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European Coordination and Globalisation

- Summative Working Paper for URGE Work Package 3

By Roger Dale



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**European Coordination and Globalisation –
Summative Working Paper for URGE Work Package 3**

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Introduction

This Working Paper concerns the theory and methodology of studying the coordination of European Higher Education in the context of contemporary globalisation. The Working Paper starts by giving an account of the relationship between the Bologna Declaration and the subsequent Bologna Process and what is referred to in EU (European Union) parlance as the ‘Europe of Knowledge’. It makes clear that the origins of the Bologna Process were to be found in the concerns felt by many leading EU states about the deteriorating position of EU higher education *vis à vis* the rest of the world, and especially the United States of America. The Bologna Process could be regarded as a collective and regional means through which Europe could compete at a global level. It was also a means of extending into a crucial new field the conception of ‘Europe’, which was more broadly conceived than EU membership, even though it came to be heavily influenced by the European Commission. The Working Paper then moves on to consider EU policy towards higher education. It shows that EU policy saw the Bologna Process as a means of establishing wider goals summed up as ‘the Europe of Knowledge’. The Europe of Knowledge was to be achieved through the activities of both the European Higher Education Area (EHEA) and the European Research Area (ERA), and the Working Paper traces how this argument evolved through three key Communications from the European Commission. This is followed by an account of how the role of universities in the Europe of Knowledge was interpreted in the ERA, with a particular focus on the proposed reform of doctoral education. The Working Paper closes with a discussion of the nature of the shifting functional, scalar and sectoral division of labour in the governance of higher education.

The Bologna Process and the Europe of Knowledge

The Bologna Declaration, setting up what became known as the Bologna Process and later, the European Higher Education Area, was signed in 1999 by the Ministers of Education of 29 European countries, including not only all member states of the

European Union but other European countries. The Bologna Process is a non-binding intergovernmental agreement whose aims are to enhance the employability and mobility of citizens and to increase the international attractiveness and competitiveness of European higher education. Its basis was a common degree architecture based on two main cycles, a three year undergraduate degree and a two year Master's degree. In its first few years of existence the Bologna Process added further elements to the agenda, as

reform goals gradually shifted from structural changes to substantive curricular reforms, quality assessment and assurance mechanisms and an increasing number of stakeholders [in particular the European Commission] became participants in the policy development and reform process (Kehm 2010: 529).

The Bologna Process now has ten 'action lines', all accepted by all members. These are:

- Adoption of a system of comparable degrees
- Adoption of a system essentially based on two cycles (BA and MA)
- Establishment of a system of credits that can be transferred between institutions
- Promotion of mobility of students and staff within Europe
- Promotion of European cooperation in quality assurance
- Promotion of the European dimension in higher education
- Lifelong learning
- Higher education institutions and students
- Promotion of the attractiveness of the European Higher Education Area
- Doctoral studies and the synergy between the European Higher Education Area (EHEA) and the European Research Area (ERA)

The membership has grown to 47 countries. It has also grown in 'density' through the setting up of the Bologna Follow Up Group (BFUG) composing representatives of all member countries, whose role is to advance the process and organise the bi-annual Ministers' meetings, while the European Commission plays a major role in funding and enabling the Bologna Process (see Ravinet 2008). In scale, its growth is seen in the adoption of versions of the Bologna Process across the world. The Bologna Process aims at creating convergence around its various action lines, but is not intended to standardise European higher education; rather, it emphasises the importance of diversity.

In summary, the action lines of the Bologna Process can be grouped into three key features:

- Enhancing mobility of labour
- Increasing competitiveness (the 'master discourse' set out by the [European Council](#) whose [Lisbon](#) Agenda in March 2000 was to make Europe 'the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion' by 2010).)
- Improving the attractiveness of European higher education.

The Bologna Process' focus on mobility is to be enabled by means of a system for students to transfer credits between European universities, the European Credit Transfer System (ECTS). The Lisbon Recognition Convention established mutual recognition of qualifications and the provision of information about the ECTS, especially through national information centres. The European Qualifications Framework, which, in the absence of a single European Quality Assurance system, is a move towards common quality standards and procedures, is also intended to facilitate students' mobility and the portability of credits.

An assessment of the Bologna Process (Westerheijden et al. 2010) found that structural elements and a common language were among its main achievements, but that there had been less success in implementation and in reaching the key goals of compatibility, comparability and competitiveness.

Such evaluations have focused closely on the degree of achievement of the stated goals of the Bologna Process and it is important here to identify a number of broader key features and possible outcomes (rather than outputs). First, the Bologna Process is not *homogeneous*. For instance we can identify three different aspects of the Bologna Process: a ‘social policy’ pursued through the relatively underemphasised ‘social dimension’, concerning access and participation; a ‘research and innovation’ Bologna, pursued through seeking an association between the European Higher Education Area and the European Research Area, which we will elaborate below; and a ‘global’ Bologna, deriving from what was originally known as the ‘external dimension of Bologna’. Other important features are that the Bologna Process is not *static* – it changes continually; it instrumentalises higher education, not *solely for reasons of competitiveness* but for other purposes too; and it is not (*solely*) *national* in its targets and effects.

It is very important to recognise the heterogeneity of the Bologna Process when confronted by the common claim that the Bologna Process is concerned with bringing about ‘convergence’ between national higher education systems. The heterogeneity of the Bologna Process in the *forms* and *levels* of convergence becomes clear by asking whether the posited convergence occurs at the level of policy input, policy formation, process or output, all of them, or some of them.

If the forms and levels of convergence are too complex to allow simple conclusions, the Bologna Process has also had outcomes that exceed the usual descriptions of its actions. Its actions to achieve mobility involve more than ‘technical’ changes. Similarly, the mutual recognition of qualifications, or credit transfer, involves academic recognition, course recognition and (crucially) ‘quality recognition’ (which effectively entails making a definition of ‘quality’). These changes mean that the Bologna Process constitutes a basis for achieving comparable and compatible

teaching and learning outcomes in higher education at a transnational level. Even though the CHEPS report found that the Bologna Process' aim of achieving comparable and compatible higher education had not been achieved, it still remained a key major ambition of the Process.

