# The Politics of the European Research Area

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# THE POLITICS OF THE EUROPEAN RESEARCH AREA

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## I. Introduction

At their Lisbon summit in March 2000, European Union leaders endorsed an ambitious goal: to make the EU "the most competitive and dynamic knowledge-based economy in the world" by the year 2010 (European Council, 2000). This was visionary rhetoric. But it was also more than that. While the ambition of surpassing the United States may or may not be realistic, European leaders are clearly committed to it in both word and deed. They continue to articulate the goal of being number one. And they have initiated a range of policies designed to bring the goal within reach -- everything from the successful introduction of a single currency to competition policy reform and a range of Internet initiatives. This paper examines a key part of this effort, the "European Research Area" (ERA). Launched in January 2000 and endorsed in Lisbon, the ERA is an ambitious effort to pool European scientific and technological resources more effectively. This paper seeks to explain the emergence of the ERA initiative, its initial successes in the face of considerable resistance, and its implications for both the study of European integration and EU efforts to compete with the United States.

The ERA is only the latest effort to cooperate on research matters within the EU. Since the 1960s a series of European leaders have called for the better coordination of national efforts to take on the American and Japanese competition. Those efforts have met with only limited success. EUREKA, an intergovernmental program in support of technological development, has grown since the 1980s. Within the EU framework, successive five-year EU Framework Programmes (FP) have provided increasing levels of funding to transnational networks of researchers in firms, universities, and public laboratories. The FP now constitutes the third largest item in the EU budget, alongside the Common Agricultural Policy (CAP) and the Structural Funds. Despite these achievements, however, national research policies still overshadow European-level efforts. EU expenditures only amount to about 5% of public civil

research spending within the Union; almost all state support flows to national researchers and institutions; and cross-national researcher mobility remains restricted. No integrated European space for science and technology exists.

The ERA, championed by Research Commissioner Philippe Busquin, aims to counteract national fragmentation and create such a space. It encompasses but also goes beyond a reform of the Framework Programme. Two new large-scale instruments, Integrated Projects and Networks of Excellence, are designed to break with previous FP's emphasis on smaller projects and create more "European Added Value." A third, more ambitious instrument is EU participation in research cooperation sponsored jointly by two or more member states. Beyond the confines of the Framework Program, the ERA involves a number of initiatives, including the benchmarking of national best practices, better cross-national researcher mobility, and improvements in research infrastructure. The overall goal, Busquin told a Berlin audience in January 2001 Berlin address, was to make the ERA "in the research sector what the single market has been for commercial exchanges."(Busquin, 2001)

Two years after its launching, the ERA has not yet fulfilled this ambitious agenda. Under pressure from entrenched interests – the smaller research networks that prospered under the previous FPs, and their allies in the European Parliament and national research establishments – the Commission backed down from its initial insistence on the exclusivity of the new instruments. At least some funding was to flow through the established, more diffuse channels. The member states represented in the Council of Ministers, or Research Council, gave a lukewarm reception to EU involvement in their bilateral and multilateral cooperation. Nevertheless, the Council did endorse the ERA and a modified Commission proposal for FP VI (2002-06) at their December 2001 meeting. And while progress was slow in other areas, such as benchmarking and researcher mobility, High Level Groups of national civil servants

went to work and began to share data and formulate recommendations. If the ERA was developing slowly, it was nevertheless moving forward.

What accounts for the launching of the ERA and its initial successes? After some discussion of the inability of intergovernmentalism and neofunctionalism to address this question satisfactorily, the paper underscores the influence of three factors: policy ideas, structural conditions, and political entrepreneurship. The idea of closer research policy coordination within the EU had a long history going back to the 1960s – and a history of failure in practice. But under permissive conditions of the late 1990s, namely growing *national* concerns about a new "technological gap" with the United States in the late 1990s, the Commission was able to develop the coordination idea without encountering strong member state resistance. Political entrepreneurship – skilful efforts to push the ERA idea in the face of considerable institutional resistance from policy networks attached to the status quo – was a further necessary ingredient for initial successes. The absence of any of the three factors would have made the ERA unlikely. The presence of all three does not portend its success. But two years after its launching, the ERA has emerged as a central part of EU strategy to match and surpass the United States in the global knowledge economy.

