed of “old” and “new” universities
	1992	Further and Higher Education Act	Introduced fundamental changes to the structure of HE. Establishment of the Higher Education Funding Councils, responsible for funding and quality control
	1997	Dearing Report	Recommendations covered institutional funding, student finance, teacher training, quality assurance, research, use of ICTs and the relationship between HE and industry and commerce.

Source: Eurydice (2000: 35-79); Griffin et al (2005b).

3.1 Decentralised Management of HE Institutions

One of the most significant changes that can be observed, with varying degrees of importance, all the countries studied here, has been the changing levels of autonomy of higher education institutions, especially universities. This has been described as a move from an “interventionist state” towards a more “facilitating state” (Neave and Van Vught 1991). This process has often involved the freeing of higher education institutions from detailed state control through strict general legislation by giving them the right to adopt their own regulations in the broadening area over which they have autonomy (budgeting, curriculum development, staff appointments, etc.).

In their study of the relationship between the state and higher education in Europe, Neave and Van Vught (1991) argue that this institutional autonomy actually concerns two separate and distinct dimensions: the control over the *process* of higher education and the control over its *products*. According to these authors, the first form of control applies to the everyday activities of institutions, such as teaching, curriculum development, etc. The second form of control concerns the number, type and level of qualified students, research publications, etc. that universities “produce”. Neave and Van Vught claim that the increased autonomy of HE institutions in Europe has focussed mainly on the control they exercise over the *process* of higher education and that this increase in autonomy has simultaneously been counteracted by legislative measures that enable the state to maintain or even increase its control over the products of higher education and research. As we shall see in more detail below, this control is now exercised through processes of accreditation, quality assurance procedures and evaluation.

In several countries, the increased autonomy of higher education institutions was obtained by the introduction of a more flexible legal framework, with an explicit aim of simplifying the legal procedures that the higher education institutions were expected to conform to. We have already seen (cf. Table 13) that such measures were introduced in Germany in 1998 (4th amendment to the 1976 Higher Education Framework Act), in Finland in 1997 (Universities Act), in Sweden in 1992 (Higher Education Act) and in Norway in 1989 (Universities and University Colleges Act).

In countries with a traditionally more centralised approach to the administration of the HE and research sectors, radical changes to the philosophy of HE management have not been introduced as explicit pieces of legislation, but have been nevertheless slowly appeared on the public policy agenda through changes to the administrative rules that govern university funding and, in some cases, as part of the implementation of the Bologna Agreement (Carrera Suarez and Vinuela Suarez 2005).

Spain and France stand out as different from other countries studied here “due to the lack of major legislation on the autonomy of higher education institutions after early 1980s” (Eurydice 2000: 31). Both these countries have retained a significant level of central control over higher education through legally defined rules and standards. According to Christine Musselin, French academics still feel less commitment to their institutions than to their own discipline and, until recently, this has served to reduce the power of universities as institutions. Despite attempts to increase the autonomy and self-regulation of universities, these reforms have been more difficult to implement in France because they require some degree of consensus to be found between the conflicting “corporative interests” that are

represented amongst the ranks of academic staff within a given university. She has analysed the tensions that exist between university presidents and deans (heads of faculties) with regard to the emergence of the university as an active partner within the French HE sector (Mignot-Gérard and Musselin 2002) and shown how university presidents are generally eager to seize the new decision-making powers the Ministry has delegated to them, whilst the deans continue to see the discipline-based councils of the Ministry as the most important and legitimate sources of control over their daily tasks.

In Spain, the 1983 University Reform Act (*Ley de Reforma Universitaria* - LRU) which greatly increased autonomy of the universities also provoked some initial opposition from the academic community who felt they had not been sufficiently consulted (Carrera Suarez et al 2005). Thus, the full implementation of the Act took many years, and resistance to the self-regulation powers given to the universities from within the academic community undoubtedly explains the lack of fundamental changes that followed the more recent 2001 *Ley Orgánica de Universidades* (LOU). As in France, there is a feeling that the academic community in Spain has paid lip-service to the quite far-reaching reforms that have been adopted, without fundamentally changing their behaviour on a day-to-day basis (Carrera Suarez, Vinuela Suarez and Rodriguez Gonzalez 2005: 4).

Analysis of recent reforms in countries which have traditionally been based on the autonomy of the universities is particularly interesting, precisely because it reveals the “double-edge” to much of the recent changes that have swept through the European HE and research sectors. In the UK: “the reforms were generally intended to increase efficiency, quality and accountability for the use of public funds, whilst maintaining the already existing high level of institutional autonomy” (Eurydice 2000: 87). Thus, to a certain extent, through the various national evaluation procedures that were imposed (often with their consent) on universities throughout the 1990s (Griffin et al 2005b), the state has actually become more rather than less intrusive in the regulation of the HE sector.

The ambivalence of the new “self-regulation” measures introduced in all of the EU countries studied here is perhaps best illustrated by the German case. As we have seen (section 1.1.), the Humboldtian tradition was based on a high degree of autonomy, more of academics as individuals than of universities as institutions one might say. The HE and research sectors in this country have recently undergone significant reforms and, as in the UK and most of the Nordic states, the question of “academic accountability” has been central to these. By using the “public interest” rhetoric that was traditionally a characteristic of the Anglo-American HE model, there are signs that the German *Länder* are increasing their control over the everyday management of universities. Rather than imposing the kind of direct control over curriculum development and staff management that were central to the Napoleonic ideal-type model, the German state has succeeded in removing the right to define “academic excellence” from the hands of the academic community itself and has imposed its own evaluation criteria on large sections of the HE and research sectors (Musselin 2003). Thus, the legitimacy of the “pure knowledge production” Humboldtian tradition has been replaced by the idea that universities should be organised according to “public interests”.