The Bologna Process has also had an impact on European politics. Appeals to the 'Bologna Process' have been used to 'leapfrog' national opposition to change in the country and the sector itself, as an 'externally induced' policy lever ('Europe says we have to do it'). It has also become increasingly difficult for existing members to withdraw, and apparently increasingly attractive for other countries and (perhaps especially) regions to join in with the nature and scope of the Bologna mechanisms. As a result, 'Bologna' has become the focus and catalyst of many different kinds of – mainly student – protests.

In sum, we might identify 10 *meanings* of Bologna:

- A set of mechanisms to promote mobility and the attractiveness of European Higher Education - variously driven by the European Commission, the European University Association (EUA, which represents the Rectors of European universities), the Bologna Follow Up Group (BFUG), national Ministers of Education, and others. Mobility is increasingly seen as an end in itself in both the EHEA and the European Research Area.
- A set of mechanisms intended to 'modernise' the European University (driven by the European Commission)
- A key element of Higher Education's contribution to the achievement of the Lisbon Agenda (this is emphasised in European Commission documents, especially those on the role of universities in the Europe of Knowledge)
- The basis for expanding the geopolitical influence of the European Higher Education Area (EHEA), through common Quality Assurance processes, and internationally, for instance through the Tuning Programme (Latin America, Africa) ⁱ
- Increasing Europe's economic competitiveness through 'brain gain', and increasing the attractiveness of Europe's higher education 'offer'

- ‘Thickening’ the idea of ‘Europe’— making higher education a new sphere of ‘European’ activity
- Implementing the ‘5th freedom’—the free movement of knowledge, researchers, etc
- A set of key indicators—and hence influences on the purposes and practices of Higher Education across Europe
- A strategy for countries to transform higher education policy
- A global ‘brand’; a standard and model for the ‘reform’ of higher education globally, as both a model of regional cooperation, and of leading-edge practice, for instance in the introduction of learning outcomes (for the case of the USA, see Adelman 2009).

The overall effect of Bologna has been nicely summarised by Pierre Muller and Pauline Ravinet: ‘Increasing Europe’s economic competitiveness through higher education’s contribution to the ‘Europe of Knowledge’ project has not ... led to the emergence of a true community project for higher education, but it certainly has in a more diffuse way brought about the evolution of the cognitive framework in which European initiatives in this area are thought’ (2008: 663-4).

The Bologna Process and the Construction of ‘Europe’

We might see the Bologna Process as what Olds and Thrift refer to as an assemblage. As they put it, ‘Assemblages differ from structures in that they consist of cofunctioning “symbiotic elements,” which may be quite unlike (but have “agreements of convenience”) and coevolve with other assemblages, mutating into something else ... They do not, therefore, function according to a strict cause-and-effect model’ (Olds and Thrift 2005: 271). The Bologna Process’ political and

technical elements are also quite unlike (Prince 2010) and have been developed deliberately, contingently and opportunistically, to contribute in multiple ways to the construction of the assemblage of 'Europe' as a polity and a region. Whereas the great majority of academic work done on the Bologna Process has focused on the effects of 'Europeanisation' on domestic politics, the economy, etc., of Member States, the approach adopted in this Working Paper focuses on Europeanisation as a process of constructing 'Europe'. As the European Commission states,

the place of higher education in the overall Lisbon strategy goes far beyond the programme of structural reform initiated by the Bologna Declaration. The role of the universities covers areas as diverse and as vital as the training of teachers and that of future researchers; their mobility within the Union; the place of culture, science and European values in the world; an outward-looking approach to the business sector, the regions and society in general; the incorporation of the social and citizen-focused dimensions in courses (CEC 2003b: para1.1.3).

These 'diverse and vital' roles of universities include not only the non-binding intergovernmental agreement around which the Bologna Process was formed, but also the construction of a 'Europe of Knowledge' based on the EHEA and the ERA. The 'Europe of Knowledge' projects the idea of 'Europe' as the most dynamic competitive economy in the world, capable of sustained growth, with more and better jobs and greater social cohesion (the Lisbon Agenda). As a result, Europe is intended to become a dynamic and credible alternative/competitor to the United States in the attractiveness (to students) and in the (economic) contribution of its higher education system. Achieving these goals was seen to require the 'modernisation' of Europe's Universities by establishing a framework for the recognition, comparability and mobility of tertiary qualifications. At the same time, this framework announces European higher education as a benchmark and a beacon for higher education governance and practice for the world.

It is most important to register and recognise the full range and import of ‘Bologna’ elements because the significance of their impact is not confined to the sum of their separate programs, projects and initiatives, but rests also in their ‘symbiotic co-functioning’. This co-functioning is not necessarily planned or designed. It is a creative response by all the parties involved in the governance of education and social policy in Europe to the multifarious projects that emerge from the opportunity structures framed by the political and legal discourses of the EU. As importantly, this collective effect is rarely registered when the focus is on the individual components. This is unsurprising, because many of them, such as the construction of the EHEA, are major, multi-faceted and far-reaching projects in themselves. At the same time, the mutual interrelationships of particular elements – for instance, in the case of the interventions of the European Commission in the Bologna Process – have become much more clearly recognised to the point where their symbiosis becomes itself a matter of serious investigation, or the European Commission comes to be seen as a driver of the process (Keeling 2006).

The symbiosis between the European Commission and the Bologna Process is comprised of three elements; a *formal* relationship, (notwithstanding Bologna’s non-formal and ‘intergovernmental’ status) because higher education is subject to the Treaty it also has to follow the rules of subsidiarity; a set of *processes* involved in propounding the message that ‘Europe’ is a key actor in these matters; and *substantive* embeddedness in the dual agenda set for education at Lisbon of pursuing the Lisbon goals and contributing to the European social model.