## Explaining the Integration of Research: Shortcomings of Established Theories

Neither intergovernmentalism nor neofunctionalism is well equipped to explain the development of EU research policy. Both rest on an either-or logic that invests sovereignty either within the state or within supranational institutions. Integration is viewed as the shift of sovereignty in particular issue areas the former to the latter. The two approaches differ mainly over what is driving the process, national interests or functional imperatives. Both approaches can shed light on a variety of policy areas, including trade, agriculture, and money where

shifts of sovereignty from national to European authorities is clearly in play. They are less adept in cases where sovereignty is shared or vested mainly at the national level, such as social, cultural, environmental, or foreign and defense policy. Ambiguity in these and other issue areas has increased the reliance on multi-level approaches that resist the national v. supranational categories that inform the leading theories (Marks et al. 1996).

Both the strong national foundations of research policy and its institutional complexity militate against intergovernmentalism and neofunctionalism as explanatory strategies. In *France in the Age of the Scientific State*, Robert Gilpin argued persuasively as early as 1968 that science was becoming "the most critical single factor in military power, economic growth, and public welfare."(Gilpin 1968) The strategic importance of science, evident in the rise of new industries of the postwar decades – nuclear energy, mainframe computer, and aerospace – made science and technology a strategic priority across the industrialized democracies. At the same time, the postwar scientific state rested on very different historical and institutional foundations from one country to the next. Different systems of national laboratories had grown up since the mid-1800s to tackle the exigencies of state-building. University-based science reflected very different national trajectories of higher education. And industrial research and development was framed by different patterns of corporate organization and government regulation. This institutional complexity, combined with considerations of national interest have ruled out – and continue to rule out – major transfers of sovereignty from the state to a central set of European institutions.

It does not follow, however, that no integration can take place in the research sector. It can move along two paths. First, EU institutions can develop their own policy competences alongside the nation state, giving rise to a situation of multilevel governance. This is evident in the case of the Framework Programmes, which have emerged since the early 1980s as

sources of European funding alongside the national. Second, the EU can emerge as a context for the coordination of national policies in particular areas. Through use of its own policy instruments and appeals to a common European political interest, the Commission can persuade member states to exchange information, share best practices, and pursue common goals in order to strengthen the EU – and its constitutent states – in the international arena. Such a regulatory strategy, while less ambitious, is better suited to the realities of entrenched national institutions and policies across a range of issue areas and to the dangers of over-centralization within a larger and more diverse Union. The Council of Ministers first adopted the principle of coordination in the area of unemployment at the 1997 Luxembourg Summit. Since then, the Prodi Commission has incorporated a new emphasis on regulation and coordination into its 2001 White Paper on Governance.[1]

How can one explain the emergence of integration, conceived not as the transfer of sovereignty driven by national interests or functional imperatives, but as regulation and coordination at the European level? This paper examines the interaction of ideas, structural constraints, and political entrepreneurship in the case of the ERA. As long as key actors conceive of integration as the transfer of sovereignty – and by extension, as a zero-sum game linking member states and the EU – they are unlikely to shift to a coordination agenda.. The turn to coordination requires a reconceptualization of the integration process. To be successful, however, that turn must also fit the operative structural constraints – the interests of the leading member states. Where sensitive national interests are in play, governments are unlikely to press for more integration. But if coordination meshes with and reinforces policies pursued at the national level, coordination may muster the requisite member state support. Finally, to be successful, the coordination strategy requires successful political entrepreneurship. Any policy innovation engenders resistance from entrenched interests

[1] http://europa.eu.int/comm/governance/index_en.htm.

attached to the status quo – whether national bureaucracies, clients of existing EU programs, or civil servants within the Commission itself. Political skill and leadership is necessary to overcome such opposition and institutionalize the new departure.

