



Understanding & Assessing the Impact &
Outcomes of the ERC Funding Schemes

Conference Paper 01
by Dr Terttu Luukkonen

Downloaded from:
www.eurecia-erc.net

Please note: This conference paper is being shared under the auspices of the EURECIA project. This does not however imply ownership of its copyright by the EURECIA project's funders, sponsors or partners. All the material reproduced herein retains its original copyright either to the author(s) or to their host institution depending on the circumstances of publication. Except where noted materials should not normally be cited or quoted without the prior permission of the original author(s). All copyright and usage questions should be addressed in the first instance to the EURECIA research project team's principal investigator, Dr Maria Nedeva of The University of Manchester, UK (maria.nedeva@mbs.ac.uk). The EURECIA project is funded via a co-ordination and support action grant of the EU Seventh Framework Programme's IDEAS Programme; grant agreement number 229286.

Will the European Research Council become an integrative mechanism for European research?

Terttu Luukkonen
The Research Institute of the Finnish Economy
Lönrotinkatu 4 B
00120 Helsinki, FINLAND
terttu.luukkonen@etla.fi

Prepared for Atlanta Conference on Science and Innovation Policy, October 2-3, 2009
Georgia Institute of Technology

Abstract

Given that in recent years, there have been intensified efforts to promote integration in European research and research policy, the paper poses the question of the extent to which the new European funding body, The European Research Council (ERC), promotes integration in European research funding and policy space. Attention is paid to the mechanisms through which this might happen. The ERC is a new agency and its activities have just started, and therefore, we cannot yet measure the degree to which it indeed has promoted integrative processes – or not. The paper will, however, take the programme principles and programme design as a starting point and will analyse possible ways in which these might lead to integrative processes. In so doing it also outlines ways in which empirical research could tackle these questions. Since there are a lot of concurrent developments in the European research policy and funding scene, attributing effects to the ERC is going to be especially challenging.

This paper will demonstrate that even though integration is not on the agenda of the ERC, the new funding body has potential to provoke processes with integrative (or disintegrative) impacts. Major early impacts in terms of integration are related to the cognitive or symbolic level. Impacts at the social/structural level by contrast take much longer to appear. In terms of integrative effects, much depends on the further institutionalisation of this new agency, its ability to maintain its legitimacy, and the resources entrusted to it to implement its strategy. The ERC has a potential to become an important European funding institution pending on its resources and success.

I. INTRODUCTION

Recent years have provided evidence of intensified efforts to promote integration in European research and research policy. This has been evident in the new funding instruments launched first in the Sixth Framework Programme (FP6) (2002-2006) and further in The Seventh Framework Programme (FP7) (2007-2013). New multi-level tools (such as Joint Technology Initiatives or European Institute of Technology) involve collaboration amongst and co-funding by firms, research institutes, governmental agencies, and the European Union. The European Research Area (ERA) is an overall umbrella concept embracing the R&D support efforts in the 2000s. The gist of the concept is a European “internal market” for research with free circulation of researchers, technology and knowledge, and coordination of national, regional and European-level research activities and funding (Inventing Our Future Together, Green Paper, 2007).

The European Research Council (ERC), established in 2007, is the first European funding body set up to support investigator-driven ‘frontier research’ in all fields of science including social sciences and the humanities. Its

ultimate aim is “to make the European research base more prepared to respond to the needs of a knowledge-based society and provide Europe with the capabilities in frontier research necessary to meet global challenges”¹. The ERC implements the IDEAS programme within FP7. According to the FP7 webpage, it supports “investigator-driven ‘**frontier research**’, within the framework of activities commonly understood as ‘basic research’ to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries, as well as for industrial research investment, by providing a Europe-wide competitive funding structure, in addition to and not replacing national funding, for ‘frontier research’ executed by individual teams.”