This symbiosis between the European Commission and the Bologna Process both limits and directs legitimate European intervention in education. The ‘master discourse’ of the Lisbon Agenda (above) emphasises the centrality of competitiveness, as far as education policy and efforts are concerned. However, the Lisbon Agenda also envisages a key role for education in contributing to the European Social Model and European social policy, where the central features are ‘investment in people’ and ‘building an active welfare state’. This means that ‘Europe’s education

and training systems need to adapt both to the demands of the knowledge society and to the need of an improved level and quality of employment' (CEC 2000, para 25).

The forms taken by the Bologna Process are based on its formal 'constitutional' status. It is not, of course, formally an EU initiative, but a non-binding inter-governmental agreement. It is also crucial to bear in mind the nature and importance of the long, 'pre-Bologna' history of European involvement in higher education (see Corbett 2011).

However, the Bologna Process is clearly perceived as a European initiative and effectively subject to the same broad conditions that derive from the treaty status of education. It is treated as similar to other programmes advanced by Directorate General for Education and Culture, for instance under the auspices of the Open Method of Coordination.ⁱⁱ The operations, goals and mechanisms of those programmes are framed by conditions set by the Treaty. These include collaborating with Member States to improve the quality of education across the Community e.g. through joint target setting. They also include Communications from the European Commission, urging changes to better serve the goals of the Lisbon Agenda. Together, these features of higher education's treaty status have clear implications for the kinds of 'policy' changes it is possible to make.

First, it means that anything 'policy-like' will be in the form of 'policy paradigms' rather than policy reforms. This draws on the work of Peter Hall (1993), who distinguishes what he calls 'normal' policy making from a 'paradigm shift' in policy making. By normal policy making – which is taken as the way that national policies are made – he means a process that adjusts policy without challenging the overall terms of a given policy paradigm, much as 'normal science' builds on and does not disrupt existing ideas in scientific research. A 'paradigm shift' in policymaking, by contrast, 'reflects a very different process, marked by radical changes in the overarching terms of policy discourse' (1993: 279). Thus, the Bologna Process may be seen as an attempt to construct a common 'parallel' paradigm to those followed by

national states, which is restricted both in its mandate and capacity by the fundamental differences in scope between the education policies of the EU and Member States. 'Europe' here is not an external context with the potential to affect national policies. Rather, it is a common space where individual states shape and frame not so much distinct education policies but a parallel educational sector, where paradigm shifts might be essayed.

The second element of higher education's treaty status that frames the possibilities for the Bologna Process is that it takes the form not of 'programmes', but of 'programme ontologies'. This distinction has been raised by Ray Pawson (2002), who argues that in attempting to find a generalized explanation for successful (or rejection of unsuccessful) social interventions and innovations, such as anti-crime initiatives, it is crucial to distinguish between what he calls the 'Programme' and the 'Programme Ontology'. Basically, the Programme is the intervention, or policy, or innovation that is being introduced or implemented with the intention of bringing about beneficial changes in some social phenomenon. The 'Programme Ontology', by contrast, accounts for *how* programmes, policies, etc. actually work. It is essentially the 'theory' of the programme as opposed to its content (and 'the theory' is typically quite likely to be implicit). According to this perspective it is not 'programmes' that work: rather it is the underlying reasons or resources that they offer subjects that generate change. Causation is also reckoned to be contingent. Whether the choices or capacities on offer in an initiative are acted upon depends on the nature of their subjects and the circumstances of the initiative. The vital ingredients of programme *ontology* are thus its 'generative mechanisms' and its 'contiguous context' (Pawson 2002: 342). The relevance to the Bologna Process seems clear. Rather than consisting of specific – national – programmes, the Bologna Process may be more usefully seen as 'offering (its members) reasons and resources that will enable them to generate change' – examples would include the European Credit Transfer System, or the common three year BA, two year MA and three year PhD degree structure.

The third aspect of the treaty status of higher education that frames the Bologna Process is that outputs, though necessarily 'political', will be 'depoliticised'. As

Renaud Dehousse suggests, differences between individual states in areas of policy meant that something that was relatively ‘content free’, and (apparently) non-political, was necessary to ensure a common platform (see Dehousse 2002: 9, 10).

What that means in the current context is that the Bologna Process:

- may set out common objectives, but cannot prescribe policies
- is more likely to advance ‘paradigm’ based initiatives, such as ‘mobility’ and ‘enhancing the attractiveness of European higher education’
- targets ‘Europe’, not national systems (e. g. ‘European competitiveness’, rather than national competitiveness).

The Relationship between the Bologna Process and the Wider Process of the Development of the Europe of Knowledge

This section looks at the expectations and the responses of European universities to the European Union’s (EU) Lisbon Agenda, which was adopted in 2000 ‘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’. The Mid-Term Review (Office for Official Publications of the European Communities 2004) revised the Lisbon Agenda to concentrate its focus on *growth* and *jobs*. The main focus of this section 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’. In a nutshell, this section of the Working 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 advanced here is that the Europe of Knowledge may represent a qualitative shift in the relationship between the EU and Member States in ways that radically challenge some deep

assumptions about the nature of Higher Education as a sector. Gornitzka et al. (2007) put it very well when they wrote: ‘Behind the phrase ‘Europe of Knowledge’, there is a search for a new pact between University, political authority and society at large’ (2007: 7). It will be argued that this 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, it is possible to distinguish four distinct but overlapping and combining parties involved: the European Commission’s directorates for Education (DGEAC) and for Research (DGResearch); the Bologna Process; 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. This also makes it clear that there is more to the European Commission’s policies for, and involvement in, higher education than the Bologna Process.

