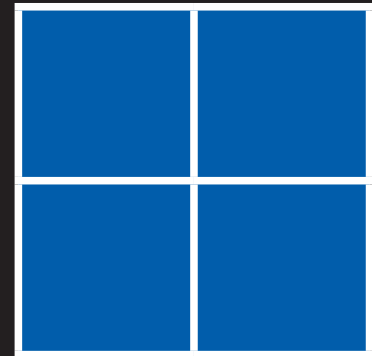


Constructing Universities' Responses to Europe's Lisbon Agenda: the Roles of the European Commission in Creating the Europe of Knowledge

Roger Dale

LLAKES Research Paper 19



Centre for Learning and Life Chances in Knowledge Economies and Societies

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Constructing Universities' Responses to Europe's Lisbon Agenda: the Roles of the European Commission in Creating the Europe of Knowledge¹

Roger Dale

Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES)², Research Paper 19

¹ This is the first of a pair of papers looking at Universities' responses to the Lisbon agenda. The second will look at how they have addressed issues of increasing social cohesion.

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Introduction

This paper looks at the responses of European Universities to the European Union's (EU) Lisbon Agenda – 'to make Europe the most dynamic, competitive knowledge-based economy in the world, capable of sustained growth, with more and better jobs and greater social cohesion', and, especially, to its Mid-Term Review revision into a more focussed concentration on *growth* and *jobs*. The main focus is on the relationships between the European Higher Education Area (EHEA) and the European Research Area (ERA) in the construction of the 'Europe of Knowledge' (EoK) and, in particular, their consequences for the nature of the EHEA. In a nutshell, the paper is concerned with the 'Europe of Knowledge' as essentially a project about increasing Europe's economic competitiveness – which, of course, hardly distinguishes it from myriad other EU projects. However, the argument I will advance here is that the EoK may represent a qualitative shift in the relationship between the EU and Member States (MS) in ways that radically challenge some deep assumptions about the nature of Higher Education (HE) as a sector. Gornitzka et al put it very well when they write: 'Behind the phrase 'Europe of Knowledge', there is a search for a new pact between University, political authority and society at large' (Gornitzka et al, 2007, 7). I shall suggest that the form taken by the attempt to marshal the Universities to this call was shaped by both the nature of the EU project, which was driven not only by the Lisbon agenda but also by its 'Europe building' project, and by the constitutional, economic and political opportunity structures that framed its possible responses. Thus, I shall suggest that there were four distinct but overlapping and combining parties elements involved – the Commission's directorates for Education (DGEAC) and for Research, the Bologna Process (BP), the intergovernmental agreement on the construction of a European Higher Education Area (whose membership was not confined to EU member states), and the European Universities Association, which played a key facilitating and legitimating role.

The idea and promotion of a 'Europe of Knowledge' was proclaimed by the European Commission in 1997:

Real wealth creation will henceforth be linked to the production and dissemination of knowledge and will depend first and foremost on our efforts in the field of research, education and training and on our capacity to promote innovation. This is why we must fashion a veritable 'Europe of knowledge'. (CEC, 1997)

The EoK thus preceded and foreshadowed the Lisbon agenda of 2000. The debate about the implications of Lisbon for education has continued over the intervening decade, with some intensification and redirection following Wim Kok's mid-term review (European Commission, 2004). If Lisbon confronted education with a triangle of 'employment, growth and social cohesion' (Gornitzka et al, 2007, 17), then Kok led to the emphasis being shifted decisively towards growth and education's potential contributions to it. This sequence has also entailed changing conceptions of the EoK, especially as it becomes more closely and exclusively identified with, and the target of, the efforts of both the ERA and EHEA. The main focus of this paper is to trace the relationship between those developments and the Higher Education sector across Europe. In particular, the paper seeks to investigate the degree to which one outcome of this process might be the effective creation of a differentiated HE sector. In this, the paper seeks to offer a complementary analysis to the substantial body of existing work in the area by moving beyond discussions about the relationship between the EHEA and Lisbon, and their effects on individual HE institutions, to examine the effects of the combination of EHEA and ERA on the HE sector as a whole. Gornitzka et al (2007) have provided valuable analyses of the development of the administrative capacities of the two sectors in constructing the EoK, which forms an indispensable backdrop to this work, whose focus is the somewhat narrower one of the implications for the future of European HE as a sector.

The approach adopted here is to see the project to improve the contribution of HE to the Europe of Knowledge through the twin but different routes of the ERA and the EHEA as fundamentally involving the construction of a new, and possibly parallel (see Dale, 2008) *sector*. This is intended to offer a slightly different approach from that which seems to dominate work in this area of academic activity, whose prime focus seems to be on the nature of individual universities, or of the 'European University's' contribution to this

project, and its potential consequences for them. That is, most work on the nature and implications of the Bologna Process/EHEA has had an institutional and national rather than a sectoral and European focus. Seeing what is happening as the construction of a new sector (or, rather, sectors, since one part of my argument will be that the existing sector may binarise), requires a somewhat different approach. It requires us to ask what might be involved in the construction of a new sector at European level, that may run alongside national sectors, but should not be expected to be a ‘scaled-up’ version of national-level HE, in a hierarchical relationship to it, or necessarily to create hybrid forms with it. One way of approaching the issues is to ask how far we may be witnessing a functional, scalar and sectoral division of the labour (see Dale, 2003) that is going on at present under the umbrella of ‘Higher Education’, across the EHEA.

Added piquancy comes from the very different origins, purposes and status of the two contributing parties, and the traditions they seek to protect and advance. Formally, the EHEA is a non-binding intergovernmental agreement, constituted through degree structures, the European Credit Transfer System, patterns of Quality Assurance, limited mobility support, and the ‘European Dimension’. Education is a national, not a Community, responsibility, and the European Commission has no formal authority in the area of higher education. However, it is a participant in the Bologna Process, which has, as a result, become much more closely aligned with the Lisbon strategy over the last few years (see Keeling, 2006; Ravinet, 2008).

Research has been a Community responsibility since 1980 (Andre, 2007). The fundamental purpose and *raison d’être* of the ERA appears to be enabling and ensuring the means of production and distribution of commercially-valorisable knowledge, in a multiple competitive context – competitiveness within and between organisations, industries, firms, individuals, countries, universities, and regions, especially the United States, but increasingly China and India, too. It involves addressing what the 2005 Salzburg declaration,³ on the nature of the ERA, referred to as the ‘systematic gap’

³ www.eua.be/eua/jsp/en/upload/Salzburg_Conclusions.1108990538850.pdf [accessed 4.10.2010]

between the production of knowledge (in universities) and its ‘use’ (in commercial innovation). The preferred strategy, we might infer from the writing in the area, is the infinitely variable - geometry of the ‘knowledge triangle’ (or, in a slightly different discourse, the ‘triple helix’) of government, industry and university. The authors of the EHEA, on the other hand, rather aim at the construction of a common institutional space, that enables underlying traditions to continue to flourish in an era of globalization, with their individual and collective benefits becoming available to, and valued by, all European students. This does not rule out the possibility – or deny the need for – the role of the university in the knowledge triangle, but if we subtract that role from the whole work of the EHEA, we find a very considerable remainder. I shall explore the possibility through suggesting that it requires an approach to the future of the EHEA that sees not so much a *diversification of activities* within the existing area/sector, but rather a *differentiation of its functions*. The paper proceeds on the basis of a modified version of Steven Vogel’s (1996) conceptualization of sectors, which suggests the analytic value of distinguishing their ‘representation’ (my term), their governance and their technology. It also draws on Rogers Hollingsworth’s (2003, 131) location of ‘institutional sectors’ within the hierarchy of components of institutional analysis. This places ‘Institutions’ (‘norms, rules, habits, conventions, values’) at the top, followed by institutional arrangements, (such as markets, states, networks, associations, etc), and then institutional sectors (such as finance, education, business). Only then do we find ‘organisations’, followed by ‘outputs and performance’. In this case, we might expect the HE sector to be shaped – but not determined – by the EoK as the key ‘institution’, the EHEA and the ERA, within the limits of their formal (Treaty) discretion, as providing the institutional arrangements, and the individual institutions responding to, and setting limits to, the achievement of these arrangements.