Given the mounting efforts to promote integration (or to reduce its presumed opposite, fragmentation), this paper poses the question of the extent to which the new ERC

1

<http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=12>.
See also The European Research Council – Cornerstone in the European Research Area, 2003 (the so-called Mayor Group report).

could promote integration in European research and what might be the mechanisms through which it would do so. Since The ERC is a new agency² and its activities have just started, we cannot yet measure the degree to which it has already promoted (dis)integrative processes. The paper will, however, take the programme goals and strategy as a starting point and will analyse possible ways in which this might lead to (dis)integrative processes. In so doing it also outlines ways in which empirical research might tackle these questions. Since there are a lot of concurrent developments in the European research policy and funding scene, attributing effects to the ERC in future empirical research will be especially challenging.

It is to be noted that the ERC can have many different kinds of effects on the European and national research funding and policy space. This paper will limit its attention to the specific question of whether the ERC will have effects in terms of promoting (dis)integrative processes.

Documentary material provides the major source of information. This material includes mission statements and other material issued by the ERC, reports of the various expert groups which prepared the foundation of the ERC, proceedings from the important high-level 2004 Dublin conference reaching consensus about the need and principles of the ERC, and other reports and reviews. The paper also draws upon preliminary material and perspectives the author of this paper has gained in a ERC-funded project entitled EURECIA³.

II. CONCEPT OF INTEGRATION

At the most general level, ‘integration’ is seen as referring to the process of forming a new entity from different parts where the result is something ‘composite’ or ‘integral’. This process occurs at different levels of social aggregation and can involve individuals, institutions and the establishment of specific institutions (Jary & Jary, 2000).

In the analysis of integration, the paper draws on the concept of integration as suggested by Luukkonen and Nedeva (2008, 2009). In their analysis, integration is outlined as a process framed by a continuum from fragmentation to uniformity, and the notion emphasizes that uniformity is not the aim. The approach is dynamic and defines integration as a process rather than a state. It

² The European Research Council Executive Agency was formally established on 15 July, 2009, as an autonomous body. Before its establishment, the European Research Council, implementing FP7 IDEAS programme, had a dedicated implementation structure operating under the Research Directorate-general as part of the European Commission.

³ EURECIA stands for “Understanding and assessing the impact and outcomes of the ERC funding schemes”. It is a collaborative project no 229286 funded from the FP7 IDEAS programme, 1 February, 2009 - 31 January, 2011, and coordinated by Dr. Maria Nedeva from the University of Manchester.

highlights that the social world is shaped by continuous processes of integration and disintegration, and that the level of integration is never stable and/or permanent.

The notion of integration makes a distinction between social and cognitive dimensions. At social level, the core in integration is the persistent relationships; it includes shared structural or organizational developments. At the cognitive level, shared knowledge and understanding of phenomena (such as mental models, mindsets) define integration. The concept of ‘crystallizing agents’ denotes integrative mechanisms, that is, catalysts for integration (*ibid.*). At the most general level crystallising agents can be norms, values and beliefs. Shared symbols are an example of such a cognitive crystallising agent. In policy-driven situations, like the new agency ERC, the potential crystallising agents also consist of knowledge embodied in artefacts or social processes and coupled with extra money to make them more effective as an incentive.

When drawing attention to the levels of integration impact, the paper uses the concept of ‘research policy space’ and ‘research funding space’. The former concept refers to the crucial relationships between research performing and funding organisations and the latter to those between funding organisations. We can speak of research policy and funding spaces at the national and European level. Under the national level, the paper further draws attention to important actors in the research policy space: research funding organisations, research performing organisations, and individual scientists. Epistemic communities, social and cognitive networks which emerge around bodies of knowledge, cut across, besides national boundaries, research performing organisations. The latter act as intermediaries between non-research and research domains (Nedeva, 2008). The researchers are members of epistemic communities.

It is to be noted that the distinction between the European and national level is not clearcut. Most European-level funding organisations are intergovernmental and formations of national-level organisations (like national Research Councils). These, however, have come together to promote joint interests and thus act together at the European level.