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 Europe of Knowledge thus preceded and foreshadowed the Lisbon Agenda of 2000. The debate about the implications of the Lisbon Agenda for education continued over the intervening decade, with some intensification and redirection following Wim Kok’s mid-term review (European Commission 2004). If the original Lisbon Agenda confronted education with a triangle of ‘employment, growth and social cohesion’ (Gornitzka et al. 2007:17), then Kok’s midterm review shifted the

emphasis decisively towards growth and education's potential contributions to it. This sequence also entailed changing conceptions of the Europe of Knowledge, especially as it became more closely and exclusively identified with, and the target of, the efforts of both the ERA and EHEA. This Working Paper traces the relationship between those developments and the Higher Education sector across Europe, and investigates the degree to which one outcome of this process might be the effective creation of a differentiated higher education sector. This involves moving beyond discussions about the relationship between the EHEA and the Lisbon Agenda, and their effects on individual higher education institutions, to examine the combined effects of the European Higher Education Area (EHEA) and the European Research Area (ERA) on the higher education sector as a whole. Gornitzka et al. (2007) have provided valuable analyses of the development of the administrative capacities of the two sectors (Education and Research) in constructing the Europe of Knowledge. Their study forms an indispensable backdrop to this work, which focuses more narrowly on the implications for the future of European higher education as a sector.

The approach adopted here is to see the project to improve the contribution of higher education 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 *sector* (see Dale 2008). This argument draws on Hollingsworth's (2003: 131) location of 'institutional sectors' within a hierarchy of components of institutional analysis. This hierarchy 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 higher education sector to be shaped – but not determined – by the Europe of Knowledge as the key 'institution'; the EHEA and the ERA, within the limits of their formal (Treaty) discretion, would provide the institutional arrangements; and the individual institutions would respond to, and set limits to, the achievement of these arrangements.

This approach is slightly different from much work in this area of academic inquiry, whose prime focus seems to be on the effects of the Bologna Process on national higher education systems and practices (see e. g. Huisman and van der Wende 2004; Musselin 2009; Voegtler et al. 2011). 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. In contrast, this Working Paper sees what is happening as the construction of a new sector or, rather, sectors, since it is conceivable that the existing sector may bifurcate with a separate sector of ‘research’ universities. This approach requires us to ask what might be involved in the construction of a new sector at European level, and one that may run alongside national sectors but should not be expected to be a ‘scaled-up’ version of national-level higher education. Nor should such a new European sector be seen as in a hierarchical relationship to national higher education, or creating hybrid forms with it. One way of approaching the issue is to ask how far we may be witnessing a functional, scalar and sectoral division of the governance of Higher Education across the EHEA (see Dale 2003).

The EHEA and the ERA have very different origins, purposes and status, and they seek to protect and advance different traditions. Formally, the EHEA is based on non-binding intergovernmental agreements, constituted through establishing common degree structures, the European Credit Transfer System, patterns of Quality Assurance, limited mobility support, and the ‘European Dimension’ (a frequently used, but rarely defined, term, which seems to come down to the ‘value-added’ of work being done at a European level, rather than at national levels). Education is a national, not a European 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 multiply competitive context – competitiveness within and between organisations, industries, firms, individuals, countries, universities, and regions, especially between Europe and the United States, and increasingly with China and India, too. It involves addressing what the 2005 Salzburg Declaration (EUA 2005), on the nature of the ERA, referred to as the ‘systematic gap’ between the production of knowledge (in universities) and its ‘use’ (in commercial innovation). This gap is often referred to as the ‘knowledge paradox’. The preferred strategy in the ERA was the infinitely variable geometry of the ‘knowledge triangle’ (or, in a slightly different discourse, the ‘triple helix’) of government, industry and university. By contrast, the authors of the EHEA aim at constructing a common institutional space that enables underlying traditions to continue to flourish in an era of globalisation, 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. This 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*. A further key issue is whether, or the degree to which, sectors are defined by territories, activities or goals, by where they take place, by 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 now that the ‘European’ Higher Education Area 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 Process instruments mentioned above. Their centrality to the EHEA is very clear, to the point where they might be seen to be becoming a brand. The argument for suggesting that it is more useful for analytic purposes to see the Europe of Knowledge 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 have 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.

Again as noted above, much of the writing on the Bologna Process and higher education 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 – such as the necessity of organisational autonomy, for instance, or the nature and functions of Faculties – 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 should be seen as related contingently and temporarily, not necessarily and permanently.

There is also little distinction in the literature between sectors and the organisational activities that make them up. Sectors should be seen as framed more directly by institutional arrangements than by institutional conceptions (see Levi-Faur 2006). In these terms, it becomes clearer that both the ERA and higher education should be seen as sectors in their own right, and should be analysed in their own right, rather than collapsed into their activities at an organisational level.

The Working Paper will next elaborate briefly on some of the possible 'internal' problems that the new sectors might face (and indeed, will face, whether or not they emerge as either *de facto* or a *de jure* entities). It will consider in turn the development of the discourse of the Europe of Knowledge and its relationship with the higher education 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 doctoral education as a *dispositif* that appears to be charged with bringing the two partners – the ERC and the EIT– together.

The Europe of Knowledge and the European Higher Education Area

At the time of the Bologna Declaration in June 1999, reform was said to be needed to make European Higher Education more compatible and comparable, more competitive and more attractive for citizens from Europe and other continents. Reform is still needed today if Europe is to match the best performing systems in the world, notably in 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’.

One of the clearest statements of the way the European Commission sees itself as promoting and enhancing the roles of higher education, research and innovation in the creation of a ‘Europe of Knowledge’ was set out in comments it submitted to the London meeting of the Bologna Process in 2007 (CEC 2007a). 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 (CEC 2007a: 2).

In the same submission, the European Commission highlighted three broad areas where changes in higher education could help modernise the system. The first was

through modernisation of the curriculum. This seems on the face of it a daring choice for the European Commission to make, given that higher education was 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*, via such mechanisms as the three cycle system (bachelor-master-doctorate), competence-based learning, flexible learning paths, recognition, the mode of assessment of learning and their contribution to one particular use of qualifications, and mobility.

The second way the European Commission sought to modernise higher education was through reforms to university governance. The assertion of the need for university autonomy (which, again as we shall see below, means setting up a new relationship between the state and the university) is accompanied 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 the European Commission is calling for something more than minor and consensually agreed changes to more traditional conceptions of university governance.