A further key issue is whether, or the degree to which, sectors are defined by territories, activities or goals, by where they take place, the social purpose of the activity or by the activity itself. In terms of the territorial element, this seems to be present by definition – though that definition is somewhat stretched when we see a ‘European’ Higher Education Area that runs from the western edge of the Atlantic to the western edge of the Pacific.

There is also a case to be made for defining the (EHEA) sector by its activities – in this case, the Bologna instruments mentioned above. Their centrality to the EHEA is very clear, to the point where they might almost be seen to be becoming a brand - for instance in the case of Tuning in the United States and Latin America. The argument for suggesting that it is more useful for analytic purposes to see EoK as an institution defined by its goals in part rests on Roberto Unger's notion of 'institutional fetishism' 'the identification of institutional *conceptions*, such as representative democracy, a market economy, and a free civil society (or, we might add, a University), with a single set of institutional *arrangements*' (Unger 1996, 19, emphases added).

Defining institutions on the basis of activities might assume that the same activities have the same meaning everywhere – that they are necessary and sufficient 'arrangements' to achieve their purposes, irrespective, for instance, of other circumstances, such as the overall societal formation of sectors, or how they are regulated.

Much of the writing on the Bologna Process and HE in general tends to focus on activities, rather than on what those activities mean. It may look at how the activities change, but there is a sense in which they are fetishised, through, for instance, the assumption of a necessary defining core which has to be retained if the existing functions are to be served by the existing activity. To put it another way, activities and functions are contingently and temporarily, not necessarily and permanently, related.

There is also little distinction between sectors and the organizational activities that make them up. Sectors should be seen as framed more directly by institutional arrangements than by institutional conceptions. In these terms, it becomes clearer that both the ERA and HE sectors should be seen as sectors in their own right, and should be analysed in their own right, rather than collapsed into their activities at organizational level.

The remainder of this paper attempts to elaborate briefly on some of the possible 'internal' problems that the new sector might face (and indeed, will face, whether or not it emerges as either a *de facto* or a *de jure* entity). I will consider in turn the development of

the discourse of the EoK and its relationship with the HE sector, as enunciated in three Commission Communications; the development of the ERA; the introduction of the European Research Council (ERC) and the European Institute of Innovation and Technology (EIT); and the development of the *dispositif* that appears to be charged with bringing the two partners together, doctoral education.

The Europe of Knowledge and the European Higher Education Area

One of the clearest statements of the way the EC sees its role in promoting and enhancing the roles of higher education, research and innovation in the creation of a 'Europe of Knowledge' was set out in comments submitted to the London meeting of the Bologna Process in 2007. The first paragraphs of the submission read as follows:

The European Commission aims to support Member States in their efforts to modernise higher education systems, in all their areas of activity - education, research and innovation - making them more coherent, more flexible, and more responsive to the needs of society. Modernisation is needed in order to face the challenges of globalisation and to develop the skills and capacity of the European workforce to be innovative. They should enable universities to play their role in the Europe of Knowledge and to make a strong contribution to the Lisbon Strategy for Growth and Jobs.

The Commission has pointed to three broad areas in higher education in which change could help:

- Curricula: the three cycle system (bachelor-master-doctorate), competence based learning, flexible learning paths, recognition, mobility.
- Governance: university autonomy, strategic partnership including with enterprises, quality assurance.
- Funding: diversified sources of university income better linked to performance, promoting equity, access and efficiency, including the possible role of tuition fees, grants and loans.

The Bologna Declaration of June 1999 put in motion a series of reforms needed to make European Higher Education more compatible and comparable, more competitive and more attractive for Europe's citizens and for citizens and scholars from other continents. Reform was needed then and reform is still needed today if Europe is to match the performance of the best performing systems in the world, notably the United States and Asia. The Bologna Process should be seen in the context of broader initiatives to support the creation of a Europe of knowledge.

Thus the Copenhagen Process promotes enhanced European co-operation in Vocational Education and Training. To establish synergies between Copenhagen and Bologna, the Commission has brought forward its proposal for the European Qualifications Framework (EQF) for lifelong learning. This is linked to and supported by other initiatives in the fields of transparency of qualifications (EUROPASS), credit transfer (ECTS-ECVET) and quality assurance (ENQA-ENQAVET). Of similar importance is the link between the European Higher Education Area and the European Research Area (EHEA and ERA), which is embedded in the current round of the Bologna Process, *inter alia* through the attention given to doctoral level activities'. (CEC, 2007a, 2)

This statement contains a number of intriguing assumptions and claims from which we might infer something of the nature of the changes expected of the EHEA and the ERA if they are to contribute effectively to the EoK. It demonstrates very clearly, if not as explicitly, the range and depth of the perceived shortcomings of the 'traditional' university in achieving the goals of the EoK. 'Modernisation' (a term which as we will see below is open to a variety of understandings and has been presented as fulfilling a range of roles in HE reform) is needed to address the lack of coherence, flexibility and responsiveness.

The first way that this is to be achieved is through modernisation of the curriculum. This seems on the face of it a daring choice for the Commission to make, given that HE is subject to subsidiarity and that the curriculum might therefore be expected to be off limits. However, the nature of that potential transgression dissolves when we notice that the topic of the advice is not about 'curriculum' as it has been taken historically to refer to the content of courses of study, but to the organisation of learning, the mode of assessment of learning (competence) and their contribution to one particular use of qualifications, mobility.

In a slightly different way, the assertion of the need for university autonomy (which, again as we shall see below, means autonomy from the state) is followed immediately by two suggestions that would each themselves limit that autonomy – entering into partnerships with private sector organisations, and setting up systems of third party validation of their qualifications. This is not, of course, to say that these things are

necessarily undesirable, but it is to say that something more than minor and consensually agreed changes are being called for in our conception of the governance of the university.

