

1. Building a European knowledge area: an introduction to the dynamics of policy domains on the rise

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The European process has very recently moved some extremely important steps ahead. Relevant as they are, they should not make one forget that Europe is not only that of the Euro, of the banks and the economy: *it must be a Europe of knowledge as well* (Sorbonne Joint Declaration 1998, emphasis added).

INTRODUCTION¹

A careful look at the history of European integration reveals that the knowledge domain has always been present: the founding fathers had visions of common European knowledge institutions (Corbett 2005), ideas about creating a common scientific area have been simmering for decades, and elements of science and technology cooperation were visible already at the very start (De Elera 2006). However, policies and programmes concerning education, students, teaching, learning, schools, colleges and universities, as well as research, research institutes and centres, academics and scientists have in general been at the political margins of the European integration process. Developments since the turn of the century have changed this situation dramatically and demonstrate how institutions and organizational capacity being created in this domain are ratcheting up European cooperation and intensifying the interaction between governance levels. A European 'knowledge policy area' is emerging that is radically different in key aspects from the traditional ways in which (higher) education and science policy issues were handled. How can this new 'knowledge policy area' be interpreted and how can we account for the changes underlying its emergence? In this volume, we show how European integration in these areas did not happen as a steady consensual process of

functional adaptation, a consequence of irreversible lock-in effects, nor as a process of rational design and exercise of predetermined political will. No single coherent group of actors – be it the member states' governments, European institutions, interests groups or transnational actors – has been able to fully control any of the processes analysed here. Instead, these processes trigger and are the results of contestation and tensions – across governance levels, across time and between institutional actors with different interests, values, norms and ideas. In this volume these processes will be examined mainly from an institutional perspective. We show that building the Europe of Knowledge 'depends to a large extent upon the internal constitutive characteristics of existing institutions', and '[i]nstitutions that authorize, and enable, as well as constrain change' (Olsen 2007a, p. 106). Specifically, we examine: (1) how institutions and governance capacity are established at the European level; (2) the effects of institutional and sector-specific factors on policy-making; and (3) the conditions that affect how national institutions and actors respond to European governance output.

These processes of European integration concern sectors of society that are increasingly transnationally connected ('borderless knowledge') and at the same time nationally embedded and sensitive. The governance of these sectors in Europe has traditionally not been at the forefront of party-political cleavage lines mobilizing broad electorate involvement, but has engaged a narrower set of experts, stakeholders, interest groups, professional associations and scholarly communities. European integration in research and higher education are also addressing sectors where traditional governance constellations as well as the sectors' role in society at large are being questioned and redefined. These are sector-specific conditions that also affect the dynamics of European integration in these policy domains.

At a general level our analytical point of departure is that European integration in different (sub)sectors of the knowledge policy domain activates tensions along two dimensions related to how these sectors are organized and institutionalized. First, the process of task expansion at the European level in areas of core national sovereignty involves cooperation as well as conflict and tensions along the *vertical* line between national and European levels of governance (Gornitzka et al. 2007, pp. 186–190). Knowledge policies are in general more nationally embedded than most and deepening and widening European engagement is likely to trigger resistance (Börzel 2005). We argue that this *vertical* perspective must be supplemented with a *horizontal* one: integration dynamics come from tensions along the horizontal line between sectors of society and from the frictions involved when the purpose and fundamental understanding of societal institutions are challenged (Gornitzka 2010). In two knowl-

edge sectors – higher education and research – competing visions for the Europe of Knowledge can be identified. These are linked to fundamental economic and social transformations that are in particular associated with the rise of the knowledge economy and knowledge society where knowledge is seen as the main source of wealth of nations, businesses and people (Lundvall and Rodrigues 2002).

We assume that, in the interaction between shifts in governance along the *vertical* line and tensions along the *horizontal* line, we will find the key to understanding how a Europe of Knowledge is emerging and is being institutionalized. Indeed, we argue that the construction, evolution and consolidation of the Europe of Knowledge offer crucial insights into the dynamics of contemporary European integration. The comparison between higher education and research policy will reveal *differentiated integration patterns as these two subsectors vary in level and form of institutionalization both at the national and European levels.*

To begin discussing the core issues of the Europe of Knowledge, we spell out what a *vertical* and a *horizontal* dynamic of regional integration implies in the knowledge policy domain and the general theoretical underpinnings of such a perspective. We then outline the pathways that European level involvement have followed before introducing the themes of this volume and what they tell us about the dynamics of European integration.

INTEGRATION DYNAMICS IN THE EUROPE OF KNOWLEDGE: *VERTICAL* AND *HORIZONTAL* PERSPECTIVES

National Sensitivity, Legitimate Diversity and the *Vertical* Perspective

A central aspect of the development of European integration is the differentiated transfer of competencies to the European level and the plurality of policy-making modes (Börzel 2005). Different shades of institutionalized interaction have taken European integration beyond the mutual adjustment among sovereign states to policy-making modes ranging from intergovernmental negotiations, joint decision-making to supranational centralization (Scharpf 2001). In European integration, the tension involved in redrawing the jurisdictional boundaries between the nation state and the European level is related to prevailing ideas about common problem-solving capacity across member states and in different societal sectors, and the legitimacy of governing modes. In some sectors of society the diversity of member states has been deemed as illegitimate and in others not, as Scharpf (2002, pp. 35–36) argues:

Given the commitment to economic integration, the defense of national diversity was tainted by the brush of illegitimate protectionism. By contrast, policy initiatives addressed to the new challenges are confronted with policy conflicts which are rooted in fundamental differences of economic and institutional conditions, policy legacies and normative orientations that have high political salience in the constituencies of member states.