The third broad area that the European Commission pointed to was funding. Their proposals were for diversified sources of university income (which are frequently equated with more private funding). Funding should be better linked to performance and the promotion of equity, access and efficiency, and should include possible roles for tuition fees, grants and loans. Such proposals are rather less opaque, but no less likely to entail significant changes in the idea of the university. They also represented 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, while others charge large fees in public as well as private institutions.

The point of this somewhat pedantic examination of the text of the European

Commission's submission to the London meeting of the Bologna Process (CEC 2007a) is to focus attention on the assumptions and intended consequences of the statement. The text's critique of existing higher education provision contains within it a particular vision of the desired future contribution of higher education to the Europe of Knowledge. This has been very widely recognised and responded to, and 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, relating to the need to 'modernise' the university and to strengthen its contribution to economic growth (the Lisbon Agenda), and especially the second half of the statement quoted at the start of this section, suggest that such a focus might be somewhat limiting, and that it is also necessary to consider the possibility of changes in higher education as a *sector* as it becomes increasingly incorporated into the Europe of Knowledge.

A key issue here is the shifts in perspective on the nature, extent and consequences of the changes to universities as institutions and higher education as a sector. At its simplest, the question is whether what was involved was a *diversification of the activities of the university*, to ensure its survival in the face of the multiple pressures. That appears to be the dominant view. Or was there a *differentiation of the functions of higher education as a sector*, as a 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 about the Europe of Knowledge and its Relationship with the Higher Education Sector

This section will focus on a series of three key Communications (CEC 2003; CEC 2005; CEC 2006), through which the European Commission articulates its policy for the higher education sector of the Europe of Knowledge. It is important to recognise that issuing 'Communications' is one of the major avenues of intervention available to

the European 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, also as noted above, the European Commission has considerable influence on the Bologna Process, particularly in harnessing it to the Lisbon Agenda (see Corbett 2011). The aim here will be to demonstrate the discursive construction and changing meanings of two key terms (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 ‘modernisation 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 (the Europe of Knowledge and the modernisation of the University) refer respectively to the differentiation of the functions of the higher education sector and the diversification of the activities of the university, but as will become clear, this possibility becomes somewhat blurred.

The Role of the University in the Europe of Knowledge

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 2003b: 2). Notably, throughout the Communication, the word ‘knowledge’ precedes the words ‘society and economy’ (or sometimes ‘economy and society’). It is clear that the reference for this version of the Europe of Knowledge is to be found in the Lisbon Agenda. Universities are seen in the Communication as having a major role to play in achieving that agenda. ‘The Europe of Knowledge’ reappears here as a key term, though with a quite different sense from that conveyed in the original Bologna Declaration. This ‘Europe of Knowledge’ is to be based on two planks, the European Research Area and the European Commission’s work in education.

The European Research Area had been set up in 2000 (CEC 2000), around ‘three related and complementary concepts, with no direct reference to education at that time:

- the creation of an ‘internal market’ in research, as an area with the free movement of knowledge, researchers and technology, and 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).

In 2003, the nature of the education contribution was rather general and unspecific, and there appeared to be little liaison between the ERA and EHEA. The 2003 Communication identified five new challenges facing European universities: the increased demand for higher education; the internationalisation of education and research; developing cooperation between universities and industry; proliferation of knowledge production spaces; and the reorganisation of knowledge. The Communication recognised 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 organisation 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 (CEC 2003c: 9–10).

There is 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 on the responsibilities of and for ‘Europe,’ rather than ‘European universities,’ or ‘the university in Europe.’ Notably absent is the very critical tone that would characterise 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 Ministers ‘took into due consideration’ the Lisbon Agenda (Council of Ministers responsible for Higher Education, communiqué 2003: 2). The Ministers said they were:

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. (Conference of Ministers responsible for Higher Education, communiqué 2003: 7)

However, in the meeting of the Bologna Process in Berlin the references to the ERA seemed a rather lower priority 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 (Bologna Process 2003: 1).

The research focus was developed in a 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 items were ‘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’ (UUK Europe Unit 2004: 2). This agenda is very much in step with ‘The role of the universities in the Europe of Knowledge,’ in the sense that universities should modify their traditional objectives and procedures to adjust to, and contribute more fully to, changing economic needs.

Mobilising the Brainpower of Europe: Enabling Universities to Make Their Full Contribution to the Lisbon Strategy

The next major Communication through which the European Commission articulates its policy for the higher education sector of the Europe of Knowledge is ‘Mobilising the Brainpower of Europe: Enabling Universities to Make Their Full Contribution to the Lisbon Strategy’ (CEC 2005). This document 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 the Lisbon process, which had narrowed the original Lisbon Agenda, and specified it more closely as involving ‘Jobs and Growth,’ rather than the original ‘Lisbon triangle’ (social cohesion, employment, and economic growth). 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’ (CEC 2005: 1). In a new and rather narrower expression of the mandate for higher education, it said universities were ‘essential’ in all three ‘poles of Europe’s *knowledge triangle*: education, research, and innovation’, but claimed they

were ‘not in a position to deliver their full potential contribution’. Here, we see changes to both ‘knowledge’ and ‘modernisation’. The word ‘Knowledge’ in this document is not to be found preceding ‘society’ or ‘economy’ as in ‘The Role of the University’ (CEC 2003). Instead, it is found in the trope of the ‘knowledge triangle,’ and typically in hyphenated links, such as ‘knowledge-based,’ or ‘knowledge-intensive’.

‘Modernisation’ becomes explicit in ‘Mobilising the Brainpower of Europe’ 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 modernisation agenda’ that was named and effectively formalised in this document. It had also been foreshadowed in the European Commission’s contribution to the European Higher Education Ministers’ Conference at the 2005 Bergen Meeting of the Bologna Process. Here, the place of the Bologna Process 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).