The third suggested means of helping, diversifying funding and setting student fees is rather less opaque, but no less likely to entail significant changes in the idea of the university. It is also an interesting attempt to intervene from a European level in an area that is both 'delicate' in itself (finance) and a matter of considerable contention and difference across Member States, some of whom charge no, or negligible, fees, others of whom charge large fees, in public as well as private institutions

The point of this somewhat pedantic examination of an EC text is not to reveal what is fairly obvious, but to focus attention on the assumptions and intended consequences of the statement. Its critique of existing HE provision contains within it a particular vision, or representation of what the desired future role and function of HE should be, in its contribution to the EoK. This has of course been very widely recognised and responded to, much more fully than I have been able to do here. However, as noted above, most of that work has tended to concentrate on the consequences for universities as organisations. Both the points I have made so far, and especially the second half of the quoted statement, suggest that such a focus might be somewhat limiting, and that what we also need to consider is the possibility of changes in HE as a *sector* as it becomes increasingly incorporated into the EoK.

A key issue here appears to involve different perspectives on the nature, extent and consequences of the changes universities as institutions and HE as a sector have undergone. At its simplest, are we seeing a *diversification of the activities of the university*, developed to ensure its survival in the face of the multiple pressures it is facing, which appears to be the dominant view or a *differentiation of the functions of the HE as a sector*, which I shall argue here is a likely consequence of the tensions between the logics of intervention entailed in the two elements of the Europe of Knowledge, the EHEA and the ERA.

The Development of the Discourse of the Europe of Knowledge and its Relationship with the HE Sector

In this section, I will be examining a series of three key documents, through which EC policy for the HE sector of the EoK was articulated. It is important to recognize that issuing ‘Communications’ (the EU equivalent of ‘White Papers’) is one of the major avenues of intervention available to the Commission in areas covered by subsidiarity, like education. They are also especially important because the Bologna Process/EHEA is, as has been noted above, an inter-governmental agreement, not part of the Treaty, with membership not limited to member states. However, as noted above, the Commission, which is a member of the EHEA, has considerable influence on the Process, particularly in harnessing it to the Lisbon agenda. My aim in this section will be to demonstrate the discursive construction and changing meanings of (a) the ‘Europe of Knowledge,’ which has been used to indicate discursively ‘new’ conceptions of both ‘Europe,’ and ‘knowledge’, and of the relationships between them; and (b) the ‘modernization of the university,’ which can be taken as embracing the family of mechanisms that have been advanced to bring about or enable those changes, and through which they have been articulated. In both cases, as each component of the terms changes, there are reciprocal consequences for the other. It may appear that the two terms refer respectively to the differentiation of the functions of the HE sector and the diversification of the activities of the university, but as will become clear, this possibility becomes somewhat blurred.

The first of the three Communications is ‘The Role of the University in the Europe of Knowledge’; its stated purpose is to ‘start a debate on the role of the Universities within the knowledge society and economy in Europe’ (CEC, 2003, 2) and it is clear that the reference for this version is to be found in the Lisbon agenda. Universities are seen in the Communication as having a major role to play in this process. ‘The Europe of Knowledge’ reappears here as a key term, though with a quite different sense from that which was conveyed in the original Bologna Declaration.⁴ Throughout the

⁴ These referred to ‘the need to establish a more complete and far-reaching Europe, in particular building upon and strengthening its intellectual, cultural, social and scientific and technological dimensions. A

Communication, the word ‘knowledge’ precedes the words ‘society and economy’ (with the order sometimes reversed). This ‘Europe of Knowledge’ is based on two planks, the European Research Area and the Commission’s work in education. At that stage, the nature of the education contribution was rather general and unspecific, and there appeared to be little liaison between the two components. The 2003 Communication identified five new challenges facing European universities: the increased demand for higher education; the internationalization of education and research; developing cooperation between universities and industry; proliferation of knowledge production spaces; and the reorganization of knowledge. The Communication recognized that:

Responsibilities for universities lie essentially in the member states at the national or regional level. The most important challenges facing the universities, by contrast, are European, and even international or global. Excellence today is no longer produced or measured at the national level, even in the biggest European countries, but at the level of the European or world community of teachers and researchers . . . The divergence between the organization of universities at the member-state level and the emergence of challenges that go beyond national frontiers has grown over the past few years and will continue to do so . . . At this stage, what is needed is a joint and coordinated endeavour by Member States . . . backed up and supported by the EU, in order to move toward a genuine Europe of Knowledge. (ibid, 9–10)

We see a shift here toward an externally determined and driven project, which is concerned with ‘Europe’ and a conception of knowledge that goes well beyond that celebrated in the Bologna declaration. The focus is the responsibilities of and for ‘Europe,’ rather than ‘European universities,’ or ‘the university in Europe.’ Notably absent is the very critical tone that characterized the later Communications.

Significantly in the present context, this Communication was followed up through separate events covering ‘education’ and ‘research.’ The education issues were taken up in the next meeting of the Bologna process in Berlin, in September 2003, where the

Europe of Knowledge is now widely recognised as an irreplaceable factor for social and human growth and as an indispensable component to consolidate and enrich the European citizenship, capable of giving its citizens the necessary competences to face the challenges of the new millennium, together with an awareness of shared values and belonging to a common social and cultural space.’

ministers ‘took into due consideration’ the Lisbon agenda (Council of Ministers responsible for Higher Education, communiqué 2003, 2) and:

conscious of the need to promote closer links between the EHEA and the ERA in a Europe of Knowledge, and of the importance of research as an integral part of higher education across Europe, [they] consider it necessary to go beyond the present focus on two main cycles of higher education to include the doctoral level as the third cycle in the Bologna Process. They emphasise the importance of research and research training and the promotion of interdisciplinarity in maintaining and improving the quality of higher education and in enhancing the competitiveness of European higher education more generally. (ibid, 7)

However, the references to the ERA seemed a rather lower priority in Berlin than the social dimension, which both preceded it in the communiqué and seemed more firmly set out: ‘Ministers reaffirm the importance of the social dimension of the Bologna process. The need to increase competitiveness must be balanced with the objective of improving the social characteristics of the European Higher Education Area, aiming at strengthening social cohesion and reducing social and gender inequalities both at the national and at European level. In that context, ministers reaffirm their position that higher education is a public good and a public responsibility’ (ibid, 1). The research focus was developed in the conference significantly entitled ‘The Europe of Knowledge 2020: A Vision for University-based Research and Innovation,’ held in Liège in April 2004. Its main agenda – ‘the creation and certification of knowledge; the changing nature of research training; public/private partnerships; the role of the university for research in regions; and the challenge of interdisciplinary research’ – is very much in step with ‘The role of the universities in the Europe of Knowledge,’ with a sense of universities modifying their traditional objectives and procedures to adjust to, and contribute more fully to, changing economic needs.⁵

However, the next major contribution, ‘Mobilising the Brainpower of Europe: Enabling Universities to Make Their Full Contribution to the Lisbon Strategy’ (CEC, 2005) considerably extended the scope of universities’ potential contribution to the achievement of the Lisbon goals; significantly, it opened with a quotation from the mid-term review of