This argument is relevant to address the tensions involved in European engagement in research and higher education. With around 4,000 higher education institutions, over 19 million students and 1.5 million staff, European higher education is vast and also highly diverse. The diversity includes variations of national knowledge systems historically rooted in the intricate relationship and coevolution of the nation state and higher education and research in European countries (Maassen 2009). In higher education, school and training systems, considerable national systemic diversity has developed over centuries of state involvement. An explicit research policy and innovation policies are respectively post-war and post-1980s phenomena, but still developed within the nation state frame in Europe (Georghiou 1999). This diversity is highly visible in spending on research and development (R&D) and higher education, educational attainment level, as well as the role of knowledge intensive sectors in national economies.² This may constitute a territorial cleavage line that can be activated in European integration between developed knowledge economies and those less developed in Europe.

Part of the diversity is rooted in national identities and legacies, which make supranational centralization highly contentious, an aspect we expect to shape the breadth and level of European integration and policy-making modes. However, national involvement in regulating and funding higher education and research has not been in a steady state. Since the 1980s, European governments have been repositioning themselves in national higher education and research systems through considerable reform efforts and experiments in changing modes of governing (Braun 2008; Gornitzka and Maassen 2000; Gornitzka et al. 2005). Hence, we cannot account for the response and involvement of national governments towards European developments without considering shifts in governance *within* national systems.

Inter-Sectoral Tensions, Interaction and the *Horizontal* Perspective

Nation building in Europe has been characterized by the successive build-up of territorial boundaries differentiating between distinct functional regimes (Bartolini 2005). Nation states consist of sets of institutions and institutional spheres that have their own operational logic, rules and

principles legitimizing them. Science, representative democracy, and the market economy are examples of three such pillar institutions in the nation state (Olsen 2007b; 2007c). The establishment of the modern state has also been carried by a specialization of public governing arrangements for societal sectors, with individual sectoral organized capacity for policy-making and implementation. A central characteristic is the specialized policies for different areas of society developed over centuries with regularized, organized interaction between policy actors aimed at developing, deciding and implementing policies. With them, specialized subsystem actors, special interest groups and experts, have been constituted. These interact with sectorally specialized public agencies, ministries and political actors as well as sectoral industries. In its most differentiated form the modern state can be seen as a conglomerate of segments (Egeberg et al. 1978) with few institutionalized opportunities for cross-sectoral coordination.

Such sectoral segments would also share basic *ideas* about appropriate policy objectives, legitimate concerns, as well as programmes for achieving them. These constitute policy paradigms and legacies and are perpetuated in the political organization of a policy area. When public policy concerns an established area it will be informed by a relative stable set of beliefs on fundamental sectoral goals (Hall 1993). Once a policy paradigm is settled and endowed with organizational structures, rules, standard operating procedures, resources and personnel to uphold them, it has become institutionalized (see Olsen 2001; 2007c, for an in-depth analysis of what institutionalization entails).

Institutional differentiation also carries some insulation from outside influence (March and Olsen 2006, p.17). Indeed, the differentiation of science, higher education and the university as the prime higher learning site has implications for governance structures and public policy. A differentiated policy for higher education and academic research implies recognition that policy objectives, programmes and actions are especially adjusted to the university as an institution with its own legitimate, constitutive principles (Olsen 2007b).

A similar but not identical differentiation process is notable in European integration history. Stone Sweet et al. (2001) talk, for example, about the 'Brussels complex' for the multiple arenas that have replaced the original primitive governance site. The European Commission has been especially organized according to a principle of sectoral specialization (Egeberg 2006). Interest group formation has accompanied the multiplication of access points to supranational decision-making (Mazey and Richardson 2001). For knowledge sectors the growth in the number of both European level interests groups and Europe-wide civic associations have been particularly high (Fligstein 2008). Observations have underlined the role of

policy communities underpinning sectorally differentiated governance and policy-making systems. These have developed around specialized issue areas that interact on the basis of shared *ideas* (Haas 1990). The European Commission has been particularly instrumental in forging epistemic communities and disseminating legitimizing ideas within such specialized communities (Kohler-Koch 2005, p. 8).

Yet differentiation processes do not imply that such sectoral demarcation lines have reached equilibrium. Change tends to occur particularly in the interface between different institutional orders and their interactions (Holm 1995), as well as over time (Pierson 2000). Parallel to the differentiation processes into institutional spheres and policy sectors, *interaction* between sectors built on different principles is a fundamental dynamic of change. From such a perspective change should be understood in terms of 'interaction and collisions among competing institutional structures, norms, rules, identities and practices' (March and Olsen 2006, p. 16). Such interaction can result in radical change, if goals, interests, understandings and actors from one sphere *invade* another. Yet, when the logics and governing arrangements of one sector are perceived to be challenged by another, it may also trigger contestation and sectoral defence mechanisms (Gornitzka and Olsen 2006; Olsen 1997, pp. 206–207).

Less dramatic cases of intersectoral interaction are the gradual changes that can occur, for instance, when market-like solutions are imported to adjust the governance mechanisms in the academic sphere without changing the overall policy paradigm or threatening the very constitutive principles of a policy or the societal institutions it addresses (Hall 1993, p. 277). Hence the construction of governance sites is then incremental and institutional arrangements of different origins coexist. It follows that this is not a deterministic process, but one that may lead to resistance, moderation or accommodation.

