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Between the global and the national: Organising European science

Maria Nedeva *

Manchester Institute of Innovation Research (MIoIR), Manchester Business School (MBS), The University of Manchester, Oxford Rd., Harold Hankins Bld., Manchester M13 9PL, United Kingdom

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ABSTRACT

Change in policy and organisation is often presented as solely the outcome of a combination of social and political processes. Furthermore, these processes are, somewhat misguidedly it is argued here, presented as explanations or 'reasons' rather than historically specific social mechanism through which core tensions are resolved. In counter-distinction, this paper seeks to explore both the generative mechanisms and the specific social conditions behind the process of science organisation building at European level. Extending the organisation of science to the European level, it is argued, results from continuous attempts to alleviate the tension between inherently global research fields and largely localised research spaces by extending the latter. How this tension is resolved is historically specific and depends on the combination of three sets of social conditions. Intellectually, this paper draws on, and contributes to, the fields of sociology of science, science and innovation studies and political science. Empirically, the discussion is informed by interviews, secondary data analysis and the analysis of the publications trail relating to the debate about the ERC between 2002 and 2004.

1. Introduction

Research funding and support organisation building at European level can be traced back almost to the very beginnings of European integration. As early as the 1950s the idea of establishing a pan-European funding agency in the image of the National Science Foundation in the United States was in the air. But, for the next couple of decades, European level organisations were established only in very specific science areas, namely nuclear research (CERN) and molecular biology (EMBO). During the 1970s and the 1980s organisations seeking to co-ordinate national research effort, such as COST, the ESF and Eureka were set up, and in the 1980s the Framework Programme (FP) largely supporting collaborative research at the more applied spectrum was established. Europe took half a century to establish a pan-European funding agency supporting investigator driven 'frontier' research.

The European Research Council (ERC) was established as part of a large scale programme for re-shaping the research funding and support for science at European level. Ideologically framed by the notion of the European Research Area (ERA) that set a policy agenda for '. . .overcoming the 'harmful' fragmentation science in Europe', and achieving a 'better organisation of the European research effort' being conditional upon the development of a European research space (system) that went 'beyond the current static structure of "15 + 1" towards a more dynamic configuration' (COM (2000) 6, p. 7), this programme also included other funding mechanisms such as ERANets (Brummer et al., 2008; Horvat et al., 2006), Technology Platforms, and Networks of Excellence (Breschi and Cusmano, 2004; Luukkonen et al., 2006).[1]

The process of organising science at the European level is detailed by historical accounts (Guzzetti, 1995; Morange, 1995; Krige, 2006). It is also discussed under the banner of 'Europeanisation' of research (Van der Meulen, 2002; Trondal, 2002; Olsen, 2002). Furthermore, the decision to set up a pan-European research-funding agency aiming to support investigator driven 'frontier' research based of scientific excellence can be interpreted in a number of ways. For instance, it has been discussed as part of the much broader objectives of the European Research Area (ERA) for further research integration (Nijkamp, 2003; Luukkonen, 2009). Similarly, it can be seen as contributing to the achievement of the Lisbon agenda for transforming the European Union into the "most competitive and dynamic knowledge-based economy in the world" (ERA News). As a desired outcome of a policy process, the ERC can be interpreted as an example of policy-initiated change (Boden et al., 2004). Alternatively, the story of the establishment of the ERC can be told through the content, structure and tensions in the European policy debate. These to a large degree shaped the organisation it is today (Gronbaek, 2003; Nedeva et al., 2003).

* Tel.: +44 161 2755921; fax: +44 161 2750923.
E-mail address: Maria.Nedeva@mbs.ac.uk

[1] Many of these instruments were later limited (Networks of Excellence) or modified (ERANets).

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Discussions of the establishment of the ERC, and the research support organisation building at European level more generally, tend to focus on the social and political micro processes, or on the 'how', in preference to un-packing their generative mechanisms. It is indicative, for instance, that the two best known papers on the ERC include in their title statements such as 'idea whose time has come' and 'a point of no return' (Nijkamp, 2003; Gronbaek, 2003).

This paper, seeks to explore both the generative mechanisms and the specific conditions behind the process of science organisation building at European level. Developing science organisationally, and setting up research funding organisations at European level, it is argued, results from continuous attempts to alleviate the tension between inherently global research fields and largely localised, mainly nationally bound, research spaces. How this tension is alleviated is historically specific and depends on three sets of framework conditions, namely the 'change champion' organising and driving the change process, the 'change agent' negotiating and legitimising the change, and the level of commensurability of research spaces shaping the organisational space and providing the framework conditions for the negotiations between actors at different political levels of aggregation.