⁵ see http://ec.europa.eu/research/conferences/2004/univ/index_en.html [accessed 4.10.2010]

the Lisbon process, which had narrowed the original Lisbon agenda, and specified it more closely as involving ‘Jobs and Growth,’ and it appears to reflect a departure from the original ‘Lisbon triangle’. It stated clearly that ‘the search for knowledge has always been at the heart of the European adventure. It has helped to define our identity and our values, and it is the driving force behind our future competitiveness’ (ibid, 1). It identified universities, in a new and rather narrower expression of the mandate for higher education, as ‘essential’ in all three ‘poles of Europe’s *knowledge triangle*: education, research, and innovation’, but ‘not in a position to deliver their full potential contribution’. Here, we see changes to both ‘knowledge’ and ‘modernization.’ The word ‘Knowledge’ in this document is not to be found preceding ‘society’ or ‘economy’ as in ‘The Role of the University . . . ’ but in the trope of the ‘knowledge triangle,’ and typically in hyphenated links, such as ‘knowledge-based,’ or ‘knowledge-intensive.’ ‘Modernization’ becomes explicit in the form of three main challenges: achieving world-class quality and increasing attractiveness; improving governance; and increasing and diversifying funding. The attractiveness, governance, and funding themes came to form the basis of the ‘core modernization agenda’ that was named and effectively formalized in this document. It had also been foreshadowed in the Commission’s contribution to the European Higher Education Ministers’ Conference at the 2005 Bergen Meeting of the Bologna Process. Here, the place of Bologna in the wider process of creating the Europe of Knowledge was more clearly spelled out: ‘the Bologna reforms are necessary and they will have the full support of the Commission in the years to come, but in striving for ever-increased quality, institutions and governments must look beyond these structures, and address the underlying questions of attractiveness, governance and funding’ (CEC 2005, 4; quotes below come from pp. 5-10). ‘Mobilizing brain power’ notably identifies obstacles to achieving these goals on the basis of comparative studies with other higher education systems worldwide, specifying the nature and size of the gaps to be filled by European universities, on the basis of which these elements were more fully elaborated. *Attractiveness* was more fully articulated as requiring much more diversity with respect to target groups, teaching groups, entry and exit points, the mix of disciplines and competencies in curricula, and so on; *governance* meant ‘modernization’ of the relationship between states and universities, and of the university as an institution, along

the lines of the New Public Management ('public responsibility' for higher education to mean 'defining a regulatory framework within which strategic orientation combined with autonomy and diversity results in wider access and higher quality . . . with fewer *ex ante* checks and greater *ex post* accountability of universities for quality, efficiency and the achievement of agreed objectives' (ibid); and more closely specified *funding*, which 'should primarily provide incentives and means to those universities (they exist in every system) and to those groups/individuals (which exist in each university) that are willing and able to innovate, reform and deliver high quality in teaching, research and services.'

Here we can see changes both in the conception of the university as an institution and in HE as a sector, with both being expected to display qualitatively different degrees of diversification and differentiation, within and between them. We also see important moves to change the role of 'Europe' and toward a closer delineation of a new knowledge sector. In the area of governance, aimed at 'unleashing universities' potential' within the national context, Europe's role appears to be one of coordinating national efforts. In the other two areas, however, Europe is slated to be rather more interventionist. Enhancing attractiveness, for instance, requires diversification and specialization of roles among universities, and 'diversity demands organization at the European level'. For funding, a wider range of sources is called for, but here, a much more radical (and in this context, more important) claim is made:

Higher education is not just the sum of its education, training and research activities . . . (but) also a fundamental economic and social sector in its own right in need of resources for redeployment. The EU has supported the conversion process of sectors such as the steel industry or agriculture; it now faces the imperative to modernize its 'knowledge industry' and in particular its universities' (ibid, 10).

Here we see both a further element of the new conception of the university as an institution, and the suggestion that it can only be enabled through the reconstruction of HE as a sector, both by 'Europe'.

These criticisms of the European HE sector were also elaborated in a series of speeches by the Commissioner for Education, Jan Figel. The main themes of these speeches is that

Europe is lagging behind the rest of the world, especially the United States, that it is essential to recognize why, and to focus on what may be done in response. One major perceived problem is the fragmentation of Europe's universities, which is 'inherent in a Europe made up largely of small countries (who) all want their own universities . . . research funding systems . . . controls . . . and cultures.' (Figel, 2006a, 9). The solution appears to be an explicit differentiation of the sector. Thus:

if we compare the number of universities which consider themselves to be 'research-intensive', we have in Europe 14 times more than in the US. Alas, they aren't. The American sector is much more sharply segmented between those which see themselves as providers of tuition and those who aspire to engage in globally significant research . . . In Europe, research funding is sprinkled between some 2000 institutions . . . Europe's universities should be allowed to diversify and specialize; some may be able to play in the major league, but others should concentrate on regional and local needs and perhaps more on teaching. (2006b, 3, 2006c, 7).

The importance of moving beyond the national level is another key theme:

The challenges (that the Modernisation agenda is designed to address) used to be regarded as mainly national ones. But things are changing in that respect . . . Top higher-education institutions operate in a truly global market, so the only viable solutions for our universities are European in scope and global in ambition . . . (the challenges) have become common European ones and require a concerted approach in the EU context (2006d, 3; 2006c, 3).

Two main institutional means of addressing these issues are identified in the speeches. One is the Bologna Process, which 'is a framework for success: the essential condition for success is the root and branch reform of the way our universities are managed, structured, funded and regulated . . . (though) . . . important as they are the curricular and other reforms under the heading of 'Bologna', cover only one aspect of how we urgently need to modernize our higher education systems (2006c, 5). The other was the European Institute of Technology, a project strongly supported by President Barosso, which we will consider below.

The third Communication in the series is 'Delivering on the Modernization Agenda for Universities: Education, Research and Innovation' (CEC 2006a), which, symbolically

indicating the dual character of the EoK, was presented jointly by the Commissioners for Education (Jan Figel) and Research (Janez Potočnik). The purpose of the Communication was to respond to a request made at the informal meeting of the European Council in Hampton Court in October 2005 which produced the ‘Creating an Innovative Europe’ report (European Commission, Aho Report, 2006) to identify areas for action on universities that can be used to drive forward the growth and jobs agenda. Of some interest and significance here are the comments of the two commissioners at the report’s launching, conveying its flavour and intention very clearly (see CEC 2006b). For Figel, ‘although they train and teach millions of people each year, Europe’s higher education systems remain hampered by a number of obstacles, many of which are decades old. The Communication adopted today is a contribution to the debate on the necessary modernization of EU’s universities,’ while Potočnik saw ‘universities (as) powerhouses of knowledge generation . . . [that] will need to adapt to the demands of a global, knowledge-based economy, just as other sectors of society and economy have to adapt. The ideas we are putting forward today should help kick-start a debate among member states, and also within universities themselves.’ It is significant that the subheading qualifying and specifying ‘the modernization agenda’ in this document is in fact comprised of what were described in ‘Mobilising the Brainpower’ as ‘the poles of the knowledge triangle’ (education, research, and innovation), while what was proclaimed there as the ‘core modernization agenda’ of governance, funding, and attractiveness is not mentioned in the document. This in itself indicates further the shifting nature of the agenda for higher education after the mid-term review and the ‘new’ Lisbon strategy. The Communication suggests that ‘Discussions at the European level show [that] an increasing willingness to modernize systems and the agenda mapped out below is not, in essence, contested’ (CEC 2006a, 4). However, the agenda, made up of nine ‘changes that will be key to success’ (ibid, 5) is somewhat broader, particularly in its promotion of a new ‘knowledge triangle’ mandate in place of the ‘core modernising agenda’ of ‘Mobilising the Brainpower.’ This construct appears in three ways. The first emphasises the need for a much stronger focus on work-related skills and competences, and a greater focus on labour market needs. The second contains what seems to be a rather different message, ‘enhance interdisciplinarity and transdisciplinarity,’ which requires a focus less

on scientific disciplines and more on research domains (ibid, 8); as does the third, which emphasises ‘increased competition, more mobility and further concentration of resources, to enable universities and their partners in industry to offer a more open and challenging working environment to the most talented students and researchers, thereby making them more attractive to Europeans and non-Europeans alike’ (ibid, 10). Here again we see an implicit but clear assumption of the necessity of diversifying the work of universities, with the first being labour market-related and ‘inward-looking,’ and the other two research-oriented and operating in a global context, possibly to a point where the differentiation of the sector becomes more likely.