Policy Coordination: An Idea with a History

Efforts to bring science and technology into the integration process go back to the 1950s (Peterson and Sharp, 1998; Guzetti, 1995). The European Atomic Energy Community (EURATOM), founded with the 1957 Treaty of Rome, was designed to pool European efforts in a cutting edge technology deemed central to the Community's economic development and modernization. Very quickly, though, conflicting national interests and France's determination to develop its own nuclear industry and military capacity reduced the scale of the EURATOM. What was to be an ambitious joint industrial policy project ended up as a loose network of European research laboratories dwarfed by their national counterparts. The reconstruction of science and technology in Europe took place on national foundations.

During the 1960s, concerns about a "technology gap" with the US revived interest in closer European cooperation (Servan-Schreiber, 1968; Layton, 1969). Alarm about a "brain drain" to the United States and an invasion of high technology American multinationals placed coordination on the Community agenda. Member states set up a committee in 1965 to recommend areas of joint action and ways to compare and coordinate national research policies. As it happened, these initial efforts lost political momentum with De Gaulle's "empty chair" policy in Brussels, rejection of British Community membership, and rocky Franco-German relations. When Altiero Spinelli, appointed Commissioner for Industrial Affairs, General Research and Technology in 1970, floated the idea of a powerful European

Science Foundation, he got a chilly reception.[2] Research cooperation grew within Europe, but mainly on an intergovernmental, not a Community basis – through the European Center for Nuclear Research (CERN), the European Space Agency (ESA) and other arrangements.

After De Gaulle's departure, the idea of research policy coordination reemerged. At their October 1972 Paris Summit, EU leaders supported the principle of "co-ordination of national policies and the definition of projects of Community interest in the areas of science and technology" (Guzetti 1995, p. 52). Ralf Dahrendorf, who assumed leadership of the Directorate General for Research, Science, and Education created in 1973, elaborated the idea in an "Action Programme". He called on member states to "harmonize national procedures relating to decisions on concerting R&D budget decisions" and provide "systematic information" on their national own research policy initiatives (Commission 1974, p.10) The goal was the creation of a "single area for European Science" through the "lowering national barriers in scientific research." In the context of the oil shock and subsequent recession, the Council's response to these ambitious efforts was tepid. In January 1974 it authorized the creation of a Committee on Science and Technical Research (CREST) designed to monitor national policies and explore possibilities for cooperation. But CREST had no real power. Research policies continued to develop along different national paths.

The EC research policy that did take shape in the early 1980s in the context of the Single Market drive did not draw on Dahrendorf's ideas. In the context of concerns about the Japanese challenge, Etienne Davignon, Commissioner for Industry and later Education and Research, secured support for funds to assist European industry in high technology areas. In 1983, two of those programs, ESPRIT for information technologies and RACE for communications technologies, were bundled with others into a multi-year Framework

[2] The ESF was created instead on an intergovernmental basis.

Programme later institutionalized within the Single European Act. As funding for subsequent FPs increased, the Community gradually emerged as an important source of research funds *alongside member states* for researchers in industrial, university, and public laboratories. The underlying idea was distributive more than regulative – to increase overall funding rather than to foster research policy coordination across member states. And over time, the FP became associated with a third value – cohesion, i.e. the reduction of differences in science and technological potential across the Community (Peterson and Sharp 1998, chap. 4).

The early 1990s saw a first attempt to revive the idea of coordination. On taking over as Research Commissioner in 1993, Antonio Ruberti argued that the EU should move from the "simple juxtaposition" of national programs to the establishment of a "truly European research policy." He did not ignore the reality of the Framework Programme but argued that the coordination across national research programs could be fostered through EU funding and participation (Ruberti 1993). Ruberti formalized his approach in an October 1994 communication entitled "Research and Technological Development: Achieving Coordination through Cooperation" (Commission 1994). The proposal called on member states to identify strategic areas for multinational cooperation to which the Commission could contribute and to set up a committee to explore the possibility of opening national programs to researchers from other countries. In keeping with Dahrendorf's approach, the Commission was to assume an important regulatory role outside the distributive confines of the Framework Programme.