From this we can expect cooperation and contestation patterns in establishing the Europe of Knowledge to reflect not only nation state (selective) resistance and sensitivity to or mobilization for European competence expansion, but also tensions concerning what kind of knowledge policy for what kind of Europe. Hence we can also expect this to be a cleavage line that *cuts across* the territorially based cleavages and the vertical tension between governance levels. Following an institutional perspective on European integration (Olsen 2007a) and research agenda (Gornitzka et al. 2007), a fundamental distinction to be made is between the understanding of schools, colleges, universities and research organizations as institutions versus instruments. Indeed, the drive towards a coherent and coordinated knowledge policy approach implicitly triggers *horizontal* ten-

sions of integration: as the foundation for a knowledge-based economy (economic competitiveness); as an embodiment of a knowledge-based society (education for social inclusion, civic education and socializing the citizens of Europe); as an instrument of knowledge-based policy (science as a transversal problem-solver for Europe's grand challenges); and as a tool for enhancing the competitiveness of European science and higher education. These competing images indicate that research and higher education are positioned in an area of tension between culture, politics and economy, and are subject to various integration pressures within and without the European Union (EU). These visions vie for dominance in an uneasy coexistence over time triggering sequential tensions that have led to unexpected changes – as we shall show below.

BUILDING THE EUROPE OF KNOWLEDGE IN AND OVER TIME

Europe of Knowledge as a Term

The political and supranational origins of the phrase can be traced to the European Commission's Communication from 1997 titled 'Towards a Europe of Knowledge' (European Commission 1997b). This Communication presented the European Commission's vision for reforming the EU's internal policies within the context of Agenda 2000, setting out comprehensive overall reforms for preparing the EU for its Eastern Enlargement and amending the Common Agricultural Policy. As part of the Agenda 2000 reforms, the European Commission (1997a, p. 14) argued that the EU's 'internal policies should set the conditions for sustainable growth and employment, put knowledge at the forefront, modernize employment systems and improve living conditions'. The Europe of Knowledge Communication was a response to this call: it outlined the guidelines for future EU actions in the areas of education, training and youth.

While the Agenda 2000 Communication explicitly defined that the efforts towards consolidating the EU as a knowledge-based polity would stem from multiple policy streams (*research, innovation, education and training*) (European Commission 1997a, p. 19), the Communication on the Europe of Knowledge saw it as, 'an open dynamic European *educational area*' (European Commission 1997b, emphasis added, p. 2). Strikingly, only a few references were made to research and innovation. The focus on the educational side of the Europe of Knowledge points to the *horizontal* tensions between the sister sectors. Concerning what this educational area/Europe of Knowledge would substantively encompass, the

Communication gave general clues: it ‘needs to be understood in the broadest possible sense, both geographically and temporally’ and consists of three key dimensions – knowledge, citizenship and competence (European Commission 1997b, p. 3). We may deduce that, in its original presentation, the Europe of Knowledge would serve a socio-economic function: as a knowledge-based *society* and *economy*.

This image for the Europe of Knowledge, albeit with a stronger emphasis on the societal and cultural dimension, was upheld by four European education ministers in 1998 when they signed the Sorbonne Declaration. With the Sorbonne’s signing, the *vertical* tensions of integration in creating a European Higher Education Area (EHEA) are clearly visible because this intergovernmental initiative moved the conversation outside the EU framework. The Sorbonne Declaration presented the Europe of Knowledge as an area in which the university would play a prominent role. European universities would be the ‘node’ through which the European citizens are connected in their lifelong pursuit of knowledge. The Sorbonne Declaration, as we have seen, referred to the Europe of Knowledge in contrast to the ‘Europe of the Euro’.

The next phase in the supranational development of the Europe of Knowledge came when the European Commission issued a Communication in 2003 titled ‘The Role of the Universities in the Europe of Knowledge’, promoting the idea that it should also be a tool for increasing the competitiveness of European higher education on the global stage (European Commission 2003, p. 3). The European Commission’s Communication ‘Towards a European Research Area’ (ERA) from early 2000 also referred to the Europe of Knowledge, albeit within the context of a ‘Europe of innovation and knowledge’ (European Commission 2000). In this core document setting out the rationale for better organization of European research through creating a common scientific area, the European Commission proposed three visions for the Europe of Knowledge: as the basis for a knowledge-based economy; as an instrument for invigorating and increasing the competitiveness of European science; and as a tool for informed policy-making and implementation. The clear emphasis on the market economy and utility of science points to the extant *horizontal* tensions in this construction process. What we may conclude from this discussion is that there is no single definition of the Europe of Knowledge. This remains the case as, in their recent review of the concept, Elken et al. (2011, p. 5) conclude: the Europe of Knowledge is ‘a complex and malleable term’.

To delve deeper, we must first step back in time and identify the main elements in European integration in higher education and research: these two sectors have a history of cooperation at the supranational level before the ‘Europe of Knowledge’ was coined.

European Integration and Higher Education: Coping with National Sensitivity

Research and education have been items on the European agenda practically since the very beginning of European integration (see Corbett 2005; Guzzetti 1995). However, education (especially higher education) has been seen as an area with national prerogatives. Most historical accounts of EU's involvement in higher education frame it as a 'tug-of-war' between member states and the European Commission evolving in incremental steps due to task expansion (De Wit and Verhoeven 2001; Neave 1984). Scholarly works, especially Corbett's (2003; 2005), have identified both the historical events in the early days of European integration and elaborated a fine-grained understanding of entrepreneurs within and around the European Commission in securing the major leaps in the EU's engagement with higher education. Corbett points to how the member states' education ministers, in voicing proposals for more organized cooperation, and the European Commission, in expressing at times concern over the Community principle, contributed to supranational expansion into the educational sector.