This is made clear in the Communication’s conclusions, which state that ‘Universities are key players in Europe’s future and for the successful transition to a knowledge-based economy and society. However, this crucial sector of the economy and of society needs in-depth restructuring and modernization if Europe is not to lose out in the global competition in education, research and innovation’ (ibid, 11). This provides further evidence of the emergence and extension, through the added prominence given to the knowledge triangle over the modernisation agenda, of a dual agenda for a new version of the EoK, with much greater emphasis on research and innovation, and further evidence of the strengthening of the European level, with the clear indication that that the knowledge triangle can be achieved only at the European level.

In parallel with the exhortations of the three Communications, the Commission was also increasing its involvement in and influence in the Bologna Process, despite its relatively peripheral formal status. It was heavily involved in funding the activities of the Bologna Follow Up Group, the closest thing to an executive, or steering committee, the Process had. The nature, complexity and consequences of this Commission involvement are very well analysed by Pauline Ravinet (2008). Another strand of its influence came through the agendas it shared with the EUA, and its funding of a number of its key initiatives. The Commission and the EUA have a common obstacle to their respective ambitions in the shape of national ministries in charge of higher education, and the Bologna Process was a valuable instrument for increasing universities’ autonomy, and providing avenues

of access to institutions that to a degree bypassed national ministries, to the point where, as Ravinet puts it, the Process moved from ‘voluntary participation to monitored coordination’ (ibid, 353).

The European Research Area in the Europe of Knowledge

The need for Europe to compete successfully with the United States and Japan pervades, albeit silently at times, the whole of EU education policy, but it is even more prominent in discussions of the contribution of the ERA to the EoK. Indeed, it is more than interesting that the two major initiatives to be mentioned below, the EIT and the ERC, take as their models the Massachusetts Institute of Technology and the US National Science Foundation respectively. One other crucial point here is that the role of the university sector in overall research and development is much greater in Europe than in the United States. The share of universities in total research expenditure is around 22 per cent in Europe, compared to 14 per cent in the US and Japan. Universities ‘are the main producers of scientific knowledge in Europe today, acting as ‘knowledge creators’ and an important training ground for researchers’ (CEC 2007a, 49). In Europe, universities employ about 36.6 per cent of researchers (CEC, 2004), compared to around 14.7 per cent in the US (CEC, 2000) and 25.5 per cent in Japan (CEC, 2003), while their share in total research expenditure is around 22 per cent, compared to some 14 per cent in the US and Japan (ibid, 7).

The European Research Area was set up in 2000 (CEC, 2000), around ‘three related and complementary concepts:

- the creation of an ‘internal market’ in research, an area of free movement of knowledge, researchers and technology, with the aim of increasing cooperation, stimulating competition and achieving a better allocation of resources;
- a restructuring of the European research fabric, in particular by improved coordination of national research activities and policies, which account for most of the research carried out and financed in Europe;
- the development of a European research policy which not only addresses the funding of research activities, but also takes account of all relevant aspects of other EU and national policies. (CEC, 2000)

There are several developing strands to the EU's research and innovation policy, all aimed at overcoming Europe's 'knowledge paradox', the failure of European researchers to match the dissemination of knowledge with the quality of their knowledge output. The two most basic and longest established emanate from DG Research. The first, which is relatively indirect, and advisory/exhortatory, involves the urging of MS to spend at least 3 per cent of GDP on research and development (see Gornitzka et al, op cit). The second is the Framework Programmes for Research and Technological Development, which have been going since the 1980s (for a history and description of the Framework Programmes, see Andre, 2007); the current programme is FP7, and runs until 2013. Two central characteristics of the Framework Programme (FP) are that the Commission determines the scope and nature of the calls, and transnational collaboration on bids and projects is mandatory. The FP has had a considerable impact on universities across Europe. It has not only made available significant research funding, but through the collaboration rule has held out a possibility of research funding to many who would not otherwise be able to access it. It has notably increased the profile of universities as research institutions in a number of countries, and in the larger countries it has been a significant means of extending research agendas. As far as individual universities have been concerned it has been a means of enabling them to do more of what they are being urged to do, rather than demanding great changes. Though the agendas for the Framework Programmes have been set at European level, they have not been essentially different in kind from that of national agencies (except perhaps in the level of bureaucracy). It could be argued that its most novel and notable contributions have been in establishing 'Europe' as a research funding entity and beneficiary. More recently, it has advanced the idea of the free circulation of researchers, knowledge and technology as Europe's 'fifth freedom.'

The ERA has also been involved in the creation of the European Research Council. Unlike the Framework Programmes, this operates 'bottom up', calling for proposals from researchers, and has no requirement of collaboration. In effect, it operates like a European version of national research councils. Initiatives such as these have little fundamental impact on the operation of universities, since they encourage them to do what they have become accustomed to doing at national level. They add a distinct 'European' flavour,

and help embed the idea of Europe and extend the reach of the Commission, but in themselves do not constitute a novel or direct assault on the knowledge paradox or the nature of the University as an institution or HE as a sector.

Rather more of such a challenge is offered by the fledgling European Institute of Innovation and Technology (EIT) (though Gornitzka suggests that both ERA and EIT represent 'breaches with the dominant pattern of European cooperation in these areas, suggesting that a different dynamic will come into play than an incremental one' (op cit, 28)). The focus and purpose here is directed at valorizing the knowledge triangle more effectively. EUA (2006) sees it as 'innovation-driven', rather than 'research-driven,' like the ERC) (since HE has 'notoriously been the absent member of innovation partnerships') through enhancing the universities' contribution to it, through knowledge transfer as well as process and product innovation. (Enders, 2005, 119). The most interesting aspect of the EIT for current purposes is that it is run through DGEAC. For David White, formerly director in charge of the Commission's innovation policy and the leader of EIT discussions in the Council and parliament (and now a senior member of DGEAC), 'The education side in the EIT is absolutely crucial. And currently there is no institution doing all this [research, education, innovation] in Europe' (quoted in EurActiv, 2007). In the development of the EIT, key issues that could be addressed by the EIT were seen as inhering in the fragmentation of Europe's university-based research, with 'nearly 2,000 universities in the EU aspiring to be research-active', which, taken together with the lower levels of spending on education and R&D in Europe compared to the USA, means that 'there are more actors seeking a slice of the cake' (ibid).