III. ERC GOALS AND STRATEGY

In its mission statement⁴ the ERC has laid out the goals it wishes to promote. Its main objective is to promote scientific excellence and frontier science using international panels of peers as evaluators. A decisive difference as compared to the rest of the Framework Programme is the fact that the ERC funding does not require international collaboration of research teams, but

⁴ <http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=12>

money can be given to individual researchers in an open, European-level competition (Mitsos, 2004; the ERC homepage:

<http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=12>). Encouragement and support of “the finest talent” is the aim (Frontier Research, 2005). This implies an important change in the definition of European value added: instead of international cooperation, *competition at the European level* becomes the essential element of the European value added (Mitsos, 2004).

Frontier research is defined as standing at the forefront of new knowledge and new understanding of phenomena (Frontier research, 2005). It is regarded essentially as a risky endeavour pursued irrespectively of disciplinary boundaries, and potentially going across traditional boundaries between basic and applied research. It can cause revolutionary changes in current research lines.

By adopting these highly ambitious goals, the ERC aims to build “a reputation for attracting and funding outstanding research proposals”, thus conferring “status and visibility on European frontier research and specifically on the best individuals and their teams, which in turn will help to draw talent to Europe (and retain it), thereby enhancing creativity” (Frontier Research, 2005). In achieving these objectives, the ERC is seen to “support the aims of the European Research Area (ERA), complementing the traditional [mission-oriented] goals of the Framework Programme” (*ibid.*)

The ERC homepage expresses the aim to “substantially strengthen and shape the European research system” by means of “high quality peer review, the establishment of international benchmarks of success, and the provision of up-to-date information on who is succeeding and why.” The ERC also wishes to promote “better strategies” for universities and research institutions in order that these are able to “establish themselves as more effective global players”. The ERC further aims to “bring about new and unpredictable scientific and technological discoveries” to form “the basis of new industries, markets, and broader social innovations”.

The concept of frontier research is thus related to a shift in the understanding of the output of academic research. Instead of treating it as ‘information’ – costly to produce but virtually costless to transmit and re-use - it is regarded as ‘knowledge’ – costly to produce, absorb and apply (Pavitt, 2000). However, there is thus an overall economic justification for the new agency.

The two major funding instruments include Starting Grants for more junior researchers to help them establish or consolidate their scientific independence and Advanced Grants targeted to researchers with significant research achievements in the last ten years (Antonoyiannakis et al., 2009). The grants are generous in terms of money and portable to a new host institution if the principal investigator so wishes. The first call for

the Starting Grants in 2007 prompted an ‘avalanche’ of proposals with the result that the success rate was only 3,2%, but later calls have been less heavily oversubscribed (Antonoyiannakis et al., 2009).

IV. LEVELS OF INTEGRATION

A. European Research Funding Space Cognitive/symbolic

Except for the Framework Programme, European-level research funding arrangements are typically intergovernmental and thus formations of national level organisations. The emergence of a novel Community-based funding agency is thus of great symbolic value. It is a joint European Research Funding Council, which supports researchers irrespectively of their origins, only presuming that they (move to) work in the EU member states or the associated states. Its foundation implied an important shift in the basic principle of European added value from international collaboration to open, European-level competition. It can thus act as a potential integrative mechanism – a cognitive crystallizing agent: *a European brand for research excellence* (Table 1).

TABLE I. EXAMPLES OF INTEGRATIVE CHANGES PROVOKED BY THE ERC
LEVELS OF INTEGRATION

Levels of impact	Integration	
	<i>Cognitive/symbolic</i>	<i>Social/structural</i>
European research funding space	Community principle as opposed to intergovernmental organization ”European brand of excellence”	New and further developed division of labour amongst European research funding organisations
National level research funding and policy space: Research Funding organisations	Yardstick for national-level performance Model for, e.g., shaping peer review practices (mimetic change)	Increasingly similar peer review practices ERC peer review replacing national level evaluation of proposals (in some cases) Adoption (and copying) of schemes to promote the competitiveness of a country’s researchers in the ERC calls
Research performing organisations	Enabling new lines of research, “frontier research” (epistemic shifts)	Grant recipient and team member mobility creating European career space
Researchers (epistemic communities)		Grant recipient mobility spreading research and research management practices

This European level competition is of high significance in terms of making the select elite – the individual researchers chosen for the ERC funding – independent of the potential biases brought about by national hierarchies and bonds in national level evaluation.