The document ‘Mobilising the Brain Power of Europe’ (CEC 2005) identified obstacles to achieving these goals on the basis of comparative studies of other higher education systems worldwide. It specified the nature and size of the gaps in attractiveness, governance and funding that had to be filled by European universities. For *attractiveness*, much more diversity was required with respect to target groups, teaching groups, course entry and exit points and the mix of disciplines and competencies in curricula. *Governance* meant ‘modernisation’ of the relationship between states and universities, and of the university as an institution, along the lines of the New Public Management. The document defined ‘public responsibility’ for higher education as

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' (CEC 2005: 4).

The section on governance 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 (CEC 2005: 3.3.1).

Here there are changes both in the conception of the university as an institution and of higher education 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 specialisation of roles among universities, and 'diversity demands organisation at the European level' (CEC 2005: 6). 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 modernise its 'knowledge industry' and in particular its universities (CEC 2005: 10).

This statement (a) introduces the idea of the 'knowledge industry' as a further element

of the new conception of the university as an institution, and (b) suggests that the universities can only be enabled through the reconstruction of higher education as a sector. Both changes are to be brought about by 'Europe'.

This view of 'Europe' creating a modernised higher education sector was also elaborated in a series of speeches in 2006 by the Commissioner for Education, Jan Figel. The main themes of these speeches were that Europe was lagging behind the rest of the world, especially the United States; and that it was essential to recognise why, and to focus on what may be done in response. One major perceived problem was the fragmentation of Europe's universities, which was '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).

His 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 (Figel 2006b: 3).

He went on to say,

In Europe, research funding is sprinkled between some 2000 institutions ... Europe's universities should be allowed to diversify and specialise; some may be able to play in the major league, but others should concentrate on regional and local needs and perhaps more on teaching (Figel 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 (Figel 2006d: 3).

The Commissioner made this point in several speeches, for example, '[the challenges] have become common European ones and require a concerted approach in the EU context' (Figel 2006c: 3). His speeches also identify two main institutional means of modernising higher education on a 'European' scale. 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 (Figel 2006c: 5).

The Commissioner's other institutional means for making this change was the establishment of a European Institute of Technology, a project also strongly supported by President Barosso, which we will consider below.

Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation

The third Communication in the series is 'Delivering on the Modernization Agenda for Universities: Education, Research and Innovation' (CEC 2006a). This document was launched jointly by the Commissioners for Education (Jan Figel) and Research (Janez Potočnik), symbolically indicating the dual character of the Europe of Knowledge. 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 report, 'Creating an Innovative Europe' (European Commission, Aho Report, 2006). This report identified areas for action on universities that could 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 modernisation of EU's universities (Euraxess, 2006:1).

By contrast, Potočník 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 (Euraxess 2006: 1, emphasis added).

It is significant that the subheading qualifying and specifying 'the modernisation 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). But what had been proclaimed there as the 'core modernisation agenda' of governance, funding, and attractiveness is not mentioned in this document. This in itself indicates 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 modernise 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' (CEC 2006a: 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'. The 'knowledge triangle' 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, the need to 'enhance interdisciplinarity and transdisciplinarity', which requires a focus less on scientific disciplines and more on research domains

(CEC 2006a: 8). The third, 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 (CEC 2006a: 10).

Here again we see an implicit but clear assumption of the necessity to diversify the work of universities, with the first element of the knowledge triangle (skills, competences) being labour market-related and ‘inward-looking,’ and the other two (interdisciplinarity and competition) 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 modernisation if Europe is not to lose out in the global competition in education, research and innovation (CEC 2006a: 11).

This provides further evidence of the emergence and extension of a dual agenda for a new version of the Europe of Knowledge. Added prominence is given to the knowledge triangle over the modernisation agenda. There is much greater emphasis on research and innovation, and a clear indication that the knowledge triangle can be achieved only at a European level.

In parallel with the exhortations of the three Communications, the European Commission was also increasing its involvement in and influence over the Bologna Process, despite its own formal status as a ‘non-member’ (see Keeling 2006). The European Commission was heavily involved in funding the activities of the Bologna Follow Up Group, the closest thing to an executive, or steering committee, the Bologna Process had. The nature, complexity and consequences of this involvement of the European Commission 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 encountered 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' (2008: 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 implicitly at times, the whole of EU education policy, but it is even more prominent in discussions about the contribution of the ERA to the Europe of Knowledge. Indeed, it is not insignificant that the two major initiatives to be mentioned below, the European Institute of Innovation and Technology (EIT) and the European Research Council (ERC), originally took 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. 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 2003a). Their share in total research expenditure is around 22 per cent, compared to some 14 per cent in the US and Japan (CEC 2003a: 7).

There are several developing strands to the EU's research and innovation policy, all aimed at overcoming Europe's 'knowledge paradox'. This refers to the perceived failure of European researchers to match the dissemination and uptake of knowledge

with the quality of their knowledge output. The two most basic and longest established mechanisms emanate from the European Commission's Directorate General Research. The first, which is relatively indirect, and advisory or exhortatory, involves urging Member States to spend at least 3 per cent of GDP on research and development (see CEC 2000). 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 latest programme was FP7, which ran until 2013. Two central characteristics of the Framework Programme are that the European Commission determines the scope and nature of the calls, and transnational collaboration on bids and projects is mandatory. The Framework Programme 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. 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' (e.g. Potočník 2007).

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 they do not constitute a novel or direct assault on the knowledge paradox – the gap between the production of knowledge (in universities)

and its ‘use’ (in commercial innovation) – or on the nature of the University as an institution or higher education as a sector.