More recently, in launching the EIT's first Knowledge and Innovation Communities (KICs – the main mechanisms through which the EIT will work) initiative, the current Commissioner for Education referred to it as:

the first EU initiative fully integrating the entire knowledge triangle of higher education, research and innovation . . . Through the Knowledge Innovation Communities we actually create a genuine, unique and European model of interaction between the actors of the knowledge triangle. This approach, I believe, reflects the spirit of the European Union: Integrated and united towards a common goal, but flexible enough to respect the diversity of its actors...The higher

education component of the KICs is actually one of the novelty (sic) and one of the strengths of the EIT. If we are to boost innovation, we need to put a particular emphasis on entrepreneurship education and transferable skills such as creativity, project management or risk assessment' (Quoted in Vassiliou, 2010).

Here we see a much more direct response to the urgings of the three Communications discussed above than the rather more 'traditional' mechanisms of the FP and ERC. As Jones' (2008) account of the decidedly vague beginnings of the EIT makes clear, from the start one of the firmer elements of the proposal was to produce a university and research culture in which 'selection as well as career is based on competition, paying for performance is not a taboo, and engaging in business is seen positively as an important learning opportunity in a researcher's curriculum' (CEC, 2006a, 5). That communication also articulates a cultural vision which constructs the EIT as a vehicle for the creation of a new kind of researcher, to create subjects who are able to traverse the 'cultural and intellectual gap between researchers and entrepreneurs' (CEC, 2006a, 5). He points out that the EIT provided the opportunity to 'not be merely a new operator in education, research and innovation, but a reference model, embodying the knowledge triangle at the European level' (CEC 2006b, 2), and that 'the Commission's ambition was for an EIT as an escape from national and institutional constraints, floating free of local commitment, with researchers and infrastructure seconded to a 'virtual' institution operating according to new allegiances and mandates' (ibid, 301- 302).

It could thus appear that the EIT represents the clearest and most radical 'threat' offered by HE's involvement in the EoK to the 'traditional University', and the likeliest basis of a new sector. However, in no small part due to the activities of the EUA, this potential threat was considerably weakened. For the EUA's deputy secretary-general for research and innovation, John Smith, EIT was 'a high political initiative, and we had to ask whether we should oppose it or develop it in a way that is complementary to other institutions' (quoted in Nuthall and Jones, 2007). The EUA also successfully opposed the proposal that the EIT should draw on individual University faculties, rather than the institution as a whole. The idea of making EIT a distinct physical legal entity was dropped, as were proposals to second staff from participating institutions. Most crucially,

perhaps, from the point of view of universities, the proposal that EIT should have its own degree awarding powers was also dropped (see EUA, 2006). This may be reinforced, though from a rather different angle, by Didier's contention, made on the basis of a close study of the recent development of the EIT, that:

practices from KICs may inspire European universities, but it is unlikely that the EIT as such could constitute a reference model for European universities . . . Most importantly, the EIT and universities have different missions: contrary to the Commission initiative, universities' main task is not to contribute to growth and competitiveness but to educate people and advance knowledge. (Didier, 2010, 24).

Doctoral Training Programmes

The quantitative and qualitative dimensions of the perceived challenge, and their consequences, have been succinctly spelled out by Jurgen Enders (2005). In quantitative terms, the European Commission hopes that by 2010 'about 1.2 million additional research personnel, including 700,000 additional researchers, are deemed necessary to attain the objective, on top of the expected replacement of the ageing workforce in research' (CEC 2003, p. 226). In qualitative terms, it is not just about 'more of the same' but about 'changing qualification needs and requests for research training, knowledge dissemination and diversifying further careers. And at the end of the day, it is about the construction of a different innovation strategy that is no longer based on the traditions of the industrial age' (Enders, 2005, 120).

A key part of response to this problem is a formalised and sequential delivery of the EoK through the stages of: 1) The production of researchers of the 'right kind' (ie able to contribute directly to commercial innovation) and number; and 2) who are then 'staircased' through the ERA system, which is tightly linked to their career management and its links to mobility. We will examine each of these stages briefly below, but it is important to note briefly at this stage the likely impact of this process on the future of the EHEA and Universities as we have known them.

The production of ‘researchers of the right kind and number’ has been addressed specifically in the development of doctoral training programmes at EU level, especially around the EUA’s programme of doctoral education - produced ‘under the leadership of European universities’) (see Chambaz, 2008). This has been seen as the crucial ‘bridge’ between EHEA and ERA contributions to the EoK. The EUA has been centrally involved in the development of new forms of doctoral degrees, through its Council for Doctoral Education, whose mission is to contribute to the development, advancement and improvement of doctoral education and research training in Europe.

However, this is not necessarily, or exclusively, the ‘doctorate as we have known it’. As Enders puts it: ‘The underlying rationales for [the new] policies are three-fold: one hopes for efficiency gains in terms of the PhD factory’s input and output, for employability gains in terms of growing career perspectives of PhD graduates beyond the traditional labor markets in academe and science, and innovation gains in terms of increasing knowledge transfer during and after research training in Europe’ (Enders, 2005, 120-1). Such shifts entail potentially a very significant shift in the place, content and preparation for, the doctoral degree in Europe. There are both quantitative and qualitative differences from the continental European doctorate. Quantitatively, it will embrace far more students than hitherto. More importantly, its curriculum, pedagogy and goals may be expected to change. The fundamental basis of these changes is the emphasis to be placed on ‘research’ in the doctorate, and the possibility of ‘systematising’ the production of doctorates; ‘researchers’ are now essentially defined as those possessing a PhD.

There is also a clear link between the form of the PhD and the career trajectory it is expected to set in motion. In the ‘traditional’ model, junior researchers were expected to produce specialized and localized knowledge. Its diffusion was propelled by ‘an enforced mobility after graduation within academe as well as to other sectors of economy and society’ (ibid). Enders contrasts this model of the PhD with the current one ‘that centres around the:

'bundling and unbundling' of knowledge production and dissemination.... the blurring boundaries between disciplines, between basic and applied research, the cognitive rationality of the scientific production of new knowledge and the economic rationality of capitalizing on new knowledge. According to this discourse, stakeholder involvement and knowledge dissemination will not only become more and more a point of reference for research inquiry at universities but an entire part of the research process itself. Such an environment will demand different things from research trainees embedded in an interdisciplinary research team that incorporates problem-solving and inter-sectoral cooperation into the entire realm of research practices' (ibid 131-2)

The issue of whether doctoral programmes should be based on, and provide, structured training, or should rely only on the traditional 'master-pupil relationship' rooted in the Humboldtian tradition, seems effectively to be in the process of resolution, through the creation of a Charter for Supervision and Training, compiled by Eurodocs, that has already been spread widely, including to the EC as an input document for the European Researchers' Charter. The Charter for Supervision and Training was set up on the basis of looking at the existing good practice, especially in the UK and in France, although other systems or mechanisms may exist or can fit better in the different specific national or local environments.