Ruberti's vision of a "European scientific and technological space" did not materialize (Andre and Ruberti, 1995). At their April 1993 meeting, the Research ministers called for better "coordination between national RTD programmes and between national and Community RTD programmes." But in the context of fiscal austerity amid recession – and the political crisis that accompanied the ratification of the Maastricht Treaty -- they were not inclined to support

new policy initiatives. Both the German and French Council presidencies in late 1994 and early 1995 saw member state efforts to better monitor FP formulation and implementation – not to embrace a broader coordination agenda. National research bureaucracies were not inclined to cede power to Brussels. And Programme clients – groups of researchers who benefited from existing funding streams – were not supporters of change. By the time Jacques Santer replaced Jacques Delors as President of the Commission and Edith Cresson took over as Research Commissioner in 1995, Ruberti's approach had gone nowhere.

Five years later, after Cresson's departure amid scandal and the resignation of the entire Commission, Philippe Busquin and his closest advisors drew explicitly on the ideas of Dahrendorf and Ruberti in developing the European Research Area initiative. They acknowledged the Framework Program as a starting point, but placed it within a broader context. Within the FP, Networks of Excellence were designed to link up *national* centers of excellence, providing a framework for the exchange of researchers the sharing data and facilities. Integrated Projects, a break with the FP's focus on smaller projects, were to bring large research teams together from the private and public sectors in at least three countries together to develop strategic technologies. In accordance with Article 169 of the Maastricht Treaty, which explicitly allowed for research policy coordination, the Commission hoped to cosponsor intergovernmental research projects and open national funding streams to researchers from other countries. Outside the FP, the Commission revived the idea of sharing information on national programs, comparing best practices, and lowering barriers to researcher mobility, a coordination agenda that harkened back to the views of Dahrendorf and Ruberti. In marked contrast to the earlier failures, these ideas now fell upon fertile ground.

Permissive Structural Conditions: National Reform Drives

The evolution of EU research policy indicates that Commission initiatives have traditionally risen and fallen with the support and opposition of member states. First efforts to coordinate research policy in the mid-1960s coincided with a wave of national concern about a transatlantic "technology gap," while Dahrendorf's efforts foundered as governments grappled with the recessions of the 1970s. Ruberti's "coordination through cooperation" initiative, elaborated amid renewed concerns about European competitiveness, did not secure member state support in a context of fiscal austerity, recession, and post-Maastricht crisis in the early 1990s. For policy innovation at the European level to take place – in the research policy area or others -- member state *initiative* is not a necessary condition. The Commission can take the lead. But to win the support of member states and take effect, EU-level innovation must reinforce, or at least not contradict, the interests of key states.

Fortunately for the Commission, the these conditions held in 2000-02. Busquin launched the ERA at a time when the three leading scientific powers – Germany, Britain, and France – were engaged in reforms of national research policies. In light of concerns about national competitiveness in science-based industries dominated by the United States – information, communication, and biotechnology in particular – all three governments endorsed changes in two directions: more competition within the public research sector and more cooperation with the private sector in strategic technology areas. Busquin's new instruments had the same underlying logic: Networks of Excellence to foster collaboration between the best research institutions, mainly in the public sector, and Integrated Projects that would focus on large-scale technological collaboration across public, university, and industrial labs. Other aspects of the ERA, such as the systematic comparison of "best practices", had the potential to reinforce reform at the national level. The compatibility between European coordination and national reform, addressed below in the key cases of Germany, France, and Britain, constituted a permissive structural constraint for the ERA initiative.