It can be argued that the overall condition framing the tensions between the supranational and national governance levels with respect to higher education as a policy area is the issue of national sensitivity. When the university was seen as an educational institution, it was positioned in an area of legitimate national diversity especially concerning higher education's socializing role and gate-keeping functions for entrance into the national civil service. One pathway of European involvement in higher education was through its policy towards mutual recognition of professional degrees and free movement of skilled manpower. As Bartolini (2005) notes for general education, the EU's inroad into this domain was legitimized via socio-functional arguments and not as a question of the socializing role of education or for creating a common European identity.

EU history suggests that higher education has been more nationally sensitive in its cultural socializing function than in its labour market/economic role. At the same time, the university was also seen as a cultural carrier and as an independent, key societal institution transcending national borders as the Magna Charta Universitatum (1988, p. 1) proclaims: 'A university is the trustee of the European humanist tradition'. The EU did not have any legal basis for harmonization (apart from the directives for mutual recognition of professional degrees) and the member states did not show much political will to allow for the development of a supranational higher education policy. The EU continues to have a *supporting* role in education and training policies. Member states are in charge of their own education

and training systems. The Treaty on the Functioning of the EU states (Article 165):

The Community shall contribute to the development of quality education by encouraging cooperation between Member States and, if necessary, by supporting and supplementing their action, while fully respecting the responsibility of the Member States for the content of teaching and the organisation of education systems and their cultural and linguistic diversity (Official Journal of the European Union 2010, p. C 83/120).

What the EU was left with in the 1980s and 1990s was first and foremost European programmes for promoting student and staff mobility. Although the decisions to establish these programmes have been highly contentious and laborious, these programmes were institutionalized and important in establishing a European governance site for higher education. They also introduced the ‘motives, means, and opportunity’ to create and consolidate stakeholder associations, transnational expert communities and administrative networks (Beerkens 2008; Gornitzka 2009). In the 1990s an *informal* cooperation structure between top national officials responsible for higher education was established. Though weak, this committee was where these officials became socialized into cooperation (Corbett 2005).

The pre-Lisbon period (before 2000) is characterized by the growing momentum of the knowledge economy discourse in Europe, where one could expect higher education to be at centre stage. Yet, the European Commission had burnt its fingers on the national sensitivity towards higher education: its 1991 ‘Memorandum on Higher Education’ received a hostile reception from member states. They opposed the economic orientation and utilitarian view of higher education supposedly permeating this document (European Commission 1991). Combined with a sense that the European Commission was trespassing on national domain (especially in the area of teacher training), the member states sent a clear message to stay off this territory. While there were tentative developments towards building up a European governance capacity for higher education in the 1990s through incentive programmes, this was about to change with the instigation of the Bologna Process.

The Bologna Process as Voluntary Coordination for Higher Education: Stepping Outside the EU Framework

In May 1998, the German, French, Italian and British ministers in charge of higher education met on the occasion of the 800th anniversary of the Sorbonne University. The four ministers called on all European countries to join them in building an attractive EHEA based on comparable degrees

and a two-cycle system for improving student mobility and employability. The Sorbonne Declaration delved straight into one of the most sensitive issues: diversity of degree structures. The central objectives exceeded what European states could have ever accepted from the European Commission (see Ravinet 2009, for details). Countries beyond the big four quickly joined and in June 1999 ministers from 29 European countries signed the Bologna Declaration, committing to coordinating their national policies based on six common objectives for establishing an EHEA by 2010 (Ravinet 2007).

Member states side-stepping the EU to pursue integrative agendas is not unprecedented. To start, following the intergovernmental logic, national ministers were in this case clearly in the driver's seat as instigators of this process. Over time, however, the actors responsible for voluntary coordination changed and became mixed. The Bologna Process saw a growing presence of national officials who connected with each other. The intergovernmental process borrowed the administrative capacity of the supranational executive and the European Commission's Directorate-General (DG) for Education became a regular participant. Consultative members were added to the Bologna Process and made it a collective forum where public and non-governmental organizations met, along with higher education experts and consultants. Measures for developing the EHEA borrowed from existing EU measures; for example, the European credit transfer system (ECTS). As Elken and Vukasovic (2014, this volume) demonstrate, the intergovernmental process has developed into a node for a *transnational* Bologna Process network.

From a *horizontal* perspective, we are able to spot the interaction between different sites of European level policy-making as a key dynamic of change. The Bologna Process is organized to reinforce the *sector internal* interaction across governance levels where actors met without any immediate demand for cross-sectoral coordination. This might be seen as a way through which member states can approach and deal with national sensitivity of a policy domain. The aspirations of the Bologna Process were ambitious, but were also restrictive in that they covered only one specific sector, paying limited attention to the overall European educational and socio-economic agendas. While it created a vision and agenda for developing national higher education systems, it made higher education vulnerable to criticisms of being a 'closed-shop' sector that did not open up for non-traditional postsecondary education developments, new providers and competence-based qualifications.