There is an important prerequisite for this development, namely, that the ERC manages to ensure and maintain its legitimacy. For organizations legitimacy can be based on the organizational goals being in accord with wider societal values or the structural and procedural aspects of the organisation (Scott, 2008: 154-155). In the case of the ERC, the procedures play an especially important role in ensuring its legitimacy. These entail the strict peer review processes and emphasis on scientific excellence and novelty (frontier research) as the sole criterion of funding. Transparency of the operations is a further factor ensuring legitimacy (European Commission and EuroHORCs High level working group, 2004). The ability of the new agency to attract highly talented researchers to apply to its grants and to serve on its panels as well as to select the most promising investigators and ideas for support is the whole *raison d'être* of this organization. All the other impacts are presumed to follow from this central mission.

Social/structural

At the social/structural level, the potential impacts of the new agency are related to its increasing institutionalization and finding a place within the European research funding space. From the point of view of institutionalization, an interesting viewpoint is the fact that so far, the new agency, even though it gained the position of an executive agency in July 2009, still exists as part of the financial perspectives of the seventh framework programme – as IDEAS programme – till the end of 2017 when the projects obtaining funding from FP7 will be completed. The recent review of the structures and mechanisms of the ERC – submitted on 23 July 2009 – suggested that the organization be made permanent (into so called article 171 undertaking) as of FP8, pending on the fact that the present organizational form cannot implement proposed changes in the structures and mechanisms to ensure sufficient autonomy and flexibility in operations (Towards a world class Frontier Research Organisation, 2009).

A process of increasing institutionalization of the ERC is obviously going on. How will this new organization then affect the European research funding landscape? As already referred to, the ERC has adopted two major funding schemes, Starting Grants addressed to junior researchers, and Advanced Grants to senior researchers. The starting grants scheme resembles the European Young Investigator Awards (EURYI) of the European Science Foundation and the European Heads of Research Councils (EuroHORCs), first launched in 2003. The EuroHORCs have announced on their website that because of the similarity and the fact that the ERC

scheme is of a much larger scale in terms of number of awards, future calls of EURYI have been indefinitely postponed (<http://www.esf.org/activities/euryi.html>).

This is just an example of the kinds of repositioning taking place in the European research funding space. There are, however, not many organisations even potentially competing with the ERC given that it emphasises frontier research and path-breaking scientific discoveries and finances individual researchers (and their teams). These include, besides the European Science Foundation (ESF), for example, the European Molecular Biology Organization (EMBO) – the latter active in a specific scientific field. Funding organisations have to rethink of their respective roles to ensure an appropriate function and thus legitimacy. The newcomer organisation has more substantial funds than the intergovernmental organisations and has a simpler mechanism of funding (research teams need not seek funding from any national research councils or funding agencies). It differs from most of the existing organisations radically in the sense that it is based on the Community principle and it is not intergovernmental.