*Germany*

As Germany emerged out of its post-reunification recession and grappled with the fiscal constraints of the drive for monetary union, concerns grew loud about its relative position within the global knowledge economy. Overall research and development spending fell from 2.9% of GDP in 1989 to 2.4% in 1995. While still Europe's overall scientific leader, the Federal Republic ranked behind Britain, France and the United States in papers and citations per unit of scientific expenditure, as well as papers per researcher.[3]Furthermore, the German share of leading science-based industries declined in 1995-97 -- biotechnology from 17.8 to 14.8% and information technology from 7.9 to 6.8%.[4] Against this backdrop, the Ministry of Education and Research claimed that "the international competitiveness of German research was in jeopardy." On coming to power in late 1998, the government of Gerhard Schroeder pledged to address the problem.

Schroeder and Edelgard Bulmahn, his Education and Research Minister, initiated a series of reforms designed to improve the competitiveness of the public sector and spur more cooperation with industry. Public sector reform focused on universities and the Helmholtz institutes, major research facilities that devoured 20% of the ministry's budget. In an effort to stanch the flow of scientific talent to the United States and trim the power of the German professoriate within the state-financed university system, the government created Junior Professorships, a partial approximation of the US "Assistant Professor" model. By giving young scientists more autonomy and resources, the reform aspired to energize a university research enterprise dominated by "the patriarchal tutelage of the old professorial system."

[3] Higher Education Funding Council of England, *Review of Research*, Report 00/37 Annex D, Table D2, http://www.hefce.ac.uk/Pubs/Hefce/2000/00_37d.doc

[4] Figures drawn from BMBF, *Zur Technologischen Leistungsfähigkeit Deutschlands. Zusammenfassender Endbericht 1999* (Bonn: 2000), appendix, table A-11.

Bulmahn pitched the model to German postdocs in the United States, urging them to return home with the promise that "in future the motto will be 'sink or swim' in Germany, too."[5] Reforms of the "Big Science" Helmholtz Institutes also sought to spur competition. In 2000-01, government reduced the guaranteed funding of the individual institutes and compelled them to compete with one another for project-based research support.

The "reordering of the research landscape" (Bulmahn) included efforts to spur more cooperation between public sector and industry research in developing cutting-edge technologies.[6] In 2001 the government transferred a set of information technology institutes from Helmholtz to the Fraunhofer Society, a network of public laboratories that worked closely with industry to translate scientific and technical knowledge into new products and processes. Other initiatives included new funds for collaboration between public laboratories and industry in "future areas" (Bulmahn) – the life sciences, information and communications technology, microelectronics, and nanotechnology. And in March 2001 the government moved to facilitate the exploitation of scientific research through greater protection for intellectual property. These efforts, flanked by related initiatives at the level of Germany's federal states, marked a break with the cautious incrementalism of the early and mid-1990s.

*France*

A parallel reform drive unfolded in France in the late 1990s. On coming into power in early 1997, Prime Minister Lionel Jospin argued in his first address on science and technology that "the international competition of the next century will be a battle of intelligence." His government commissioned a series of reports to gauge France's position within the global

[5] Address of January 18, 2001 in Palo Alto, www.bmbf.de
[6] Address before the Bundestag, January 25, 2001, *Verhandlungen des deutschen Bundestages. Stenographischer Bericht*, 14250. See also her address in the reform debate of June 29, 2001, ibid., 17570.

knowledge economy and recommend policy changes. One influential report underscored a decline in the proportion of French GDP committed to research and development – from 2.45% to 2.26% between 1993-96 – and the country's weak position in new strategic sectors, ICT and biotechnology. It also noted France's proportionally large and inflexible public research sector and comparably low levels of corporate investment in R and D. [7] Jospin's two ministers for science and technology, first Claude Allegre and then Roger-Gérard Schwarzenberg, sought to strengthen France's research capacity "the principal motor of competitiveness, growth, and employment" (Schwarzenberg)[8]