Correspondingly, the paper is organised in three parts; the first part is more conceptual in nature, the second part contains the empirical discussion and the third part is a critical discussion of the case through the expectations of the theory.

2. (Re)conceptualising Europeanisation

This paper draws on a clear distinction between causal powers or generative mechanisms and the specific conditions through which these manifest. Analyses of the 'Europeanisation' of science, including the establishment of the ERC, generally focus on the specific conditions rather than causal powers (Trondal, 2002; Banchoff, 2002; Van der Wende, 1997). Here, the Europeanisation of science is (re)conceptualised by drawing on a notion of science dynamics as a relationship between research fields and research spaces and linking this to three reference points for discussing the specific conditions for change and organisation building.

2.1. Science as a relationship between 'research fields' and 'research spaces'

Conceptualisations of science and its dynamics mostly focus on the relationships between science and considerations for its use (Stokes, 1997), its orientation towards external goals (Böhme et al., 1983) or the links between the social and cognitive aspects of science (Whitley, 2000; Shinn, 1999). Attempts to bridge the lacuna between the social and the cognitive organisation of science offer considerable opportunities for the analysis and, in particular, cognitive dynamics. However, in terms of explicating the causal power(s) behind the processes of science organising, these concepts present two problems. First, these notions generally focus on the effects of social conditions on cognitive dynamics rather than on un-packing the social mechanisms of organisational change. And second, they generally take more institutionalist stand and do not address the organisational architectonic of science explicitly.

In this paper the continuous organisation building at European level, including the establishment of the ERC, is discussed in the context of a notion of science as a relationship between 'research fields' and 'research spaces' (Nedeva, 2010). 'Research fields' are empirically outlined by three inter-connected elements, namely relatively converging *knowledge communities*, coherent *bodies of knowledge* and *research organisations*. In this context, knowledge communities are defined as '. . .groups of researchers who share similar or commensurate epistemic assumptions, methodologies and have developed consistent systems of reputational control.' (Nedeva, 2010). Members of specific knowledge communities, by the virtue of sharing fundamental assumptions, methodologies and techniques, and rules and scripts, are involved in intensive interactions founded upon the exchange of information (Crane, 1972), knowledge flows (Knorr-Cetina, 1999) and reputational hierarchies. Hence, knowledge communities can be empirically accessed as relatively persistent social networks.

Research organisations are the lynchpin between 'research spaces' and 'research fields' in that on the one hand organisations are the legal unit of resource in science and, on the other, they enable researchers and scholars to be effective knowledge producer and participants in trans-organisational and trans-national knowledge communities.

'Research spaces' are defined by the 'essential' relationships of the research organisations and by notions of utility of knowledge. To the extent to which research organisations cannot function without resources, relationships between them and other organisations involving the exchange of money and people for knowledge are arguably 'essential'. Resources can, and indeed are, exchanged for knowledge embodied in science artefacts (academic paper, books, research reports, data sets, equipment and facilities, techniques, new molecules etc.) and/or knowledge embodied in people (competencies).

In a nutshell, research spaces are funding and policy environments within which the rules of knowledge production, knowledge legitimacy and knowledge use are negotiated. Fig. 1 is a graphical representation of the notion of science as a relationship between 'research fields' and 'research spaces'.

The conceptualisation of science as a relationship between 'research fields' and 'research spaces' has a number of implications for the study of science dynamics; discussing these here in any detail is likely to obscure the argument rather than contribute to it. This notion, however, brings attention back to organisations and by according similar status to the social and cognitive aspects of science[2] opens the (symmetrical) relationship between them to analysis.

A number of tensions between different aspects of science, understood as a relationship between 'research fields' and 'research spaces', can be identified. One such tension, for instance, is the tension between knowledge communities and research organisations resulting from these having developed different reward, control and evaluation systems. Another tension that potentially could have important consequences for policy and policymaking is this between highly differentiated research fields (e.g. Life Sciences, Financial Mathematics, Education etc.) and the usually non-differentiated research spaces (blanket policies). Yet another tension, one particularly relevant for the understanding of the processes of organising science at European level, is the tension between the inherently global nature of the research fields and the localised, mostly national, research spaces. This tension is discussed in some detail in the next section of the paper.

2.2. Global "research fields" and localised "research spaces": the tension

Research fields are, and have always been, inherently 'open' and global.[3] Science deals with problems that are mostly

[2] This means that in the context of this notion the social and cognitive conditions of science are not framed as 'independent' and 'dependent variables; there is an underlying assumption of symmetrical relationships.

[3] This statement obviously excludes special cases such as commercial and military science. Whilst the commercial and military science can be carried out in international collaboration the use of knowledge is subject to variety of restrictions.