How are these current and potential future changes in the research funding space related to integration or disintegration? The European research funding space is here regarded as a potential organizational field, which entails a set of actors relevant for the activities and active in the same domain as the ERC⁵ (for the concept, see, e.g., DiMaggio and Powell, 1983: 148). The formation and/or restructuring of an organisational field can be regarded as part of integrative or disintegrative processes taking place. Blau (1960) has observed that “the very processes required for social integration in a entity give rise to other processes that lead to social differentiation” and to hierarchies within the entity. Though originally this observation was made about person-to-person social groups, it could be applied to aggregated entities. We may assume that *a more refined division of labour and differentiation of roles* within an entity (here European research funding space) will evolve with the process of integration. This process can include changes in organisations or schemes which are dissimilar to the ERC, to make them even more dissimilar and ensure legitimacy (Nedeva et al., 2009). Another example is a wish to avoid overlaps in the activities such as the disappearance of the specific ‘blue skies’ programme NEST (New and Emerging Science and Technology) from FP7 as a result of the foundation of the ERC, which more or less replaced it. It is to be remembered though that the NEST followed the usual Framework Programme principle of funding collaborative research projects and here again there was no full overlap. As emphasised, integration is a dynamic process and can alternate with disintegrative changes. When there is a newcomer to an organisational field it is possible that, at

⁵ How exactly to define the organizational field of the ERC is a question to be resolved based on empirical research.

first, this will provoke disintegrative processes, uncertainties and disagreements about the respective roles and division of labour among the various actors.

The likelihood of the ERC promoting integrative/disintegrative processes is related to its increasing institutionalisation, as already referred to, but also to the resources allocated to it and its way of using them in such a way that it will maintain its legitimacy. This implies that the ERC can exert influence and can become an important actor in the European research funding space only if it is regarded as successful in its principal aims.

B. National level research funding and policy space

The foundation of the ERC is potentially of great importance for the activities of the national research councils, which typically fund research based on the criterion of excellence. However, the many potential changes at this level are outside the focus of this paper. Instead, attention will be devoted to potential cognitive and/or social/structural changes of significance from the point of view of integrative processes.

First, from the point of view of *cognitive integration*, the outcome of the ERC peer review processes and the lists of new grant holders is expected to draw a great deal of attention. At the level of countries, these can become a *yardstick of the performance* of the national research systems, their ability to nurture first-rate researchers and to attract top-level researchers from abroad to settle in the country and its institutions (see, e.g., Antonoyiannakis et al., 2009). In a similar vein, poor performance can be taken as an indication of a need to reform systemic features leading to the poor performance. The above mentioned article (Antonoyiannakis et al., 2009), for example, paid attention to the fact that the frequency of acting as a host country for ERC grants was correlated with the size of the country's R&D budget. This aspect of a new, common yardstick against which performance can be measured is at the cognitive and symbolic level an integrative mechanism – crystallizing agent - promoting joint understanding of what high level scientific performance is and how it can be measured.

Another, different type of potential cognitive integrative impact relates to the very procedural aspects at the heart of the ERC. The strict peer review processes as practiced by the ERC have obviously adopted influences from many sources and could be regarded as a 'best practice' in the field. Even though the national-level Research Councils can be expected to have adopted similar practices for quite some time, there may, nevertheless, be features such as the inclusion of international members in review panels, not practiced in all countries. The ERC can *provide models of practices* for the national Research Councils, however, again depending on the success of the

ERC in achieving and maintaining its legitimacy and prestige.

With regard to potential *social/structural* potential shifts in practices of the national level funding agencies, they can become more similar with each other through *imitation* (mimetic, DiMaggio and Powell, 1983). Normative pressures can also be brought to bear on the national organizations to change the national practices through the *exchanges of their members and staff* at the European level. The ERC procedures can thus act as a catalyser (crystallizing agent) in such change processes.

There are some indications that national level funding agencies take the results of the ERC evaluation as a basis for providing special support to the finalists in the ERC starting grant scheme, those who passed the quality threshold but were not funded by the ERC⁶. This implies that the ERC evaluation replaces in some instances a national level evaluation and thus avoids a duplication of evaluation efforts. The outcome of further developments in this direction could in the future lead to joint European level evaluation procedures.

Another potential development is that national level funding organizations can learn from and imitate each other when trying to promote researchers from their country to succeed in the ERC competitions, or to make systemic reforms to promote high-level research and researchers. There are already early indications of the former, but not yet from the latter phenomenon (unpublished findings).