In the German case, as can also be observed in some of the Nordic countries and in the UK, the notion of what exactly constitutes the “public interest” is open to discussion. It would certainly seem that a duty to supply the labour market with the right kind of skills and a duty to produce and disseminate research results that can make a contribution to solving “social problems” are at the heart of the definition of the “public interest” which has been adopted by

most national governments over the past decades. The additional duty to provide such services in a cost-effective way is also, of course, a vital element of the new “public interest discourse” that has influenced the re-organisation of the HE and research sectors in recent years.

3.1.1 Reforms to HE Funding

One of the most important aspects of the decentralisation of HE and research management from the state to the institutions has been the question of funding, both in terms of the general level of spending on the HE and research sectors and in terms of the criteria on which funds are allocated within the system.

It is important to note that most of the reforms introduced over the past decades have taken place in a context of economic recession and of restrictions on public spending. In many countries, the constraints of the Maastricht Treaty have stimulated changes in the way public funds are allocated to higher education and research, with a move towards various forms of “contractual arrangements” between the HE institutions and the state. These “contracts” are usually based on increased levels of competition within and between institutions and on the rather hazy notion of “excellence”. The recent reforms can be summarized into four main areas: a change from earmarked spending to lump-sum or block-grant budgets, a move towards the introduction of more objective funding procedures, the connecting of funding to outputs (degrees awarded, publications) rather than inputs (enrolled students) and the development of external, contract-based funding (Eurydice 2000).

In all the countries studied here, HE institutions have also been encouraged to look for alternative sources of funding, both nationally, from local and regional governments (Filâtre and Manifet 2003), industry and commerce, etc. and internationally, notably from the EU RTD programmes. As we have seen, the pressures on HE institutions to “sell” their services on a more or less open market represents a radical change in most national contexts, particularly in those countries where higher education was traditionally seen as a public service. In Germany, France and Spain, the reforms in this area even required an explicit change in the juridical status of the higher education institutions, since they have been accompanied by the devolution of responsibility from the central or federal state to the regions. In France, the decentralisation of the HE system began with vocational training, but has since been encouraged in relation to research too.

Despite these radical changes in the funding of HE institutions and research, most of the countries studied here (Spain, France, Finland Sweden, Norway and Hungary), have encouraged some degree of “marketization”, whilst maintaining or even increasing their overall levels of public spending on higher education and research. The UK, which went through a similar process much earlier than the other countries, is in a slightly different position, since spending cuts in the HE sector were one of the main reasons for encouraging HE institutions to increase the range of services they could sell on the open market (Eurydice 2000: 97). According to the authors of the National Report, higher education in the UK has suffered from chronic under-funding for over thirty years (Griffin et al 2005b). In this context, the state has since become a central actor on the higher education and research market, notably by providing financial incentives for institutions to increase the number of university places available, whilst ensuring quality assessment through nationally-organised accreditation and evaluation exercises (Griffin et al 2005b).

It should however be remembered that, in some EU countries, the state is still the main employer of the academic community. Although most universities are no able to recruit temporary administrative, research or teaching staff, academic careers in Germany, France and Spain are still relatively independent of the budget decisions made by the universities themselves. Furthermore, although all of the countries studied here are in the process of introducing more decentralised management practices, relatively few countries have, to date, totally tied their levels of spending to the various “performance” indicators they have encouraged universities to develop. Again, the UK has gone furthest down this road, but there are also signs that some of the Nordic states (Finland, for example) are increasingly tying funding to the universities’ ability to meet quantitative or qualitative objectives (Silius 2005).

Some authors have identified a general trend away from the “state-control model” of higher education towards a “state-supervisory model” where the government prefers to guide the system and its funding from a distance by setting the wider framework and objectives for development (de Boer et al 1998). This movement led to a bolstering of the management culture of HE and research institutions, including changes to the composition of their governing bodies to include more external, non-academic members, and changes in the role of institutional councils from a “control-oriented” function to an “advice-oriented” stance. The management structures of EU universities vary considerably, with some institutions being run by professional academic management staff, whilst others are managed by academics on temporary secondment from their departments. The degree to which so-called “new managerialism” has become part and parcel of the academic world varies considerably between the countries studied here. In most cases, however, academic staff recruited on the basis of their publishing record (or, more rarely, on their teaching experience) are finding themselves in new and often unfamiliar roles as “academic entrepreneurs”, with budgets to spend and market demands to meet (Enders 2000; Henkel 2000; Mignot-Gérard 2003; Morris 2003; Reed 2002). These reforms have brought major changes to the way academic “tribes and territories” (Becher and Trowler 2001) are organised within the HE and research sectors in the different national contexts (Griffin et al 2005a).

Although the general trend in Europe might be the development of government steering at a distance as well as the expanding of the managerial culture in higher education institutions, there are still great differences between the countries where the tradition of state control remains strong (Spain, France) and the countries at the forefront of these changes like the UK and most of the Nordic countries.

3.1.2 “New Managerialism” and Interdisciplinarity

To our knowledge, little systematic research has been carried out to date on the effects of the “new managerialism” culture that is currently seeping into HE and Research institutions on the development of interdisciplinary training and research. The STREP National Reports provide rather contradictory analyses on this point. In those countries where the centrally-organised disciplines have traditionally been the bed-rock of the HE and Research systems, there are some signs that the devolution of university management to the institutions themselves and the moves to make these institutions more responsive to “social needs” may indeed provide a new impetus for interdisciplinary teaching and research activities. However, examples for countries where the disciplines have long since lost their monopoly over the HE and research sectors imply some caution in this matter.

In those countries where the relationship between the HE sector and industry and commerce and / or local government agencies has been systematically institutionalised (as in Sweden and the UK, for example), there is some evidence that universities are tailoring their teaching and research activities quite tightly to “external demands” (as one would expect from universities that correspond closest to the Anglo-American ideal-type model). This is obviously, at least in the case of the UK, because partnerships with industry and other social groups represent an important source of income for the HE institutions. In so far as the “external demands” require complex combinations of knowledge, it seems likely that fostering collaboration between departments and / or between academics from different disciplinary traditions would prove to be economically rational for the institutions concerned.