As in Germany, efforts to reform the public sector emphasized more competition among laboratories and more opportunities for young scientists. Allegre's effort to reform the massive National Center for Scientific Research, a network of public laboratories with some 12,000 researchers in 1,200 laboratories ran up against considerable opposition. The rank and file, represented in strong unions, blocked government efforts to set research priorities from above and shift funds to competitive university-based funding. A more successful effort to spur competition was the creation of "national science funds" to distribute funding not to institutions, but to high quality projects. Between 1996-2001 the government more than quadrupled the funds to about 1 billion francs. As in Germany, efforts to increase the competitiveness of the public sector also targeted young researchers. More – and more attractive -- posts were designed to counteract the emigration of young scientists educated in France. The country's educational institutions, Schwarzenberg insisted, should not operate "for the benefit of big foreign countries which, more and more, are our rivals in international scientific, technological and economic competition."

[7] Rapport Cohen, July 7, 1999, accessible at: http://www.mission-cohen-ledeaut.org/pages/section3/pages/Rapport.zip

[8] Schwarzenberg

Efforts to reform the public sector were flanked by measures to increase cooperation between public and university laboratories, on the one hand, and industry, on the other. The 1999 "Law on Innovation" was a milestone. It included legislation to facilitate movement personnel between public institutes and corporations and back again, and funding streams to encourage joint research projects across the public-private divide. The law also set up venture capital funds for high technology start ups and created a legal framework for the commercialization of scientific knowledge developed within the public sector. Related efforts included the "National Technology Funds," designed to foster cooperation between public labs and industry in strategic sectors, which saw its funding double to 1 Billion francs by 2002. As in the case of the Federal Republic, it is too early to evaluate the overall impact of these efforts. But they mark the most sustained effort to reform the French scientific state in two decades.

*Britain*

Reform was also on the agenda in Britain. Here, a key juncture was the 1993 White Paper, *Realising Our Potential: A Strategy for Science, Engineering and Technology*. The paper noted Britain's traditionally low levels of investment in science and technology – under 2% of GDP – and its weak position in the ICT field in particular. On taking office in 1997, Tony Blair insisted that Britain should "live up to the challenge of the knowledge economy" and "reverse the decades of decline that we suffered in the twentieth century and become one of the world's most successful economies in the twenty first century." His government commissioned another White Paper in 2000 which painted a mixed picture of Britain's global position. In it, Stephen Byers, Minister for Trade and Industry noted the strength of British science – per capita publication rates that surpassed those in the US, France, and Germany, and traditional strengths in the biomedical sector. But he warned that Britain should better

mobilize its science and technology resources, both public and private, in an increasingly competitive global environment.[9]

In pursuit of this goal, the Blair government continued efforts initiated in the early 1990s to increase competition within and across public laboratories and British universities. The network of public laboratories attached to the Research Councils continued to decline in importance, as some were privatized and others had their funding cut. The overall trend was away from public labs and toward more competitive project funding for university-based science. The government also pushed ahead with the Research Assessment Exercise, a controversial conservative innovation which linked institutional funding to research performance. And, like the German and French governments, it moved to funnel support to young and promising researchers and stop the flow of talent abroad, mainly to the US. In 2000 the government partnered with the Royal Society and a private foundation, the Wolfson Foundation, to create a fund to bring 50 leading scientists from around the world to Britain.

The Blair government also implemented a parallel set of reforms designed to improve cooperation between the public and private sectors. A centerpiece was the "Higher Education Innovation Fund," stocked with 675 million pounds to encourage universities to cooperate with business in joint research projects. Other measures, including the "Enterprising University Initiatives" to support knowledge transfer to local corporations and "University Challenge Competition" designed to spin off companies from university laboratories. The government also increased support for an established program -- Faraday Partnerships that bring university researchers and corporations together with the specific goal of developing new products and processes. A revision of intellectual property rights was designed to stimulate the commercialization of research findings.