C. Research performing organizations and individuals (epistemic communities)

The levels of research performing organisations and individual researchers (and through them, their epistemic communities) have been merged in this paper, since the potential integrative impacts hypothesized here concern similar types of matters, though analytically, it is not a question of the same things. Future empirical research can reveal further forms of integrative processes which differentiate them more from each other.

From a *cognitive* point of view, the ERC – if successful in its activities – promotes frontier research, which creates new knowledge and new understanding of phenomena. In rare cases it can cause breakthroughs and

⁶ See, e.g., Italy: http://www.miur.it/0006Menu_C/0012Docume/0015Atti_M/6932Band_o_cf3.htm; France: <http://www.recherche.gouv.fr/cid20921/felicitations-aux-laureats-francais-de-l-european-research-council.html>; Switzerland: http://www.snf.ch/E/NewsPool/Seiten/news_080402_ERCStartingGrants.aspx; Sweden: <http://www.vr.se/huvudmeny/pressochnyheter/nyhetsarkiv/nyheter2008/ercsokandefarpengarfranvetenskapsradet.5.1d4cbbb11a00d342b08007387.html>

revolutionary changes, but even in less revolutionary cases new breakthroughs can disrupt adopted patterns of thinking and research. Such breakthroughs can at first be disintegrative, but can in the longer term establish new research lines and even specialties thus bringing about integration within new specialties and research areas. Anyway, *epistemic shifts* are to be expected from the activities of the ERC.

These shifts can affect research performing organizations by *changing their research agendas*. ERC support to new parthbreaking research will be especially helpful to individuals with unconventional research agendas and who might not obtain support from the national sources of funding because of vested interests of those making the decisions.

In terms of *social and structural integration*, potential *mobility* related to and caused by the ERC can act as a crystallizing agent - catalyser of integrative processes. Mobility can enter into the picture in many ways. The ERC grants are portable; and it implies that the recipients can work at the institute of their choice and take the grant with them. One of the purposes of the ERC is also to attract researchers to Europe from, e.g., the USA (http://cordis.europa.eu/fp7/ideas/home_en.html).

Nationals from a European country can settle down in a host institution of another country. Further, grant recipients will be able to create a team to which they can recruit members from all over the world.

There are thus many ways in which the ERC can promote mobility of researchers within and to Europe. Through this mobility, the ERC grants can help create a truly European research career space involving those who are currently or are expected to become the scientific leaders in their respective fields. This career space will specifically affect the future scientific leaders since they are the Starting Grant recipients and among the junior researchers to be recruited to the teams of both Starting Grant and Advanced Grant holders.

Mobility can thus act as a crystallizing agent and be integrative by creating a *European career space*. It can also spread *research and research management practices* to new environments.

These potential effects have to be examined against the backdrop of a multitude of European initiatives which also promote mobility and collaboration across institutional borders. The ERC-related mobility is, however, expected to apply to present and future scientific leaders potentially exerting deeper impacts.

V. CONCLUSIONS

The ERC has been designed with a few central aims in mind:

- promotion of excellence and frontier research through strict peer review processes (independent of national or local hierarchies)
- funding of investigator-led research without requirements concerning international collaboration (though it may entail it)
- provision of sufficient resources for the grant-holders to pursue world-class research
- Independence from political goals and existing administrative structures within the framework programme

According to the review of the structures and mechanisms of the ERC (Towards a world class Frontier Research Organisation, 2009), the very last point, independence from the administrative structures of the framework programme, has not yet been fully implemented.

This paper has demonstrated that even though integration is not on the agenda of the ERC, by its activities the new agency can provoke processes with integrative (or disintegrative) impacts.

The ERC is a novel Community-based new funding agency and in itself of great symbolic value. One of its most immediate integrative impacts is its potential as a cognitive crystallizing agent: European brand for research excellence. The power of this crystallizing agent, however, depends on the prestige and legitimacy that the new agency will achieve through its activities.