However, there is also evidence from these same countries and from Finland (Keskinen and Silius 2005b), that the increased competition within institutions, particularly between departments, may actually be detrimental to the further development of interdisciplinary teaching and research initiatives. Since funding is now “targeted” and each institutional component is required to prove its own “market value” (notably by bringing in external funding for research and / or by attracting students to its courses) in order to access resources within the institution (or, indeed, in order to survive as an autonomous unit within the university), the most rational solution is for the departments to operate within clearly demarcated boundaries. Collaboration with other departments may prove interesting and indeed effective in attracting students or external funding, but it can also have negative consequences if the departments that have decided to work together then have to wrangle about which proportion of the additional resources they should each have access to or indeed be recognised as having brought in.

The solution to this problem that has been adopted in some countries (e.g. Norway) is to link interdisciplinary structural units to clearly identifiable internal budgets. However, if knowledge production is to be brought closer to the Mode 2 ideal-type presented in the first part of this report, such institutional or infrastructural arrangements for interdisciplinarity also have their limits. It may well be, for example, that in a particular context, such structural units bring together two or more disciplinary departments (e.g. sociology and geography), whereas more “demand” exists for collaborative work between sociologists and psychologists or between geographers and economists than between sociologists and geographers. Should this be the case, the institutionalisation of interdisciplinary structures along “efficient resource management” criteria may actually be detrimental to the institutions’ ability to react quickly and cost-effectively to “market demand”.

Other issues concerning interdisciplinarity and “new managerialism” in the HE and research sectors are also worth mentioning. These concern the nature and financial solvency of the “social needs” that universities are increasingly encouraged to address. It is clear that some disciplines or interdisciplinary groupings have access to more affluent user groups than others. It has traditionally been easier for technological and ‘hard’ sciences to attract external funding than it has been for the humanities and the social sciences. However, even within the latter group of disciplines, this is a complex issue.

It may be useful to refer to the results of a previous EU-funded project here⁸. One of the conclusions from this research concerned the relationship between the development of interdisciplinary Women’s Studies centres or departments in European universities and their

⁸ This was the Employment and Women's Studies Integration (EWSI) Project - HPSE-CT2001-00082

relationship to the social actors directly involved in promoting equal opportunities outside universities. The cross-national comparison of this issue showed quite clearly that Women's Studies were indeed more institutionalised in those countries where strong ties existed between the HE institutions and the equal opportunities bodies in the public, private or the voluntary sector. However, the institutionalisation process of this interdisciplinary field did not only depend on the ability of Women's Studies centres or departments to "market" their services to relevant user groups. It also depended on the ability of such groups to buy in the expertise that was available in the HE and research sectors. In those countries where the promotion of equal opportunities was given a high profile, both in public policy and in the private sector, the potential user groups of gender equality expertise were relevantly solvent and could contribute to improving the institutional position of Women's Studies centres and departments by contributing to their resources (either by sending their staff on courses or by contracting out specific research projects). In countries where this was not the case, the financial resources necessary to enhance the institutional position of Women's Studies within the universities were simply not available amongst the potential "user groups". Somewhat paradoxically therefore, the "new managerialism" principles in the HE sector served to encourage the development of interdisciplinary Women's Studies teaching and research much more in countries where gender equality issues already benefited from a relatively high level of visibility and social legitimacy than in countries where this was not the case (Andriocci and Le Feuvre 2005). One could obviously argue that the "social need" for gender equality expertise was actually higher in the latter countries than in the former!

3.2 Selectivity and Conditions of Access to HE Institutions

The question of increasing and democratising access to HE institutions has been on the political agenda of most EU member states since the mid-1980s. This increase in demand for some HE courses and the desire to see the qualification levels of the adult population improved has led to reforms in HE selection procedures in most countries. This has been reflected both in the increase in the number and diversity of HE institutions and in the increase in the number of applicants for places in higher education. In most of the countries studied, expansion was greatest during the 1970s, while in Spain most expansion took place during the 1980s (Carrera Suarez et al 2005) and, in Hungary, since the beginning of the 2000s (Jakab et al 2005). Despite the decrease in the number of school-leavers seen in most countries since the mid-1980s, the demand for higher education has continued to increase in the countries studied here, as young people and especially adults choose to obtain further qualifications before entering a very competitive job market. As we have already seen (Table 7), France and Germany stand as an exception to this rule, since the number of higher education students began to level out during the mid-1990s. However, in France at least, the reduction in student numbers has not affected all sections of the HE sector to the same extent: the "hard" science universities have lost more students than those in the arts, humanities and social sciences (Eurydice 2003a: 15).

Thus: "Countries faced the difficult task of balancing the growing demand for a qualified workforce against the cost of a mass higher education system and the need to maintain the quality of higher education provision" (Eurydice 2000: 107). In all the countries studied here, the standard basic requirement for entry to university is the successful completion of general upper secondary education. Some countries (France, the Nordic countries, the UK) have adopted policies to open HE courses to those pupils who have gained a vocational secondary school qualification.

Despite the demand and competition for places in higher education, most countries studied here have introduced reforms aimed at widening access, focussed particularly on improving access for mature students.

Table 14. Selectivity and Entry to Higher Education in 1997

Country	Non-University Sector			University Sector		
	No Selection	Some Selection	Mostly Selective	No Selection	Some Selection	Mostly Selective
Finland			X			X
France			X		X	
Germany		X			X	
Hungary			X			X
Norway		X			X	
Spain			X			X
Sweden			X	(-)	(-)	(-)
UK			X			X

Source: Eurydice (2003b: 108).

(-) = no data available

Table 15. Routes to HE for Mature Students without Traditional Qualifications in 1997

	FIN	FR	D	HU	NO	E	S	UK
Accreditation of prior occupational / study experience	X	X	X	-	X	X ⁹	X	X
Quota of places	X	-	-	-	-	X	X	-
Special entry exam	X	X	X	-	-	X	X	-
Access courses	-	X	-	-	-	X	X	X
Flexible / open / distance learning	X	X	X	X	-	X	X	X

Source: Eurydice (2003b: 116).