However, the demand is for an increased number of (the right kind of) researchers has to be met from the smaller pool of (research) universities deemed capable of producing them. As Louise Ackers points out: 'The clustering of scientific resources has been specifically encouraged at national and European level as the basis for promoting competition and facilitating specialization.' The European Commission's Communication 'Towards a European Research Area' refers specifically to the need to develop 'essential critical mass . . . to achieve economies of scale, to allocate resources better overall, and to reduce negative externalities due to insufficient mobility' (Ackers, 2005, 311).

The European Research Area in the Europe of Knowledge: Mobility as Central Mechanism and Value

The doctoral training stage is seen as the first step on a projected research career that can be ‘staircased’ through the ERA-sponsored research career strategy, which is itself closely linked to, and dependent on, the possibility of intra- and extra- European researcher mobility. The Green Paper on the ERA pointed to mobility as the first critical feature of the ERA, though there are some different views on the nature and significance of mobility. For Bruno (2008) it is the ‘cardinal virtue’ of the ERA, while Beerkens (2008) takes it merely as an index of transnational activity, with no reference at all to labour markets. The president of Eurodocs suggests that ‘a doctoral programme that is not going to foresee a mobility experience for its students will become less and less appreciated by prospective candidates and by future employers of Ph.D. graduates. And the added value of mobility will be important in the realization of the “open market of researchers”, one of the main goals of the strategy underpinning the European Research Area’ (Rubele, 2004, 2-3). Another interested group argues that ‘Employers and/or funders must recognise the value of geographical, intersectoral, inter- and trans-disciplinary and virtual mobility, as well as mobility between the public and private sector as an important means of enhancing scientific knowledge and professional development at any stage of a researcher’s career. Consequently, they should build such options into the specific career development strategy and fully value and acknowledge any mobility experience within their career progression/appraisal system.’⁶

In a rather more sceptical paper, that questions the idea that mobility and excellence are ‘mutually constitutive’, Louise Ackers (2008) suggests that ‘European policy at the present time tends to conflate different forms of mobility and promotes the use of the concept as a proxy for internationalisation, excellence and competitiveness’. She goes on to argue that while ‘mobility is one means of achieving international research

⁶ European Researchers’ Charter’ (19) the pan-European Researcher’s Mobility Portal: http://ec.europa.eu/eracareers/pdf/am509774CEE_EN_E4.pdf [accessed 11.10.2010].

collaboration and knowledge transfer . . . it is not an end in itself and the concept masks a whole range of ‘strategies’ (423).

All that said, it is difficult not to recognize that such levels of mobility and competitiveness are likely to lead to the stratification, and possibly the differentiation of the sector. Allied to the need for critical mass that we mentioned earlier, it seems designed to produce organizations that are qualitatively different from each other, with the relevant expertise and excellence concentrated in a very small number of them (see the Commissioner for Research’s estimate above). Indeed, Ackers suggests that ‘evidence of geographical inequality as a result of scientific clustering may be justified on the grounds that research concentration constitutes the most efficient and effective use of resources to stimulate European-level science and enables it to gain a competitive edge for the greater benefit of all European citizens’ (Ackers, 2005, 314).

Conclusion

The basic question addressed by this paper is whether the changes brought about by the involvement of both the ERA and the EHEA in constructing the EoK have led, or are likely to lead, to some form of re-sectoralisation of HE in Europe, and I will conclude by attempting a very simplistic kind of balance sheet.

We might proceed by considering whether and how far there has been, or might be, a changing functional, scalar and sectoral division of the labour subsumed under the category ‘Higher Education’, resulting from the construction of the Europe of Knowledge. To put it another way, have there been fundamental rather than superficial changes brought about in that process?

If we look first at the ‘functional’ component, it is useful to break it down, following Vogel (1996), into activities, governance and technology. In terms of activities, clearly different things are called for, and asked of, HE institutions. Solving the knowledge paradox and cementing the knowledge triangle call for activities different from the

‘traditional’, directed at different purposes from the traditional. But it is crucial for the purpose of the re-sectoralisation argument to note that they are not called for from all institutions, for we are not suggesting that there has been a wholesale shift in HE activities; that would be a clear negation of the re-sectoralisation argument. Indeed, if Jan Figel is to be believed, they are required of only a distinct minority of institutions. A further relevant point is made in the course of a rather similar discussion by Maassen and Stensaker (2010), who essentially problematise the salience of ‘activities’ speculating that the distinction between the traditional and the contemporary university is that the former was defined by what it *is*, and the latter by what it *does*.

In terms of governance, it is an interesting question whether and how far the EoK involves extending, reducing, or altering the writ of Bologna, which might already be seen as underlying a scalar division of labour of HE governance between European and national levels. While, as Gornitzka et al (op cit) point out, both ERC and EIT represent a break with the normal pattern of HE policy making at European level, the clearest test case here is the EIT. Its original sponsors clearly saw it as comprising something like a new sector, or at least detaching itself significantly from the existing sector, but it does seem that any such intention was foiled, by EUA among others, most especially by obstructing the move to allow EIT to award degrees, especially the PhD, the acme of the traditional sector. However, it is clearly possible that, via the KICs, EIT may hold the possibility of being at least *sui generis* rather than seen as part of an HE sector.

The focus on the need to resolve the knowledge paradox as the key driver of the EoK, and the knowledge triangle as the centre of gravity around which at least some parts of HE should revolve, has clearly put pressure on the PhD as one of the defining elements of the HE sector, and as the key mechanism for bringing together the EHEA and the ERA. It is where the EUA has placed a stake in the ground, but is also designated as the heart and the symbol of the ‘new’ research career (in itself a rather novel concept, and closely associated with the knowledge paradox representation of the problem facing European competitiveness), which is clearly conceived of as quite distinct from the traditional

academic career founded on a PhD. It stands then as a quite different mechanism, constructed for a quite different purpose from that of the 'traditional' PhD.

Finally, there does seem to be ample evidence of an emerging national-European scalar division of labour. One of the major, but somewhat unpublicized, features of the whole set of elements that we have been discussing is that they all, to a greater or lesser degree, are to do with the 'thickening of Europe'. If, as Ruth Keeling (op cit) puts it, the objective of Bologna was the production of Europeans, the objective here is the production of Europe. From being an 'economy' with a responsibility for competitiveness and social cohesion in the Lisbon strategy, it moves to the rather more focused responsibility for *growth* and *jobs*, to be brought about largely through the EoK, which it itself constructs as being obstructed by the knowledge paradox, and the fragility of the knowledge triangle.

We might conclude, then, that there is a clear sense that resolving the knowledge paradox involves restructuring the sector; it is its traditional sectoral boundaries that HE cannot perform as is required by the EoK. Sectoral boundaries have to be made more porous - open to the world (see Enders 2005, 120), but they have to be recomposed on the basis of the kinds of knowledge that lie at the heart of the EoK.

References

Ackers, Louise (2005) 'Promoting Scientific Mobility and Balanced Growth in the European Research Area', *Innovation: The European Journal of Social Science Research*, 18: 3, pp. 301-317.

Ackers, Louise (2008) 'Internationalisation, Mobility and Metrics: A New Form of Indirect Discrimination?', *Minerva*, 46: 4, pp. 411-435.

Andre, Michel (2007) 'The 7th Framework Programme in the History of European Research', *RTD Info: Magazine on European Research*. Special Edition.