[9] http://www.dti.gov.uk/ost/aboutost/dtiwhite/

From its rhetoric through its specific provisions, the ERA initiative mirrored reforms unfolding at the national level in Europe's leading scientific states. Busquin, too, painted a pessimistic picture of the situation viz. the US. "The average research effort in the Union," he argued, "was only 1.8% of Europe's GDP, as against 2.8% in the United States and 2.9% in Japan" (Commission 2000a, pp. 4-5). He proposed instruments that dovetailed with national efforts to increase the competitiveness of the public sector and enable more interaction with industry in cutting edge fields. And he argued that steps to overcome national fragmentation through a broad coordination agenda would serve the common interest. "Fragmentation, isolation and compartmentalisation of national research efforts" had, in his words, lowered the EU's "global investment in knowledge"(Commission 2000a, p. 7). By late 2001, national leaders would be persuaded of the synergy between the ERA and their own reform efforts.

Political Entrepreneurship: The Struggle Against Entrenched Interests

The appeal of the idea of policy coordination and permissive structural conditions – reform drives at the national level – are not sufficient explanation for the initial success of the ERA initiative. The Commission also had to secure the support of two other key actors in the policy process, the Council of Ministers and the European Parliament. Both were initially receptive. In its November 2000 communique, the Research Council welcomed efforts "to develop an open method of policy coordination" and was even open to "the gradual voluntary opening-up by the competent authorities of national research programmes" (Council, 2000). It set up High Level Groups of national civil servants to map areas of excellence, benchmark best practices, and study barriers to researcher mobility. The Parliament, too, gave its initial, if conditional assent in May 2000. As the Commission settled down to the difficult work of preparing the FP VI (2002-06), it had succeeded in changing the terms of the debate.

This quick start was enabled by Busquin's assumption of the mantle of reformer. After the allegations of misconduct precipitated the fall of the Santer Commission, Busquin – a Belgian politician with a scientific background and relative outsider to the EU system – seized the opportunity to set a new tone. He crisscrossed the continent to engage members of the European research community, and encouraged criticisms of Commission proposals through an open consultation process. He acknowledged a history of too much bureaucracy and micromanagement within the Commission, and parts of the ERA addressed the problem. Once a Networks of Excellence and Integrated Project award was made, for example, participating researchers would have unprecedented autonomy in their internal governance and distribution of funds. Furthermore, Busquin streamlined DG XII in 2000, reworking an organization centered on the Framework Program management, and and introduced a political wing charged more flexibly with the implementation of the ERA. This theme of decentralization dovetailed nicely with a reform impetus of the Commission under President Romano Prodi Commission -- a strategy designed to address ongoing legitimacy problems, fiscal constraints, and the complexities of managing an enlarged EU from the Center.

As the new FP proposal took shape, however, Busquin ran up against complex procedural hurdles and entrenched interests. Under the co-decision procedure set out in the Maastricht Treaty, Framework Programme approval required a unanimous Council vote and a Parliamentary majority, first on the Programme as a whole and then on its specific provisions. This cumbersome procedure allowed interest groups ample opportunity to influence the process. As successive FPs grew, the number of program partners in public, university, and national laboratories rose from thirteen to more than eighteen thousand between FP II (1987-1991) and III (1990-94 (Commission, 1998, p. 46). National organizations representing different research communities developed contacts in Brussels; some of them combined to

form an Informal Group of Liaison Offices (IGLO). Natural alliances were forged within the Commission bureaucracy and with a wide range of committees of scientific experts and national civil servants charged with the selection and oversight of research projects. Interest groups found a natural ally in the European Parliament, which consistently backed larger research budgets. And they could appeal through their national governments to shape the Framework Programme as well.

In early 2001, the Commission's specific proposals for FP VI (2002-06) began to come under scrutiny. They concentrated more than 16 Billion Euros around seven thematic areas: biotechnology, information technologies, nanotechnology and advanced materials, aeronautics and space, food safety and health, the environment, and the "knowledge-based society." Familiar haggling over distribution – concerns about the particular selection of strategic priorities, for example – combined with confusion and concern with the new proposed instruments. (Research Europe, 2001b). For the Parliament and its allies, concerns that Integrated Projects and the Networks of Excellence might marginalize particular disciplines, industries, and countries was paramount. European business leaders cautioned against a focus on basic research at the expense of technological development, while university leaders articulated the opposite fear (UNICE, 2000; Research Europe 2001b). Some of these concerns reached the ears of national research ministries, which were hesitant about opening up their programs or opening intergovernmental arrangements to EU participation, as proposed by the Commission under Article 169. By mid-2001, the legal and procedural demands of the Framework Programme, complicated by the introduction of new instruments, had undermined the political momentum for the ERA accumulated over the previous year.