It is interesting to note that France is the only country where the non-university sector is actually more selective than the traditionally open-access university sector. In fact, only post-graduate university courses and some vocational undergraduate courses are allowed to select their students in this country. In Germany, the introduction of selection criteria has been extremely controversial and some admission decisions have been successfully challenged in the courts (Eurydice 2000; Krebs et al. 2005).

Despite the relatively similar selection procedures, there are clear differences in the locus of responsibility for the selection process between countries: “Where access to higher education was limited, the decision about the overall number of places offered was most commonly taken by the institutions themselves [...] This decision was based mainly on the capacity of the institution, but in some countries it was steered by government imposed target number of places (Sweden and the UK) and/or graduates (Finland)” (Eurydice 2000: 112).

⁹ For vocational courses only.

In Norway, the number of places offered in all disciplines is decided by the appropriate Ministry, taking into account the capacity of the institutions and the demands of the labour market. In Germany, the *Länder* ministries only take account of the capacity of institutions, but not the labour market (Eurydice 2000: 112). In Spain and France, labour market demand for students has not traditionally been a legitimate criterion for creating new courses or degree programmes, but there are signs that this is becoming increasingly important, particularly at post-graduate level. One of the major problems here is obviously that of gauging the nature and level of “market demand” for students with a particular academic profile. As a previous EU-funded research project on graduates’ labour-market experiences has shown quite clearly, “demand” for students with a particular profile may be quite latent and invisible until those students actually enter the labour market. This was clearly the case in many countries for graduates from the interdisciplinary Women’s Studies courses whose experiences were analysed in the EWSI project (Griffin 2005).

In parallel with measures to broaden access to HE institutions, many national governments and / or universities have also been preoccupied with improving the completion rates of higher education courses. As the European Commission has stressed: “Encouraging students to progress quickly through their higher education courses has been seen by many countries as a way of optimising the use of the higher education system in the face of high demand” (Eurydice 2000: 120). In those countries where the academic tradition does not require students to finish their studies in a set time-frame and gives them the freedom to decide when to sit their examinations (Finland, France, Germany and Spain to a certain extent), this drive to reduce the duration of studies has met with great resistance, both from the students and from the academic community. This has particularly been the case where the introduction of shorter or modular courses has been the main tool used to improve completion rates. It has often been felt that these types of courses reduce the freedom of academics and produce over-simplified processes of knowledge production and transmission (in favour of producing “bite-size” nuggets of knowledge), precisely in a context where the increased complexity of contemporary societies required introduction to a wide-range of theoretical perspectives.

3.2.1 Selectivity, Access, and Completion Policies in Relation to Interdisciplinarity

There is no consensus in the STREP National Reports about the effects that public policies in relation to selectivity, access and completion rates in the HE sector are likely to have on the barriers to interdisciplinarity in the humanities and social sciences.

In some countries (Finland, France, Germany, Spain, for example), there is a clear impression that the reduction of the time students spend in HE and the modular degree systems that have been introduced under the Bologna Agreement are likely to be detrimental to the development and promotion of interdisciplinarity. This is generally the case in countries with a tradition of strong discipline-based degree programmes. In these cases, interdisciplinarity often involves the parallel or successive study of two or more disciplinary fields, ideally in equal depth.¹⁰ Students are thus equipped to cross disciplinary boundaries in so far as they have received training in two or more disciplinary traditions. However, this takes time and is not conducive to the policy objectives on reducing “wastage” (to use the EU term) within the HE sector.

¹⁰ For a more detailed discussion of the notion of « interdisciplinarity », see Holm and Liinason (2005a) *STREP Comparative Report: Interdisciplinarity*. Göteborg: STREP Research Integration Project.

When the academic community is pressured to improve degree completion rates, there is a “natural tendency” for them to re-assert the central importance of core knowledge within a single disciplinary field (Carrera Suarez and Vinuela Suarez 2005). Thus, even when students are formally able to build their own study programmes from a choice of subject-based modules, they may be actively encouraged to focus on modules offered by a single discipline / department, since this “specialisation” often serves to improve examination pass-rates.

In other countries (Finland, Sweden, the UK, for example), concern is expressed about the indirect effects of the modular degree system (in conjunction with increased competition between different HE institutions) on the increasingly narrow disciplinary and / or thematic focus of degree programmes (Griffin et al 2005b; Keskinen and Silius 2005b). As funding is increasingly linked to student numbers and to degree completion rates, university departments are under pressure to maintain direct control over “their” own students learning paths. Students may, therefore, be actively discouraged from “broadening their horizons” by taking optional courses offered by other departments within the same university and actively encouraged to remain within a single disciplinary field. In some countries, these institutional constraints have clearly constituted a barrier to the development of emerging interdisciplinary fields of study such as Women’s Studies (Keskinen and Silius 2005a; Widerberg and Hirsch 2005).

In other countries, the negative effects of the modular HE systems and of faster degree completion rates on interdisciplinarity are less evident. There is some evidence from Norway, Sweden and the UK to suggest that modularisation has served to promote the development of multi-disciplinary degree programmes by fostering more institutional collaboration between departments. However, the positive effects of measures to reduce the weight of the disciplines within modular degree programmes are often dependent on the existence of student demand for interdisciplinary courses. The experience of Women’s Studies in the UK clearly shows that this interdisciplinary field was able to flourish in many UK universities in the 1980s and early 1990s because there were numerous students willing to register for such courses (Griffin 2002) and because the universities were willing to push resources into programmes that responded to a clear “market demand”. However, somewhat paradoxically, once measures to improve HE access for the main target group of Women’s Studies courses (mature female students) were more widely adopted across the HE sector as a whole, the relative attractiveness of these broad-based, pluridisciplinary courses began to fall, as students were more interested in courses with a more explicitly vocational slant. These were often offered within the traditional discipline-based departments and have served to undermine attempts at promoting interdisciplinarity in this field in the UK.