Bologna's effectiveness is contested, but even a very conservative reading suggests that it has committed signatories to a common agenda. Its effects should not automatically be equated with national policy convergence (see Witte et al. 2009). Governments have used its non-binding nature

and ambiguities to bring about a variety of policy changes. The domestic impacts of these changes are conditioned by timing, national traditions and previous and on-going domestic reform trajectories. Yet changes in degree structure have taken place in a majority of higher education institutions across the Bologna signatory countries. This made them structurally more similar than they were in the 1990s; the same goes for the spread of elements that the Bologna Process 'took over' from the EU's Erasmus mobility programme (Common European Diploma Supplement and the ECTS). It has enhanced a European dimension in quality assurance, setting *European standards*, plus bolstering the *agencification* of national quality assurance systems. The national agencies are marked by domestic variations and ambitions of a common European quality policy have been co-opted by national governance traditions and nationally specific interests (see Hansen 2014, this volume). Yet they are connected through a European network of agencies with potential for European standardization of agency practices – as can also be observed in the research sector.

European Research Policy Cooperation: from Intergovernmental to Programmed and Multi-Layered

Compared to higher education, European research cooperation has been far more developed. From the start, it was legitimized as a contribution to Europe's economic growth and industrial development (Guzzetti 1995). During the earliest period, this cooperation was about setting up the foundation for a knowledge-based *economy*. Indeed, 'science' was billed to play a starred role in European integration and a treaty basis for such cooperation was established in the Paris and Rome Treaties. While member states were keen to pursue joint collaborations, they were also cautious about retaining control over such undertakings (*vertical* tensions of integration), which took place in selected research areas such as agriculture, energy, health and environment. Meeting in various configurations of the Council of Ministers, the European research ministers decided the scope and depth of this cooperation. Hence, European research cooperation up until the 1980s can be characterized as *intergovernmental*, with the central institutions – especially the European Commission and European Parliament – playing limited advisory roles.

European research cooperation changed in the 1980s. The European Commissioner for Industry, Davignon, pushed for bundling up existing research programmes into a multi-annual research Framework Programme (FP). The idea, according to Banchoff (2002, p.8), was to ensure that funding European research activities would directly support the Single European Market project, which goes to show a *horizontal* dynamic

of integration at this stage of EU research policy development. Both the European Commission leadership and member states endorsed this approach and the Single European Act extended a treaty base for the FPs and the Community Method. Research was thus brought closer to the market and became *programmed*.

Throughout the 1990s, European research policy cooperation continued to operate along the FP-structure formalized during the previous decade. At the same time, this *programmed* approach strained the capacity of the European Commission which oversaw its preparation and implementation (Banchoff 2002). Indeed, the repeated delays in securing approval from the Council and European Parliament on the European Commission's proposal for the second FP (1987–1991) defined the tenure of the Research Commissioner Pandolfi (1989–1992). Although negotiations based on the Community Method were by no means smooth, the entry into force of the Maastricht Treaty did little to change this. This Treaty altered the decision-making procedure to co-decision, which established the Parliament as a co-legislator.

European research policy since then has gradually evolved into a very dense area of activities with a sizable share of the Community/Union budget (from €11 million to €80 billion) and a large DG for Research whose size is only surpassed by DG Translation. Indeed, DG Research established itself as the key funding agency for European research and it became the node for networks across Europe and for research collaboration between Europe and the rest of the world. Transnational organizations mushroomed around FP preparation and implementation, which expanded in the 1990s. The fourth FP (1995–1998) was designed to solve more *technical* issues with programmes offering financial support to collaborative projects in materials, designs and manufacturing technologies (European Court of Auditors 2008). By contrast, the fifth FP (1999–2002) was formulated to promote research that also addressed specific *social problems*. In short, the 1,200 officials in DG Research and the complex transnational constituency attached to the FPs thus became the 'FP machinery'. Its importance was consolidated when this supranational instrument became an increasingly significant funding source different from the traditional intergovernmental research cooperation structures that existed in parallel to the FPs.

The launch of the ERA in January 2000 furthered the importance of the supranational governance layer even though this new initiative struggled against the dominant FP organizational model (see Chou 2012). To conclude, European research cooperation became more complex and *multi-layered* with the emergence of the ERA initiative and this was largely spurred on by the adoption of the Lisbon Strategy.

The Lisbon Strategy: the Challenge of Policy Coordination

The EU's Lisbon Strategy was a turning point for knowledge policies with more explicit ambitions for *horizontal* policy coordination. It can be considered as a new 'governance architecture' for Europe (Borrás and Radaelli 2011) that has a substantive component (to become 'the world's most competitive and dynamic knowledge-based economy') and a procedural dimension (introduction of the 'Open Method of Coordination', OMC). As an overarching frame, the Lisbon Strategy pushed knowledge policies to the centre of the EU agenda, as transversal 'problem-solvers' (as a policy instrument) in areas such as economic growth in general, regional development, the environmental agenda and labour market policy. Among the means to the Lisbon ends was an overhaul of the European education and research systems.

The Lisbon Summit provided a diagnosis of a Europe challenged by globalization and demands of the new economy. The diagnosis concerned also European research and education systems which were argued as needing an increase in investments in human resources, improvements of education attainment levels, development of basic skills and competences in its labour force, and growth in intra-European mobility. Education and research received full attention as part of a much larger agenda and political project with the whole knowledge and skills area defined as a necessary component of an economic and social reform strategy. Hence, the link between Lisbon and the research and education sectors spurred a radical change in the cooperation mechanisms at the European level based on the OMC, especially in education (Education and Training 2010 Work Programme (E&T 2010)) (Gornitzka 2007).