In the face of opposition through 2001, Busquin and his allies compromised on certain aspects of the ERA, without abandoning the project altogether. At their June meeting in Luxembourg,

the Council rejected the Commission insistence on the exclusivity of the new instruments and expressed little enthusiasm for the implementation of Article 169 (Council, 2001). In the months that followed, as the Commission's proposals went through a first reading in Parliament, Busquin backed the further utilization of established instruments centered on smaller research projects (while calling for their review in 2004) and downgraded Article 169 to the status of a pilot program. The openness of Integrated Projects to a variety of partners, including the accession countries, was emphasized, and the concept of "Stairway to Excellence" was endorsed to underscore that Networks of Excellence would not be limited to elite players. The Council adopted these changes at its December 2001. Its amendments included the addition of an eighth priority for small and medium sized enterprises (SMEs) and explicit reference to the *Sixth* Framework Programme – in order to emphasize the novelty of the ERA, the Commission's draft had referred simply to "Framework Programme."

As the FP legislation headed into its second reading and almost certain approval by late 2002, the Commission could claim an overall success. While key aspects of its original ERA framework had not survived, its basic thrust was intact. The FP was to be centered on larger projects with more obvious "European Value Added." And EU research policy won a regulative as well as a distributive dimension. While national civil servants conferring as High Level Groups had not reached consensus, they had initiated wide-ranging consultations and made first recommendations. In a Union where the very idea of "best practices" and "centers of excellence" had long been anathema, this was a notable step.

## Conclusion

The initial success of the European Research Area, this paper has argued, cannot be reduced to overlapping national interests or functional imperatives. It depended on the interplay of

policy ideas, structural conditions, and political entrepreneurship. Had the Commission continued to conceive of integration in distributive terms, on the model of the Framework Programme, the ERA would not have taken place. Furthermore, the initiative, no matter how persuasive as an idea, could hardly have flourished had it clashed with national reform efforts. Member states remain the key players in research policy. The absence of national opposition was not, however, sufficient to get the ERA off the ground. Commission entrepreneurship was necessary to steer the reform over legislative hurdles against the opposition of entrenched interests wedded to the status quo.

A multidimensional explanatory approach like the one deployed in this paper is well suited to the contemporary phase of integration. At the turn of the new century, EU leaders faced with legitimacy problems, fiscal constraints, and the daunting challenges of enlargement have begun to recast integration in more modest terms. Coordination, not transfers of sovereignty to the center, has become a watchword. From this perspective, the EU provides a framework for sharing best practices and setting joint goals – a way to regulate the interaction of states with overlapping interests. As EU leaders rethink integration along these lines, scholars should rework theories that conceive of integration as a shift of sovereignty to the center. The multilevel governance literature acknowledges the reality of shared sovereignty but in a descriptive rather than an explanatory idiom. An approach centered on the interplay of ideas, structure, and entrepreneurship represents constitutes an explanatory strategy with potential applications beyond the sphere of research policy.

What are the ERA's implications for the goals set out in Lisbon? In isolation, the ERA will certainly not revolutionize the European Union's position in the global knowledge economy. Innovation depends not just on scientific research and technological development, but also on capital markets, intellectual property rights, and a host of other factors. But to the extent that

the ERA can concentrate resources more effectively, create stronger research networks, and foster mobility within the Union, it will reinforce the Lisbon process. If the EU does meet the American challenge successfully, it will be not as a federal state with a central science and technology policy, but as a set of scientific states competing with one another and, within the context of the ERA, collaborating more effectively to joint advantage.

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