The state and institutional policies towards students can thus be seen to have ambiguous or even contradictory effects on reducing the barriers to interdisciplinarity in the EU Member states. Similar conclusions can also be drawn from a more detailed analysis of the policies aimed at reforming the ways in which the curriculum is organised in the different national contexts.

3.3 Curriculum Development

As with questions concerning selectivity and access to the HE sector, there are signs that the different EU members states are also decentralising responsibility for curriculum development

to the universities, although this move often brings more indirect forms of state control over the type of degree courses offered and their content.

As the European Commission report on Reform in Higher Education in Europe has stated: “Due to the impact of economic factors, governments policies in many countries focused on tightening the links between higher education and the needs of the labour market for highly-qualified employees. Higher education was increasingly expected by governments to tailor its course offer towards areas with current or predictable skill shortages and to be flexible in the re-direction of resources [...] There are two separate and somewhat contradictory trends in relation to the planning of higher education courses. The first is the strong trend towards giving higher education institutions more autonomy over their administrative affairs, including course planning. The second is the intention, mainly promoted by public authorities, to link the course offer more closely to the economic and social environment and in particular with the labour market” (Eurydice 2000: 133-4).

These contradictory tendencies were clearly evident in the STREP National Reports, although they were more of a “burning issue” in some national contexts than in others. This is both because the national HE systems vary in the degree to which they share the characteristics of the three ideal-type HE models presented in the first part of this report and because the time-scale of these changes was rather different in each national context.

At the beginning of the 1980s, for example, universities in the UK and in Finland were already largely responsible for the planning of course structure and content, whereas most other countries introduced reforms to this effect throughout the 1990s and early 2000s. Previous to these reforms, the most common pattern for course development in most of the EU countries was the so-called “line system”, whereby: “all higher education courses formed part of study programmes with a fixed, government-prescribed content leading to specific degrees” (Eurydice 2000: 136). In France, for example, the state provided detailed guidelines (*maquettes*) for all degree courses. These were generally drawn up by a group of expert advisors to the Ministry and were always based on the traditional disciplines. Although they did not specify exactly what aspects of the discipline should be taught, they did indicate the broad themes that should be included and the amount of time that should be allocated to each part of the course (i.e. at least 40% on research methods; at least 40% on sociological theory; at least one boundary discipline – demography or ethnology – to be included, etc.). The rationale behind these national guidelines was one of social equality and national cohesion. Since undergraduate students were not free to choose their place of study (they were usually required to attend the university nearest to their parents’ home), it was argued that they should be guaranteed almost exactly the same course content wherever they studied a given discipline. This was also the argument used to justify “central planning” of curricula in the Eastern European countries and in the Nordic states. The system proved to be extremely inflexible and time-consuming to administer.

By the beginning of the 1990s, France, Spain and Sweden had revised and simplified this procedure, although the reform was more systematic in Sweden than in the other countries (Holm and Liinason 2005b). There are still national degree accreditation procedures in operation in the other countries (particularly for vocational degree programmes), but these tend to be less constraining than was previously the case.

3.3.1 The “Employability” of Graduates

Behind the desire to give individual universities more direct control over their course content was the recurrent and pan-European preoccupation with the “employability” of graduates. All of the countries included in this report have seen this question placed high on the political agenda over the past decades, although the policy mechanisms adopted to reach this goal have varied from country to country.

Traditionally, the non-university sectors of the HE systems were the first to be hit by the desire to tighten the links between higher education and the labour market. However, none of the universities have escaped from similar pressures in more recent years. Indeed, the signatories to the Sorbonne Declaration, in May 1998 (Germany, France, Italy and the UK), made improved graduate employability one of the main reasons for promoting a common European higher education framework (Eurydice 2000: 137).

National policy measures have included: the setting up of national advisory councils with representatives of industry, commerce and local or regional government to advise the government on the national higher education course offer; the inclusion of external representatives on the governing bodies of HE institutions; the use of external examiners from industry in the assessment of students and in the quality assessment of courses; the provision of work-placements for students on vocational courses (and sometimes for non-vocational students too); the increase of in-service course provision for private or public sector enterprises. Most countries have also upgraded vocational courses offered by non-university HE institutions to university level.

In Sweden, these policies have undoubtedly been taken furthest, with university boards now having to include a majority of external members and, since 1998, to be chaired by someone from outside the institution. Indeed, the 1992 amendment to the Higher Education Act stipulates that cooperation with “civil society” (not only industry and commerce) and the duty to inform the public about the institutions activities is the “3rd task” of the HE sector, besides teaching and research (Holm and Linaason 2005b; Eurydice 2000: 139).

3.3.2 Curriculum Development and “Employability” in Relation to Interdisciplinarity

Again, little systematic research has been carried out to date on the effects of the drive to improve the “employability” of graduates on the development of interdisciplinarity in teaching and research. However, it is clear that, at least until the mid-1990s, multi- or pluri-disciplinary courses were further developed in the non-university sectors of the HE system in most countries than in the universities themselves. In so far as vocational training has generally been more open to multi-disciplinary approaches, one could reasonably hypothesise that any attempt to make university degree programmes more directly relevant to labour market demand is likely to encourage some kind of interdisciplinarity.

This would certainly seem to be the case in those countries where the development of interdisciplinarity in teaching and research has been taken furthest to date, i.e. in Norway and in the U.K. (Griffin et al 2005b; Widerberg et al 2005). In both these countries, course content is now tailored as closely as possible to the perceived “needs” of the user groups (either the

students themselves or their future, potential employers) and this often involves drawing on the knowledge base of several traditional disciplines.

On the other hand, in those countries where curriculum development has only more recently been decentralised, there is no clear evidence about the extent to which institutions will use their new prerogatives over curriculum development to introduce more interdisciplinarity.