Rather more of a challenge was posed by the fledgling European Institute of Innovation and Technology (EIT). Gornitzka et al. (2007) suggest that both ERC 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 (sic)’ (2007: 28). The focus and purpose here is directed at valorising the knowledge triangle more effectively. The EUA (2006) saw the EIT as ‘innovation-driven’, rather than ‘research-driven’ like the ERC. According to the EUA, higher education has ‘*notoriously* been the absent member of innovation partnerships’ (Enders 2005: 119) through enhancing the universities’ contribution to the valorisation of knowledge, through knowledge transfer as well as process and product innovation. One interesting aspect of the EIT proposal was that it was run through the Directorate-General for Education and Culture. For David White, a senior member of the Directorate General for Education and Culture, and former director in charge of the European Commission's innovation policy and the leader of the EIT discussions in the Council and Parliament. ‘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). Key issues that could be addressed by the EIT were seen as the inherent 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 research and development in Europe compared to the USA, means that ‘there are more actors seeking a slice of the cake’ (EurActiv 2007)

In launching the EIT’s first Knowledge and Innovation Communities (KICs – the main mechanisms through which the EIT will work), the then Commissioner for Education referred to the EIT 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 (Vassiliou 2010: 2).

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 Framework Programmes and the European Research Council. 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. The aim is 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). In addition, ‘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’ (CEC 2006b: 301- 302).

It could thus appear that the EIT represented the clearest and most radical ‘threat’ offered to the ‘traditional university’ by higher education’s involvement in the Europe of Knowledge. The EIT also provided the likeliest model for 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: 10). The EUA also successfully opposed the proposal that the EIT should draw on individual university faculties, rather than on the university 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 the 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 to the supply of relevantly prepared researchers, and their consequences, have been succinctly spelled out by Jurgen Enders (2005). In quantitative terms, the European Commission says 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 2003c: 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 response to this problem is a formalised and sequential delivery of the Europe of Knowledge through, first, the production of researchers of the ‘right kind’ (i.e. able to contribute directly to commercial innovation) and number. Second, these researchers are expected to ‘staircase’ 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, and it is important to note 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 Europe of Knowledge. 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 labour 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 very significant changes 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 specialised and localised knowledge. Its diffusion was propelled by ‘an enforced mobility after graduation within academe as well as to other sectors of economy and society’ (Enders 2005: 121). 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 of boundaries between disciplines, between basic and applied research, the cognitive rationality of the scientific production of new knowledge and the economic rationality of capitalising 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 (Enders 2005: 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 (See Eurodocs 2004). This Charter has already been spread widely, including to the European Commission as an input document for the European

Researchers' Charter (CEC 2014). 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 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 specialisation' (Ackers 2005: 311).

The European Commission's Communication 'Towards a European Research Area' (CEC 2000) refers specifically to the need to develop an '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).

And finally, we should note the recently implemented Marie Curie programme of doctoral education, the Initial Training Network (ITN), which is characterised by a much more structured programme of doctoral training than has traditionally been the case, and has as a central goal that fewer than 50 per cent of the graduates of the programme should be employed in academia.

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

Doctoral training 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 (CEC 2007b) 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 suggested 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 realisation of the 'open market of researchers', one of the main goals of the strategy underpinning the European Research Area (Rubele 2004: 2-3).

And it is stated in the European Researchers' Charter, which was first adopted in March 2005,

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 (CEC 2014).

In a rather more sceptical paper that questions the idea that mobility and excellence are 'mutually constitutive', Louise Ackers (2008) suggested 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' (2008: 423). She goes on to argue that while 'mobility is one means of achieving international research collaboration and knowledge transfer ... it is not an end in itself and the concept masks a whole range of "strategies"' (ibid).

All that said, such levels of mobility and competitiveness are still likely to lead to the stratification, and possibly the differentiation of the sector. Allied to the need for critical mass that we mentioned earlier, these tendencies seem likely to produce

organisations 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

One basic question addressed in this Working Paper is whether the changes brought about by the involvement of both the ERA and the EHEA in constructing the Europe of Knowledge have led, or are likely to lead, to some form of re-sectoralisation of higher education in Europe, and it 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 labour in the governance of activities 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 the process of constructing a Europe of Knowledge?

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, higher education institutions. Solving the knowledge paradox – the 'systematic gap' between the production of knowledge (in universities) and its use (in commercial innovation) – and cementing the knowledge triangle between government, industry and university calls for activities that are different from those traditionally identified with the university and

that are directed at different purposes. But it is crucial for the purpose of the re-sectoralisation argument to note that not all higher education institutions are called to make such changes. It is argued here that certain institutions are being split off and incorporated into a new sector in the Europe of Knowledge, leaving remnants of the old higher education sector still in existence. Thus any suggestion that there has been a wholesale shift in higher education activities would be a clear negation of the re-sectoralisation argument. Indeed, if Jan Figel is to be believed, these changes 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 (2011), 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 Europe of Knowledge involves extending, reducing, or altering the writ of the Bologna Process, which might already be seen as underlying a scalar division of labour of higher education governance between European and national levels. As Gornitzka et al. (2007) point out, both ERC and EIT represent a break with the normal pattern of higher education policy making at the 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. It seems that any such intention was foiled by EUA among others obstructing the move to allow EIT to award degrees, especially the Ph.D., 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 a higher education sector.

The focus on the need to resolve the knowledge paradox as the key driver of the Europe of Knowledge, and the knowledge triangle as the centre of gravity around which at least some parts of higher education should revolve, has clearly put pressure on the PhD as one of the defining elements of the higher education 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 as a representation of the problem facing European competitiveness). Clearly, the new ‘research career’ PhD is 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 unpublicised, 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 (2006) puts it, the objective of the Bologna Process 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, ‘Europe’ moves to take on the rather more focused responsibility for *growth* and *jobs*. This is to be brought about largely through the Europe of Knowledge, whose development is obstructed by the knowledge paradox, and the fragility of the knowledge triangle.

In conclusion, there is a clear sense that resolving the knowledge paradox involves bifurcating and restructuring the sector; it is as a result of staying within its traditional sectoral boundaries that higher education cannot perform as is required by the Europe of Knowledge. Sectoral boundaries have to be made more porous – open to the world (see Enders 2005: 120) – but they also have to be recomposed on the basis of the kinds of knowledge that lie at the heart of the Europe of Knowledge.