In a similar vein, at the level of national research funding organizations and research space, the most obvious and early impact as an integrative device is cognitive: its provision of a yardstick for measuring the performance of national-level research systems. The ERC can provide a model for shaping peer review practices in especially national level funding organizations. Because of the very nature of the research it is expected to fund, the ERC should cause epistemic shifts and even revolutionary changes on the research forefront.

Major early impacts in terms of integration processes are thus related to the cognitive or symbolic level. Impacts with regard to social/structural level by contrast take much longer to appear. They include the assumption that with its procedures and support instruments, the ERC can provide models for imitation for other, both national- and European level funding agencies. It can also cause restructuring in the European research funding space and a new division of labour and role for the organisations. These changes can prove to be important in the longer run.

Mobility related to the activities of the ERC can provide an important crystallizing agent both in terms of creating a European career space, but also by spreading new research and research management practices.

With regard to the impact in terms of social and structural integrative effects of the ERC, much depends on the further institutionalisation of this new agency, its ability to maintain its legitimacy, and the resources entrusted to it to implement its strategy. The ERC has a potential to become an important European funding institution pending on its resources and success.

At the present moment, we can only pose hypotheses and pay attention to the first indications of new processes and emerging new dynamics. In order to be able to draw more definite conclusions, we will need to wait much longer, maybe up to ten years.

REFERENCES

- Antonoyiannakis, Manolis, Hemmelskamp, Jens, and Katafos, Fotis C., The European Research Council Takes Flight, Cell 136, March 6, 2009, 805-809.
- Blau, P. M., 1960. A theory of social integration. *The American Journal of Sociology* 65 (6) 545-556.
- DiMaggio, Paul and Walter W. Powell. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in organizational Fields, *American Sociological Review*, Vol. 48 (April: 147-160).
- European Commission – EuroHORCs High level working group on a European funding mechanism for basic research, Report of the working group, 28th July, 2004.
- Frontier Research: The European Challenge. High-Level Expert Group Report. European Commission, Directorate General for Research, EUR 21619, Luxembourg: Office for Official Publications of the European Communities, 2005.
- Inventing our Future Together. The European Research Area: New Perspectives, Green Paper, 04.04.2007. Directorate-General for Research, European Commission, 2007.
- Jary D., Jary, J., 2000. *Collins Dictionary of Sociology*, Third ed., Glasgow, Harper Collins Publishers.
- Luukkonen Terttu and Nedeva, Maria 2008. “Mirror, mirror on the Wall”: The assessment of the networks of excellence, paper presented at PRIME International Conference 2008, 24-26 September, Mexico City.
- Luukkonen, Terttu and Nedeva, Maria. 2009. Towards understanding integration in research and research policy, unpublished.
- Mitsos, Achilles, European Commission Presentation, in « Europe’s Search for Excellence in Basic Research », Symposium, February 16 & February 17, 2004, Dublin Castle. Ireland 2004 Presidency of the European Union.
- Nedeva, Maria. 2008. “Public Science and change: a structural perspective.” Prepared for sub-theme 42 on “The Changing Organisation of the Sciences and the Changing Science of Organisation” at the 24th EGOS Colloquium, Amsterdam, 10-12 July, 2008.
- Nedeva, Maria, Gläser, Jochen, Thomas, Duncan, and Nugroho, Yanuar. 2009. Proposed Methodology, EURECIA Discussion Paper , unpublished.
- Pavitt, Keith. 2000. Why European Union funding of academic research should be increased: a radical proposal. *Science and Public Policy*, vol. 27, no. 6, December, 2000, 455-460.
- Scott, W. Richard, 2008. *Institutions and Organizations: Ideas and Interests*. Los Angeles, London, New Delhi, Singapore: Sage Publications, Third Edition.
- The European Research Council – A cornerstone in the European Research Area, Report from an expert group (led by Professor Federico Mayor). Ministry of Science, Technology and innovation, Copenhagen: December 15, 2003.
- Towards a world class Frontier Research Organisation, Review of the European Research Council’s Structures ad Mechanisms, 23 July, 2009; <http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=158>.