In fact, in some of these countries, universities would seem to be organising a “supermarket” model of interdisciplinarity, enabling students to “pick ‘n’ mix” their course modules from a range of disciplines. This is notably the case in France, where the implementation of the Bologna Agreement has led to the end of the national guidelines (*maquettes*) for each disciplinary degree programme and has seen the development of government rhetoric in favour of “student choice”. Universities are therefore supposed to offer a range of “study paths”, often combining modules from different departments or disciplines, with a strong optional component, which is supposed to enable student to tailor their courses to their particular “needs”. Notwithstanding the administrative headaches that this highly individualised conception of interdisciplinarity poses for the institutions involved, it is also interesting to note that it rests on the idea that students are themselves totally conscious of their own educational “needs” and/or that they are well-informed of the skill requirements of the labour market. In a country where educational levels of achievement, rather than precise curriculum content have traditionally been used as recruitment criteria in the public and in the private sector, this seems to be somewhat presumptuous, to say the least.

This conception of interdisciplinarity also limits the degree of inter-departmental collaboration that is required at the institutional level. In practice, most departments will continue to offer the same courses or modules as before the implementation of the Bologna Agreement, but they will face increasing uncertainty as to student numbers and as to the previous studies of the students they will now be teaching (since these may come from other departments in the same university or from other universities). Thus, one could say that, under this system, the students will experience some kind of interdisciplinary training (if they so wish), whilst their professors will remain firmly grounded in their disciplinary traditions!

Furthermore, the curriculum development that is taking place in the context of the implementation of the Bologna Agreement seems to rest on very different conceptualisations of interdisciplinarity in the different national contexts. In some cases, students are “exposed” to a wide range of disciplines in the early years of their undergraduate degree programmes, but are expected to “specialise” in a single discipline as they progress through to Masters or PhD level. In other cases, the opposite is true. Students are given a solid grounding in one disciplinary tradition at undergraduate level, but are encouraged to explore knowledge produced in other disciplines at postgraduate level. There are obviously issues here about the ways in which students are being prepared for international mobility within the European Higher Education Area within these divergent national conceptualisations (Reichert and Tauch 2003; Tauch and Reichert 2005).

Conclusions

In conclusion to this report, we must insist on the fact that the effects of the recent changes to the relationship between the state and the HE and research sectors in the EU member states on the development of interdisciplinary teaching and research activities are still rather hypothetical.

In this report, we have tried to identify and characterise the different national traditions for organising the production and dissemination of knowledge, with particular reference to the role of the state in this process. We have identified three different ideal-type models of the HE and research sectors: 1) the Humboldtian model, based on academic freedom and “pure knowledge” production in universities that integrate teaching and research. Here university management has traditionally been in the hands of the academic community, organised along disciplinary lines, but with space for individual initiatives with regard to interdisciplinarity, with the state providing little more than the ground rules for access to higher education and the organisation of examinations and nominations. Vocational education has traditionally been organised alongside universities, in the less prestigious technical and professional schools ; 2) the Napoleonic model, based on the partial separation of teaching and research and on a binary system of mono-disciplinary university courses and pluri-disciplinary vocational training in the prestigious *Grandes écoles*, that train the future elites of the Nation. Here the state plays an active role in the daily management of universities, in collaboration with the highly-institutionalised representative bodies of the disciplines. In order to guarantee “social integration”, the state has traditionally controlled all aspects of the HE system, from curriculum development, to funding and staff management; 3) the Anglo-America model, based on integrated, largely autonomous teaching and research institutions that are expected to provide a wide range of activities and expertise on an more or less open market. In this case, the universities are managed by professional staff who act to guarantee the closest possible fit between the activities carried out within their institutions and the demands of the stake-holders and user groups in the wider society.

We have shown that each particular ideal-type model of the HE and research systems has consequences for the development of interdisciplinarity in teaching and research. In the Humboldtian tradition, university-based teaching and research activities have been organised around the disciplines, but individual academics have been free to offer interdisciplinary perspectives and students have been encouraged to study subjects from more than one disciplinary field. More institutionalised multi- or pluri-disciplinary teaching has been developed in the vocational schools,. In the Napoleonic tradition, the disciplines have also been central to the organisation of teaching and research within the universities, but the training of the nations’ elite and the development of autonomous non-university research centres have served to provide other spaces for interdisciplinarity. Finally, the Anglo-American model is usually associated with the most advanced levels of interdisciplinary teaching and research, since the “pragmatic” approach to problem-solving has often required knowledge produced in a wide range of disciplinary traditions. In so far as the disciplines rarely correspond to a precise “social need” or “market niche”, they usually have to be combined in some way before they can be sold on the open market. However, as the Napoleonic tradition shows, it would be wrong to associate interdisciplinarity with marketization, since the state and the public sector also require “applied” knowledge which draws on multiple disciplinary resources.

We have used these ideal-type models to understand the historical legacies of the eight countries studied here and to compare their distance from or proximity to the new “modes of knowledge production” that are associated with the emergence of post-industrial, so-called “knowledge economies” (OECD 1998). Interdisciplinarity is clearly a central characteristic of the teaching and research activities that one could legitimately expect to see developing at the beginning of the 21st century in all contemporary societies.

After having provided some background data on the characteristics of the HE sector in the EU today, we have analysed the major policy reforms that have been introduced in relation to HE and research in the EU Member states over recent years. Our aim here has been to understand the extent to which these reforms have aimed at transforming the existing HE and research sectors with a view to bringing them into line with the founding principles of the new “modes of knowledge production” that have been associated with the post-industrial “knowledge economies” or with what some authors have called the “service university” (Cummings 1995).

We have selected three themes for exploring this question in comparative perspective: the introduction of more decentralised arrangements for the management of HE and research institutions; the changes introduced to the procedures for selection and entry of students to higher education institutions; the new modes of curriculum development within the HE sector.