For research policy the *horizontal* link between developing the ERA, the Lisbon Process and, later, the competitiveness and growth strategy was crucial (see Chou and Real-Dato 2014, this volume). Yet the introduction of the new governance mode did not have the same transformative impact as it did in the education sector (Gornitzka 2007).

For education policy the impacts of Lisbon and the OMC were considerable. The European Commission's work programme for E&T 2010 defined education cooperation and the modernization of European education systems for a decade. The Education Council agreed on the strategic objectives to guide the E&T 2010 process. Compared to the hesitant attitude towards committed cooperation in this sector only 15 to 20 years earlier, the will to agree on common goals was taken to another level. At the time, the same ministers were grappling with how to handle the policy implications of the 'shocking' results of the Organisation for Economic Co-operation and Development's (OECD) Programme for International

Student Assessment (PISA) 2000 comparative study of school children's basic skills.

DG Education championed the use of the OMC as a way to change the modus of cooperation, arguing that this was 'a method for us'. The assumed dynamics of the OMC were expected to allow the involved countries to deal with a combination of common challenges, national sensitivities and national systemic diversity. The method, however, was presented as a way of exploiting this diversity for policy learning purposes as, at the time, the education sector was involved in intersectoral rivalry – 'colliding' with the European employment strategy (EES). Reclaiming European cooperation in lifelong learning from the EES became a spur for cooperation within the education sector. Hence, the OMC's use should be read as a *sector defence* enacted by the core European institutions in the education field (Gornitzka 2007).

There was a strong awareness in DG Education that the Bologna Process occupied higher education territory (Gornitzka 2007). As a consequence, the European Commission could not easily propose a coordination process that stepped on the toes of those developing the EHEA. At the political level, most of the ministers who met in the Bologna meetings also met in the Education Council. So when they agreed to the European Commission's proposal for a 'full' E&T 2010, the Bologna Process was enlisted as an integral part of the education sector's contribution to Lisbon. Furthermore, Bologna as a governance site did become a source of inspiration, competition and support for Lisbon in other ways. In November 2002, the Education ministers of 31 countries adopted the Copenhagen Declaration on enhanced cooperation in vocational education and training, initiating a process set to mirror the Bologna Process. However, it was all along an EU process. From the moment the Bologna and Copenhagen Processes were incorporated into the E&T 2010, it was showcased as the EU's integrated policy framework for education and training.

In these contexts, the European Commission started to shape its reform agenda for higher education; more specifically, developing a vision and agenda for higher education institutions and their role within the Lisbon Strategy. It presented a vision of the university as an institution expected to play a core role in achieving the European knowledge economy ambitions. However, it would only do so if the university opened up to society and underwent drastic reforms (for an in-depth discussion of this agenda see Olsen and Maassen 2007). This reform agenda was renewed in 2011 (European Commission 2011) and can be regarded as an element in the renewed Lisbon Strategy: 'Europe 2020'.

Europe 2020: Continuing a Competitiveness and Growth Strategy Amidst the Economic Crisis and Recession

In June 2010, EU leaders adopted the 'Europe 2020' Strategy to replace the Lisbon Strategy. Research and education retained their place in the new strategy. New initiatives were built on existing programmes and institutions (European Commission 2010), while several Lisbon targets were recycled: for example, the 3 per cent investment for R&D; reducing school drop-out rates; increasing university degree/diploma holders.

The impact of the acute crisis is not yet well researched, but it seems that it has not resulted in the deinstitutionalization of the knowledge domain. There is no overt decentralization to the nation state level or withdrawal by the European Commission. What we can observe at this early stage of the Europe 2020 implementation is that the *vertical* and *horizontal* lines of tensions remain. For the education sector, the governance architecture seems to have been kept without major redesigns – showing signs of robustness even in face of major crisis and political upheaval.

Similarly, in the research and innovation sectors, the crisis has been used as a catalyst to 'bring ideas to the market' and the concept of the 'innovation cycle' was introduced to tightly couple EU-funded research and innovation activities. The vocal ambitions of meshing innovation policy with both research and education policy were reiterated (Maassen and Stensaker 2011). These developments were built on the Ljubljana Process for completing the ERA (Council 2008), the newly minted concept of the 'fifth freedom' (free movement of knowledge), and the new legal basis for the ERA following the entry into force of the Lisbon Treaty (not to be confused with the Lisbon Strategy) in December 2009. The European Commission has adopted a Bologna-like approach for delivering the ERA: it signed several 'ERA Pacts' with key stakeholder organizations and will 'name-and-shame' those member states and signatories failing to deliver the ERA in the coming years.

To summarize, this chapter gave an overview of the evolution of European policies towards higher education and research – two key pillars of what constitutes the Europe of Knowledge. This overview highlighted the key sector-specific conditions and multiple inherent tensions influencing the course of European integration in these domains. Below, we turn to the lessons this volume offers concerning the main dynamics in building the Europe of Knowledge specifically and regional integration more generally.

INTEGRATION DYNAMICS IN TWO KEY KNOWLEDGE SECTORS: LESSONS FROM THIS VOLUME

Our theoretical starting point is that European cooperation in different subsectors of the knowledge domain is unleashed by institutionally embedded tensions along two dimensions: *vertical* (between governance levels) and *horizontal* (between sectors and institutional spheres). The *first lesson* the chapters in this volume provide is: *vertical* and *horizontal* tensions are not exclusive to specific sectors or policy activities. These tensions are present in everyday practices, inform key decisional moments and, indeed, may even coexist in a single policy process. Yet the specific expressions they take are influenced by sector-specific conditions within which European integration has taken place.