Notes

ⁱ 'TUNING Educational Structures in Europe started in 2000 as a project to link the political objectives of the [Bologna Process](#) and at a later stage the [Lisbon Strategy](#) to the higher educational sector. Over time Tuning has developed into a Process, an approach to (re-)design, develop, implement, evaluate and enhance quality in first, second and third cycle degree programmes. ... Tuning focuses not on educational systems, but on educational structures with emphasis on the subject area level, that is the content of studies. Whereas educational systems are primarily the responsibility of governments, educational structures and content are that of higher education institutions and their academic staff' <http://www.unideusto.org/tuningeu/> It is supported financially by the EU's Directorate General for Education, Arts and Culture (DGEAC).

ⁱⁱ The OMC is a means of governance in the [European Union](#), based on the voluntary cooperation of its member states. It is based on mechanisms such as guidelines and indicators, benchmarking and the sharing of good practice.

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): 301-317.
- Ackers, Louise (2008) 'Internationalisation, Mobility and Metrics: A New Form of Indirect Discrimination?', *Minerva* 46 (4): 411-435.
- Adelman, Clifford. (2009) *The Bologna Process for U.S. Eyes: Re-learning Higher Education in the Age of Convergence*. Washington, DC: Institute for Higher Education Policy.
- 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): 407-25.
- Bologna Process (2003) 'Realising the European Higher Education Area' Communiqué of the Conference of Ministers responsible for Higher Education: Berlin, 19 September.
- 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): 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 (2003a) *Communication from the Commission – ‘Education & Training 2010’: The success of the Lisbon Strategy hinges on urgent reforms (Draft joint interim report on the implementation of the detailed work programme on the follow-up of the objectives of education and training systems in Europe) {SEC(2003) 1250} /* COM/2003/0685 final.*

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

CEC (2003c) *Communication from the Commission: Investing in Research: An Action Plan for Europe, COM (2003) 226 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, COM (2005) 152 final. 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.
- CEC (2014.) ‘European Researchers’ Charter’ The pan-European Researcher’s Mobility Portal. Accessed on 6 February 2014 at <http://ec.europa.eu/euraxess/index.cfm/rights/europeanCharter>
- 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].
- Corbett, Anne (2011) ‘Ping Pong: Competing Leadership for Reform in EU Higher Education 1998-2006’, *European Journal of Education* 46 (1): 36-53.
- 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, (2007) ‘Changing Meanings of “the Europe of Knowledge” and “Modernizing the University”, from Bologna to the “New Lisbon”’, *European Education* 39 (4): 27-42.
- 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.

Dehousse, Renaud (2002) 'The Open Method of Coordination: A New Policy Paradigm?' Paper presented at the First Pan-European Conference On European Union Policies 'The Politics of European Integration: Academic Acquis and Future Challenges', Bordeaux, 26-28 September.

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): 119-133.

EUA (2005) 'Bologna Seminar on "Doctoral Programmes for the European Knowledge Society". Conclusions and recommendations' www.eua.be/eua/jsp/en/upload/Salzburg_Conclusions.1108990538850.pdf [accessed 4.10.2010] 5.

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

Euraxess, (2006) 'Europe needs modernised universities, says European Commission' <http://ec.europa.eu/euraxess/index.cfm/general/modernisedUniversities>.

Eurodocs (2004) Supervision and Training Charter for Early Stage Researchers http://www.eurodoc.net/file/2004_eurodoc_charter_supervision_training.pdf.

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.

Hall, Peter A. (1993) 'Policy Paradigms, Social Learning and the State'. *Comparative Politics*, 25 (3): 275-96.

- Hollingsworth, J. Rogers (2003) 'Advancing the Socio-Economic Paradigm within Institutional Analysis', *Socio-Economic Review* 1 (1): 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): 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): 203-223.
- Kehm, Barbara (2010) 'The Future of the Bologna Process – The Bologna Process of the Future' *European Journal of Education* 49 (4): 529-34.
- Levi Faur, David (2006) 'Varieties of Regulatory Capitalism', *Governance* 19 (3): 367-82.
- Maassen, Peter and Stensaker, Bjørn (2011) 'The Knowledge Triangle, European Higher Education: Policy Logics and Policy Implications', *Higher Education* 61 (6): 757-69.
- Muller, Pierre and Ravinet, Pauline (2008) Construire l'Europe en résistant à l'UE ? Le cas du processus de Bologne , *Revue internationale de politique comparée* 15 (4): 653-65.
- Nuthall, Keith and Jones, Christopher (2007) 'EU Institute Starts to Take Shape', *Times Higher Education*, 7 August, 10.
- Office for Official Publications of the European Communities (2004) *Facing The Challenge. The Lisbon Strategy for Growth and Employment. Report from the High Level Group chaired by Wim Kok*, November.
- Olds, Kris, and Thrift, Nigel (2005) 'Cultures on the Brink: Reengineering the Soul of Capitalism—on a global scale', pp. 270-90 in Aihwa Ong and Stephen J Collier

(eds) *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, Malden, MA: Blackwell Publishing.

Pawson, Ray (2002) 'Evidence-based Policy: The Promise of "Realist Synthesis"', *Evaluation* 8 (3): 340-58.

Potočnik, Janez (2007) 'The EU's Fifth Freedom: creating free movement of knowledge' Speech to Informal Competitiveness Council Wuerzburg (Germany), 26 April.

Prince, Russel (2010) Policy Transfer as Policy Assemblage: Making Policy for the Creative Industries in New Zealand *Environment and Planning A* 42: 169-186.

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): 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. Accessed on 11 November 2010 at http://ec.europa.eu/research/conferences/2004/univ/pdf/slides_renzo_rubele_en.pdf

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

UUK Europe Unit (2004) 'A Vision for University-based Research and Innovation', European Commission Liège conference London 9 June.

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.

Westerheijden, D. F, Beerkens, E., Cremonini, L., Huisman, J.,Kehm, B., Kovac, A., Lazetic, P., McCoshan, A., Mozuraityte, N.,Souto-Otero, M., Weert, E., White, J. and Yagci, Y. (2010) *Bologna process independent assessment. The first decade of working on the European Higher Education Area*. Final report to the European Commission. Twente: CHEPS.

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