For each of these themes, we have illustrated the rather ambiguous, not to say contradictory effects of EU and national or local policy measures on the development of interdisciplinary teaching and research activities in the different national contexts. Although there is a good deal of convergence in the type of policy objectives defined in each national context, the effects of these measures depend both on the historical legacy of the national HE and Research sectors and on the precise policy implementation tools that have been adopted. Indeed, given the diverse national traditions that continue to influence the structural organisation and philosophical values of the HE and research sectors in the eight countries studied here, it is extremely unlikely that similar policy orientations that we have identified across all the countries will produce comparable effects (Lallement and Spurk 2003; Ragin 1991).

Finally, this report clearly shows that the promotion of “interdisciplinarity”, through local, regional, national or EU-level policy initiatives, is often associated with attempts to promote a unified model of the academy, based on the “marketization” of higher education and research in a global economy.

As scholars committed to the development of interdisciplinarity through our experiences in the field of Women’s / Gender Studies, we feel that it is important to recognise the “hidden agenda” that often lies behind policy initiatives in this field in each national context. We nevertheless believe that students and scholars from all EU member states have an active role to play in ensuring that the “best practices” identified in relation to the development of interdisciplinary teaching and research activities in full respect of academic freedom and social cohesion and equality are those that we should strive to make an integral part of any attempts to promote interdisciplinarity within the European Higher Education Area.

Bibliography

Web Sites

<http://www.eurydice.org>

<http://www.eua.be>

http://www.om.ho/letolt/felsoo/stat_felsoo_2003_2004_1217.pdf

- Andriocci, Muriel, and Nicky Le Feuvre (2005) "Les enjeux sociaux de l'institutionnalisation des 'études féministes' à l'Université." Pp. sous presse in *Parcours de femmes à l'Université*, edited by Claudie Solar and Edmée Ollagnier. Paris: l'Harmattan.
- Apitzsch, Ursula, and Irini Siouti (2005) *STREP Comparative Report: Infrastructural Definitions*. Frankfurt am Main: STREP Research Integration Project.
- Becher, T., and P.R. Trowler (2001) *Academic Tribes and Territories*. Buckingham: Open University Press, 2nd edition.
- Carrera Suarez, Isabel and Laura Vinuela Suarez (2005) *STREP Comparative Report: The Impact of the Bologna Process on Disciplinization*. Oviedo: STREP Research Integration Project.
- Carrera Suarez, Isabel, Laura Vinuela Suarez, and Carla Rodriguez Gonzalez (2005) *STREP National Report: Disciplinary Boundaries Between the Social Sciences and the Humanities in Spain*. Oviedo University: STREP Research Integration Project.
www.hull.ac.uk/researchintegration.
- Conraths, Bernadette and Hanne Smidt (2005) *The Funding of University-Based Research and Innovation in Europe. An Exploratory Study*. Brussels: European University Association.
- Cummings, W.K. (1995) *The Service University*. Boston: Paper to the Annual Conference of Comparative and International Education Society (CIES), 16 March.
- de Boer, Harry, B. Denters, and Leo Goedegebuure (1998) "Dutch Disease or Dutch Model? An Evaluation of the Pre-1998 System of Democratic University Government in the Netherlands" *Policy Studies Review* 15(4): 37-50.
- Dewatripont, Mathias, Françoise Thys-Clement, and Luc Wilkin, eds. (2002) *European Universities: Change and Convergence?* Bruxelles: Editions de l'Université de Bruxelles.
- Enders, Jürgen (2000) "Academic Staff in Europe: Changing Employment and Working Conditions, Conference Paper 00/05." Research Training Network "Women in European Universities", University of Muenster, Germany, 27 pages.
- European Commission (2000) *Politique sociale et de l'emploi européenne: une politique pour les citoyens*. Bruxelles: European Commission.
- Eurydice (1999) *Organisation of Higher Education Structures in Europe (1989/1999)*. Luxembourg: European Commission, DG Education & Culture.
- (2000) *Two Decades of Reform in Higher Education in Europe: 1980 Onwards*. Luxembourg: European Commission.
- (2003a) *Focus on the Structure of Higher Education in Europe (2003/2004). National Trends in the Bologna Process*. Luxembourg: European Commission, DG Education & Culture.
- (2003b) *Key Data on Education in Europe, 2002*. Luxembourg: European Commission, DG Education & Culture.

- Filâtre, Daniel (2003) "Les universités et le territoire: nouveau contexte, nouveaux enjeux." Pp. 19-46 in *Les mutations actuelles de l'Université*, edited by Georges Felouzis. Paris: Presses universitaires de France.
- (2005) "Politiques publiques de recherche et gouvernance régionale." *Revue française d'administration publique* 112:719-730.
- Filâtre, Daniel, and Christelle Manifet (2003) "Université et territoire : nouvelles relations, nouveaux défis." *Sciences de la société* 28:75-97.
- Friedberg, Erhard, and Christine Musselin (1992a) "Carrières académiques et gestion des systèmes universitaires." Pp. 201-224 in *Le gouvernement des universités. Perspectives comparatives*, edited by Erhard Friedberg and Christine Musselin. Paris: l'Harmattan.
- eds. (1992b) *Le gouvernement des universités. Perspectives comparatives*. Paris: l'Harmattan.
- Gornitzka, Ase, and Peter Maassen (2000) "Hybrid Steering Approaches with Respect to European Higher Education." *Higher Education Policy* 13:267-285.
- Griffin, Gabriele, ed. (2002) *Women's Employment, Women's Studies and Equal Opportunities, 1945-2001. Reports from Nine European Countries*. Hull: The University of Hull.
- ed. (2005) *Doing Women's Studies: Employment Opportunities, Personal Impacts and Social Consequences*. London: Zed Books.
- Griffin, Gabriele, Pam Medhurst, and Trish Green (2005a) *STREP Comparative Report: The Relationship between the Process of Professionalization in Academe and Interdisciplinarity. A Comparative Study of Eight European Countries*. Hull: STREP Research Integration Project.
- (2005b) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in the UK*. Hull: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Heen, Elisabeth (2002) "Research, Priorities and Disciplinary Cultures: Friends or Foes? A Cross-National Study on Doctoral Research Training in Economics in France and Norway." *Higher Education Policy* 15:77-95.
- Henkel, Mary (2000) *Academic Identities and Policy Change in Higher Education*. London: Jessica Kingsley.
- Holm, Ulla, and Mia Liinason (2005a) *STREP Comparative Report: Interdisciplinarity*. Göteborg: STREP Research Integration Project.
- (2005b) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in Sweden*. Göteborg: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Jakab, Eniko, and Jasmina Lukic (2005) *STREP Comparative Report: Disciplinization: Process and Problematics*. Budapest: STREP Research Integration Project.
- Jakab, Eniko, Jasmina Lukic, and Kata Kovári-Krečsmáry (2005) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in Hungary*. Budapest: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Keskinen, Suvi, and Harriet Silius (2005a) *STREP Comparative Report: The Moving Boundaries of Research Structures and Funding*. Åbo Akademi University: STREP Research Integration Project.
- (2005b) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in Finland*. Turku: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Krebs, Rebecca, Irimi Siouti, Ursula Apitzsch, and Silke Wenk (2005) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in*