How have tensions between the national and the supranational governance levels been dealt with in building a European knowledge area? In Chapter 2, Chou documents the resistance from national ministers in surrendering regulatory competence to the supranational level, especially to the European executive (*vertical* tensions), in creating a ‘common scientific space’. This narrative is a classic integration story with a twist: national policy-makers came to endorse the ERA concept not because the idea set out clear roadmaps for achieving their objectives. On the contrary, Chou asserts that policy actors embraced the ERA notion because the idea itself became increasingly vague and was able to accommodate multiple – sometimes even conflicting – interests. Instead of being a ‘tit-for-tat’ lowest common denominator outcome from rational grand bargaining, the institutionalization of the ERA concept testifies to the power of ideas and the crucial importance of institutional champions in its discursive promotion and sustainability.

Hoareau’s chapter (Chapter 9) on funding higher education also highlights *vertical* tensions, but with different kinds of factors affecting the shift towards the European level. What are the conditions under which federal governments are likely to increase their redistributive functions, which are generally held by state governments? Taking the case of financial aid to students and comparing the United States and the EU, Hoareau shows that redistributive schemes are difficult to establish at the federal level given the consensus required among contributing states and the budget constraints in place preventing increases in interpersonal and interregional redistribution. Studying the United States, she argues that an economic recession alters the dynamics of this process by affecting the capacity of private lenders of loans to continue their operations. These loans, as Hoareau puts it, are ‘not designed to absorb major shocks’. In her view,

these findings demonstrate how negative economic shocks may become *an engine for vertical transfer of competence from the member states to the EU* on an important issue, such as student financial aid for the Europe of Knowledge. The main message from this analysis echoes core historical institutionalist argument about the conditions under which major institutional change is likely to take place.

The chapter by Gornitzka and Metz on the European Institute of Innovation and Technology (EIT) (Chapter 5) shows what happens when a combination of *vertical* and *horizontal* tensions is involved in the institution-building process. In several respects, the establishment of a higher education institution such as the EIT as an EU legal entity was unlikely. From a power-oriented perspective, one would anticipate member states vetoing the proposal from the top political leadership of the European Commission to establish such an institution in a nationally sensitive area, and in doing so blocking the attempts of the European Commission to pursuing a supranational solution and integrative agendas. From an institutional path-dependency perspective, a proposal that cuts across policy and administrative boundaries is likely to meet institutionally entrenched inertia since such an institution involves three hitherto strongly segmented policy areas: research, higher education and innovation policies. Gornitzka and Metz find that the EIT is indeed shaped by power and conflicts along the territorial cleavage line, but also by temporality and path dependency. While the will and power of key institutional actors were main factors in the institution building and in pushing this idea through to a decision, a power-oriented explanation is not a sufficient account. Several parallel events contributed to this institution's final form.

In Elken and Vukasovic, Chou and Real-Dato, and Hansen's chapters (Chapters 6, 3 and 8 respectively), *vertical* tensions of integration are the catalysts that led to the adoption of the voluntary processes they studied: the Bologna Process, Human Resource Strategy for Researchers (HRS4R) and quality assurance. These chapters zoom in on the organizational structures and query how they contribute to certain defining features of these processes – *stability* in the case of the Bologna Process, *growth* in HRS4R participation and *differentiation* in quality assurance practices in three Scandinavian countries. What these chapters highlight is that, although *vertical* tensions may have contributed to the 'design' and 'choice' of institutional structure – creating institutional set-ups for soft governance, they do not determine the outcomes of these processes. Indeed, what they tell us is that the effects of constructing the Europe of Knowledge on the evolving European political order is under certain conditions unpredictable and even situational.

Applying a network perspective to the meta-governance of the Bologna Process, in Chapter 6 Elken and Vukasovic map out the collective actor constellations from inception to the present. They find that these collective actors were able to join the Bologna Process due to the unique resources they offered: financial (the European Commission), information (expertise) or legitimacy (European University Association and the European Student Union). Elken and Vukasovic explain that the Bologna network has been relatively stable as a result of: (1) the limited numbers of entrants (collective actors); and (2) the limited range of individuals moving within this network through the collective actors. This study evidences an emerging European governance layer in higher education where it was previously absent and demonstrates how the network perspective reveals a rich dimension of an unlikely case of institutionalization – the Bologna Process.

Turning to a voluntary process in the research policy sector, in Chapter 3 Chou and Real-Dato investigate the growing participation in a European Commission-led process for HRS4R. Launched in 2008 to support national organizations and research institutes interested in translating a set of non-binding European standards for researchers, the HRS4R now consists of four cohorts, with around 50 organizations in each. The Charter for Researchers and Code of Conduct for their recruitment is a central instrument adopted for the ERA. Studying the Norwegian and Spanish organizations in the first HRS4R cohort, Chou and Real-Dato identify the factors contributing to their decisions to *voluntarily* comply, that is, endorse the Charter and Code and participate in the HRS4R. They found that both the logics of expected consequences and of appropriateness have roles in different stages of this process. While the consequential logic was most visible in the endorsement stage, appropriateness reinforces it in the formal HRS4R stages.