Beerens, Eric (2008) 'The Emergence and Institutionalisation of the European Higher Education and Research Area', *European Journal of Education*, 43: 4, pp. 407-25.

Bruno, Isabelle (2008) 'La Recherche Scientifique au Crible du Benchmarking: Petite Histoire d'une Technologie de Gouvernement', *Revue d'Histoire Moderne et Contemporaine* 55: 4 (supplément), pp. 28-45.

CEC (1997) *Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions: Towards a Europe of Knowledge*, Brussels, 12.11.1997 COM (97), 563 final.

CEC (2000) *Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions: Towards a European Research Area*, COM (2000) 6-18.01.2000.

CEC (2003) *Communication from the Commission: The Role of the Universities in the Europe of Knowledge*, Brussels, 05.02.2003 COM (2003) 58 final.

CEC (2004) *The Europe of Knowledge 2020: A Vision for University-based Research and Innovation*, Liège, Belgium 25–28 April. Conference Proceedings edited by G. Blythe, B. Hasewend & B. Laget.

CEC (2005) *Communication from the Commission: Mobilising the Brainpower of Europe - Enabling Universities to Make Their Full Contribution to the Lisbon Strategy*, Brussels, 4 April.

CEC (2006a) *Communication from the Commission to the Council and the European Parliament: Delivering on the Modernisation Agenda for Universities - Education, Research and Innovation*, Brussels, 10.5.2006 COM (2006) 208 final.

CEC (2006b) 'Europe Needs Modernised Universities, says European Commission', Press Release IP/06/592 10/05/2006 Brussels.

CEC (2007a) *Towards the European Higher Education Area: Responding to Challenges in a Globalised World*, Conference of European Higher Education Ministers, contribution of the European Commission, London, 17/18 May.

CEC (2007b) Commission Staff Working Document, accompanying the Green Paper *The European Research Area: New Perspectives*, SEC (2007) 412/2, Brussels.

Chambaz, Jean (2008) *Reforming Doctoral Education in Europe: a Response to Global Challenges*, CDE Launch Conference, Lausanne, 1-3 June.

Conference of Ministers responsible for Higher Education - communiqué: *Realising the European Higher Education Area*, Berlin, 19 September 2003, <http://www.bologna-berlin2003.de/pdf/Communique1.pdf> [accessed 10.11.2010]

Dale, Roger (2003) 'The Lisbon Declaration, the Reconceptualisation of Governance and the Reconfiguration of European Educational Space', paper presented to RAPPE seminar, 'Governance, Regulation and Equity in European Education Systems', Institute of Education, University of London, 20 March.

Dale, Roger (2008) 'Repairing the Deficits of Modernity: the Emergence of Parallel Discourses in Higher Education in Europe.' In D. Epstein, R. Boden, R. Deem, F. Rizvi and S. Wright (eds) *World Yearbook of Education 2008: Geographies of Knowledge, Geometries of Power: Framing the Future of Higher Education*, Routledge: London.

Dale, Roger, (2007) 'Changing Meanings of "the Europe of Knowledge" and "Modernizing the University"', from Bologna to the "New Lisbon"', *European Education* 39, 4, Winter 2007-8.

Didier, Anne-Celine (2010) 'The European Institute of Innovation and Technology (EIT): A New Way for Promoting Innovation in Europe', *Cahiers de Recherche Politique de Bruges/Bruges Political Research Papers* 13/2010, Bruges: College d' Europe.

Enders, Jurgen (2005) 'Border crossings: Research Training, Knowledge Dissemination and the Transformation of Academic Work', *Higher Education* 49: 1-2, pp. 119-133.

Euractiv (2007) 'European Institute of Technology - Against All Odds?', 7 March.

European Commission (2004) The Kok Report: *Facing the Challenge*, Brussels: November.

European Commission (2006) The Aho Report: *Creating an Innovative Europe*, Report of an Independent Expert Panel on R&D and Innovation, appointed following the Hampton Court Summit and chaired by Mr Esko Aho, Luxemburg: European Commission.

European University Association (EUA) (2006) *Comments on the European Commission's New Communication on the European Institute of Technology: Further Steps Towards its Creation*, Brussels: EUA.

Figel, Jan (2006a) 'International Competitiveness in Higher Education – a European Perspective', speech to AHUA Conference, Oxford: 3 April.

Figel, Jan (2006b) 'Higher Education needs Bold Reforms', presentation at Centre for European Reform, Brussels, 18 July.

Figel, Jan (2006c) 'The Modernization Agenda for European Universities', speech at Ceremony of the 22nd anniversary of the Open University of the Netherlands. Heerlen 22 September.

Figel, Jan (2006d) 'Modernising Europe's Higher Education: Making Initiatives Work', dinner speech at the presentation of the Global Engineering Excellence study entitled: *In Search of Global Engineering Excellence: Educating the Next Generation of Engineers for the Global Workplace*, Frankfurt/Main 9 November.

Gornitzka, A., Maassen, P., Olsen, J.P. and Stensaker, B. (2007) "Europe of Knowledge": *Search for a New Pact*, Arena Working Paper No. 03, February. Centre for European Studies, University of Oslo.

Hollingsworth, J. Rogers (2003) 'Advancing the Socio-Economic Paradigm within Institutional Analysis', *Socio-Economic Review* 1: 1, pp. 130-34.

Jones, Peter D. (2008) 'The European Institute of Technology and the Europe of Knowledge: a Research Agenda', *Globalisation, Societies and Education*, 6: 3, pp. 291-307.

Keeling, Ruth (2006) 'The Bologna Process and the Lisbon Research Agenda: the European Commission's Expanding Role in Higher Education Discourse', *European Journal of Education* 41: 2 pp. 203-223.

Maassen, Peter and Stensaker, Bjørn (2010) 'The Knowledge Triangle, European Higher Education: Policy Logics and Policy Implications', *Higher Education* (Published online 12 August, <http://www.springerlink.com/content/34686q748pr67k20/> [accessed 11.10.2010]).

Nuthall, Keith and Jones, Christopher (2007) 'EU Institute starts to take shape', *Times Higher*, 7 August, 10.

Ravinet, Pauline (2008) 'From Voluntary Participation to Monitored Coordination: why European countries feel increasingly bound by their commitment to the Bologna Process', *European Journal of Education*, 43: 3, pp. 353-67.

Rubele, Renzo (2004) 'Training through research in the 21st century Europe', presentation to EURODOC: the Council for Postgraduate Students and Junior Researchers in Europe, http://ec.europa.eu/research/conferences/2004/univ/pdf/slides_renzo_rubele_en.pdf [accessed 11.11.2010].

Unger, Roberto Mangabeira (1996) 'Legal Analysis as Institutional Imagination', *The Modern Law Review*, 59: 1, pp. 1-23.

Vassiliou, Androulla (2010) Commissioner Vassiliou's speech at 'Launching the KICs - Delivering new solutions to the European innovation landscape' Conference: Barcelona 3 June.

Vogel, Steven K. (1996) *Freer Markets, More Rules: Regulatory Reform in the Advanced Industrial Countries*, Ithaca, NY: Cornell University Press.

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