- Germany. Oldenburg / Frankfurt am Main: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Krebs, Rebecca and Silke Wenk (2005) *STREP Comparative Report: Current Debates about the Construction of Knowledge in the Social Sciences and Humanities and the Impact of these on Disciplinization*. Oldenburg: STREP Research Integration Project.
- Lallement, Michel and Jan Spurk, eds. (2003) *Stratégies de la comparaison internationale*. Paris: CNRS Editions.
- Le Feuvre, Nicky, and Muriel Andriocci (2004) "Employment Opportunities for Women in Europe." Pp. 13-63 in *Doing Women's Studies: Equal Opportunities, Personal Impacts and Social Consequences*, edited by Gabriele Griffin. London: Zed Books.
- Le Feuvre, Nicky and Milka Metso (2005) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in France*. Toulouse: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Mignot-Gérard, Stéphanie (2003) "Who are the Actors in the Government of French Universities? The Paradoxical Victory of Deliberative Leadership." *Higher Education* 45:71-89.
- Mignot-Gérard, Stéphanie and Christine Musselin (2002) "More Leadership for French Universities, but also More Divergences between the Presidents and the Deans." Pp. 123-45 in *European Universities: Change and Convergence?*, edited by Mathias Dewatripont, Françoise Thys-Clement, and Luc Wilkin. Bruxelles: Editions de l'Université de Bruxelles.
- Morris, Huw (2003) "Changing Communities at Work in Academia: Review Article." *Work, Employment and Society* 17: 557-68.
- Musselin, Christine (2001) *La longue marche des universités françaises*. Paris: Presses universitaires de France.
- (2003) "Dynamiques de construction de l'offre. Analyse comparée de la gestion des postes d'historiens et de mathématiciens en France, en Allemagne et aux Etats-Unis." Pp. 133-158 in *Les mutations actuelles de l'Université*, edited by Georges Felouzis. Paris: Presses universitaires de France.
- Neave, Guy, and Frans. A. Van Vught, eds. (1991) *Prometheus Bound: The Changing Relationships between Government and Higher Education in Western Europe*. Oxford: Pergamon Press.
- OECD (1998) *University Research in Transition*. Paris: OECD.
- Paradeise, Catherine (1998) "Pilote institutionnel et argumentation: le cas du développement du département SHS au CNRS." in *Sociologie et connaissance. Nouvelles approches cognitives*, edited by Anni Borzeix, A Bouvier, and P Pharo. Paris: Editions du CNRS.
- Parsons, Talcott (1939) "The Professions and Social Structure." Pp. 34-49 in *Essays in Sociological Theory*, edited by Talcott Parsons. New York: Free Press.
- Ragin, Charles. C. (1991) "The Problem of Balancing Discourse on Cases and Variables in Comparative Social Science." *International Journal of Comparative Sociology* XXXII: 1-8.
- Reed, Michael (2002) "New Managerialism and the Management of UK Universities." Pp. 69-78 in *European Universities: Change and Convergence?*, edited by Mathias Dewatripont, Françoise Thys-Clement, and Luc Wilkin. Bruxelles: Editions de l'Université de Bruxelles.
- Reichert, Sybille, and Christian Tauch (2003) *Trends 2003: Progress Towards the European Higher Education Area*. Bruxelles: European University Association.
- Schnapper, Dominique (1999) *La compréhension sociologique : démarche de l'analyse typologique*. Paris: Presses universitaires de France.

- Scott, Peter, E Nowotny, and Michael Gibbons (1994) *The New Production of Knowledge. The Dynamics of Science and Research in Contemporary Societies*. London: Sage.
- (2001) *Rethinking Science. Knowledge and the Public in an Age of Uncertainty*. London: Polity.
- Silius, Harriet (2005) "The Professionalization of Women's Studies Students in Europe: Expectations and Experiences." Pp. 111-140 in *Doing Women's Studies: Employment Opportunities, Personal Impacts and Social Consequences*, edited by Gabriele Griffin. London: Zed Books.
- (1987) "A Comparative Perspective on Finnish Higher Education Policy." *Higher Education* **16**: 417-432.
- Tauch, Christian, and Sybille Reichert (2005) *Trends IV: European Universities Implementing Bologna*. Bruxelles: European University Association.
- Tjeldvoll, Arild (2002) "The Service University in the Knowledge Economy of Europe." Pp. 85-109 in *European Universities: Change and Convergence?*, edited by Mathias Dewatripont, Françoise Thys-Clement, and Luc Wilkin. Bruxelles: Editions de l'Université de Bruxelles.
- Widerberg, Karin, Eva Braaten, and Ida Hjelde (2005) *STREP National Report: Disciplinary Boundaries between the Social Sciences and Humanities in Norway*. Oslo: STREP Research Integration Project. www.hull.ac.uk/researchintegration.
- Widerberg, Karin, and Silje Hirsch (2005) *STREP Comparative Report: Change in Disciplinization: Two Case Studies*. Oslo: STREP Research Integration Project.