A key area of European level ambitions, EU and Bologna alike, is developing common European standards for quality assurance. In Hansen's chapter (Chapter 8) on developing quality assurance agencies, *vertical* tensions are visible: national governance traditions and institutional arrangements clearly influence the ways in which similar intentions and ideas about controlling and developing quality in higher education are addressed. Her analysis shows that even within the Nordic corner of the Europe of Knowledge, the differences in national governance systems in higher education in Sweden, Denmark and Norway have led to 'diverse' practices concerning how quality agencies and assurance are regulated. Using a framework informed by organizational theory and the regulatory approach, Hansen concludes that the standardizing role of European level developments is limited and 'hits' quality assurance in these countries in non-converging ways.

Similarly, examining the OMC effects on Norwegian ministries and agencies, Gornitzka in Chapter 7 finds that the OMC has had an impact on decision-making practices in some parts of national ministries and agencies – the most significant footprints of the OMC are found in research and education policy. Overall, national civil servants use the OMC in a ‘learning mode’ – seeking to learn from others and to share their experiences with European peers – and in a monitoring mode. Hence, the direct instrumental role of soft modes of governance in facilitating policy change is difficult to pinpoint. What the data show, however, is that the OMC has contributed to establishing regularized connections between the European administration and national ministries and agencies. The use of organized EU soft governance processes in this policy domain is clearly part of a much more general picture of going from policy-making in a national frame to organized multi-level interwoven policy-making. Domestic research and higher education policy-makers’ practices are now much more oriented towards Europe than two decades ago.

The chapters by Gornitzka on the OMC (Chapter 7), Hansen on quality assurance (Chapter 8), and Chou and Real-Dato on human resource standards (Chapter 3) show that the clash of different ideas about Europe has led to different levels of Europeanization. By pointing explicitly to the domestic ‘filter’, these authors emphasize the importance of historical legacies on current policy and standardization efforts. This reference to the past points to the *second lesson* this volume offers on the evolution of knowledge policy cooperation and European integration: *sequential* tensions are consistently visible and should be systematically incorporated in future research in these areas. Here, *sequential* tensions of integration refer to the tensions between the past and the future in which historical legacies and path dependence become enabling/hindering factors shaping how institutions are built at the European level and how the national level responds to European governance output.

Several chapters point to the importance of the historical context, including Gornitzka and Metz’s chapter on the EIT (Chapter 5). They ask: why are new European institutions established and what shapes their design? In Chapter 4 Gornitzka and Metz address this question explicitly by examining the birth of a key institutional innovation in the European research landscape – the European Research Council (ERC). The ERC was set-up in February 2007 to distribute European R&D funds based on a single assessment criterion: academic ‘excellence’, thereby building an institution that breaks with the established principles that have been engrained in the EU’s main research policy instrument, the multi-annual FPs. With the ERC, the EU institutionalized its involvement in what was defined as *frontier* research. Starting as an idea and vision of the few,

this institution became one with a governance structure, funding and an executive agency with a considerable staff and an elaborate set of rules and procedures. The case of the ERC is a testimony of how institutions *enable* change and institution building.

The *final lesson* from this volume concerns the possibility of a coherent Europe of Knowledge emerging from these contexts. Coherence, in this instance, suggests that the processes leading to the European knowledge policy area are based on calculated rational decisions in its design and expected outcomes. This has clearly not been the case. The findings from the chapters in this volume suggest that coherence would be actually rather surprising and perhaps the result of temporal ‘accidents’. Yet, a European knowledge policy area *is emerging*: it is fragmented, differentiated and ordered by soft, albeit fairly robust, governance. Even though it is not far-reaching in the perspectives of current policy-makers and some stakeholders, it is certainly revolutionary from the vantage point of the founding moments. This observation speaks to the extraordinary developments that have carried European integration beyond the Single Market to one concerning knowledge policy.

CONCLUSIONS

The European level in the 1950s has been characterized as a ‘primitive site of collective governance’ (Stone Sweet et al. 2001). This was most certainly the case with respect to European level governance capacity concerning research and higher education. In terms of conferring legal competencies to the EU this primitive state lingered. Yet as the European institutions developed, gradually an institutionalization of collective governance capacity for a Europe of Knowledge took place. This process partly resembles a pattern familiar from the build-up of European nation states, marked by two essential dynamics of change: institutional and sectoral differentiation on the one hand and, on the other, the transformation implied in interactions and collisions between policy sectors and institutional spheres.

These developments led to competing visions for a Europe of Knowledge, with strong and institutionally anchored promoters at multiple governance levels. Integration in the knowledge domain has occurred in the ‘shadow of the past’ rather than in the ‘shadow of hierarchy’ (Héritier and Lehmkuhl 2008). It has been carried by a progressive build-up of institutions that established capacity for and promoted certain ideas and norms about research and higher education policy cooperation. The debate concerning the Europe of Knowledge – its shape, functions and societal value – is affected by sector-specific factors embodied in the notion of

policy-making under limited participation due to the 'image of policy problems' (Baumgartner and Jones 1991).

The logic(s) of integration evolved with considerable presence of transnational networks, which made the idea of a pure intergovernmental or, even supranational, logic of integration problematic. As a result, European research and higher education cooperation has witnessed processes of coevolution between intergovernmental, transnational and supranational logics. Impacts on national institutions and policies are indelible rather than legal, through European incentive programmes and the gradual socialization of national policy-makers and networks of transnational stakeholders. Indeed, the Europe of Knowledge is emerging as an experimental site of mixed modes of governance more than most other policy sectors.

NOTES

1. We are grateful for comments from Peter Maassen, Bjørn Stensaker, Jarle Trondal, Martina Vukasovic and Mari Elken on this chapter.
2. See European Union (2013).

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