Serendipities
Journal for the Sociology and History of the Social Sciences

ARTICLE

Competing for Status: Dynamics of Scientific Disciplines in the European Transnational Field

Barbara Hoenig
barbara.bachhoenig@gmail.com

Abstract

This paper analyses how the emergence of transnational research funding by the European Research Council (ERC) affects the competition for status among disciplines and what this means for the social sciences in particular. Two notions are of analytical importance here: the idea of a European transnational field, and investigating disciplines by comparing research capacity and performance. The field structure was examined for a sample of 12 countries and 30 disciplines from all scientific domains. The study not only sheds light on the status of the social sciences and humanities, when compared to the physical, engineering and life sciences, it also allows insights into disciplinary comparisons within one domain. Results indicate that the relative capacity of the social sciences and humanities in Europe is far from being reflected in their ERC grant performance, retaining the significance of national funding in that domain. Nevertheless, ERC funding in the social sciences and humanities is proportionally larger for some countries (United Kingdom, France, the Netherlands) than for other countries within the European Research Area.

Keywords

Scientific disciplines, transnational field, Europe, European Research Area, European Research Council.

Introduction and Research Question

This contribution begins with the assumption that scientific disciplines can be regarded as collective actors competing for status, reputation and resources in a dynamic social field.[1] The structural position of the social sciences and humanities in an anticipated 'hierarchy of the sciences' has always been rather peculiar. However, it is not clear how, and to what extent, recent transformations of both

[1] Some arguments of the paper are outlined in more detailed form in Hoenig (2017).

European universities' practices of governmental steering and transnational research funding have imposed obstacles or created new opportunities, particularly for these disciplines. How are hierarchically structured disciplines represented in a European transnational field? Is the hierarchy of the sciences subject to structural transformations by virtue of European research policies and its enforced competition for 'excellence'? How does the existence of transnational research funding affect the internal structure of disciplines in their competition for status and power? And why do particular countries seem to be better equipped in the competition for reputation and reward than others?

This contribution scrutinizes how the emergence of transnational research funding affects the competition for status among scientific disciplines and what this means for European social sciences and humanities. An empirical comparison of countries and disciplines undergoing that recent change may provide insights into their relative status and dynamics within the transnational field of the European Research Area (ERA). The conceptual and methodical approach suggests two streams of inquiry, centring on both the notion of a European trans-national field and on the relation of disciplines' research capacity[2] and performance. In contrast to a 'methodological nationalism,' examining scientific fields within their particular national frameworks, I undertake a comparative study of cross-national variations in academic disciplines and their status in a European transnational field.

The paper starts by clarifying the notion of a European transnational field, indicating a particular framework for an empirical case study on the European Research Council (ERC). In contrast to the European Framework Programmes (FPs) promoting mission-oriented, transnational collaboration of scientific institutions, the ERC is a more recent funding scheme for supporting individual early career researchers, exclusively based on the criterion of 'scientific excellence.' A short description of the most recent phase of European research policies and the role of the ERC is given, and the research design outlined in more detail. Findings of a systematic comparison of research capacity and performance are given by country and discipline. Results show that in the most recent phase of European research funding the social sciences and humanities seem to proceed under increasing pressure from the natural and life sciences.

Towards a European Transnational Field

Theorizing scientific disciplines and its underlying power relations has a long tradition in sociology (Comte 1851; Snow 1959; Lepenies 1985; Abbott 2001) and has also stimulated research on determinants of a country's rate of scientific growth (Ben-David 1971; Merton 1973; Clark 1983; Crothers 2000). In analysing the historical formation of the social sciences (Heilbron et al. 1998; Wagner et al. 1991), distinct 'national traditions' in sociology (Genov 1989; Koniordos and Kyrtsis 2014; Levine 1995; Nedelmann and Sztompka 1993) more recently transcended towards the notion of an internationalizing scientific field (Gingras 2002; Heilbron 2004; Heilbron et al. 2008). This short study on the ERC may serve to exemplify how a research funding institution of genuinely European scope affects the scientific disciplines differently and thus sets in motion a dynamic with particular—often unintended—consequences for the social sciences and humanities.

[2] Research capacity of researchers by country is measured as the number of researchers in fulltime equivalents of university-based scientific personnel with postdoctoral qualification level or higher, as documented in country-specific higher education statistics.

At the historical height of a strong controversy between 'structuralist' and 'constructivist' traditions in a newly emerging specialty—the sociology of science (Cole and Zuckerman 1975)—it was Pierre Bourdieu who derived the notion of the scientific field, emphasizing the hierarchical relationship of disciplines as socially structured (Bourdieu 1975). Drawing upon his distinction of forms of capital, he analyzed the relationship between scientific and academic capital as explaining the disciplines' relative location in terms of supposed autonomous versus heteronomous poles of the field (Bourdieu 1984, 2001). Whereas high *scientific* prestige is characteristic for formal disciplines such as mathematics, philosophy, the humanities, and the social and natural sciences, *academic* capital accounts for applied sciences, in particular medical and law faculties, indicating their close relationship to powerful institutions within academia and beyond. Bourdieu recommends analyzing the scientific field in relation to other fields of power in order to locate its position in the social space, and then reconstructing the internal structure of scientific disciplines to investigate power relations within that field (Bourdieu and Wacquant 1992).

Bourdieu's notion of science as a distinct 'field' implies an assumed or anticipated center-periphery-structure of agents—disciplines or institutions for example—in a tension or continuum between autonomous and heteronomous poles of disciplines and institutions. When applied to an anticipated transnational field, it can also characterize power relations between differently structured public science systems in Europe. When operationalizing these conceptual notions empirically, the scientific capital of actors—such as countries, institutions or disciplines—is indicated by their research publications; the most important source of symbolic prestige. With some restrictions for the social sciences and humanities, which enjoy a particular publication culture not comparable to those of the natural sciences, taking actors' bibliometric profiles into account might enable comparison of their scientific capital. Conversely, the actors' social and economic capital can be characterized by their share in the distribution of research grants.

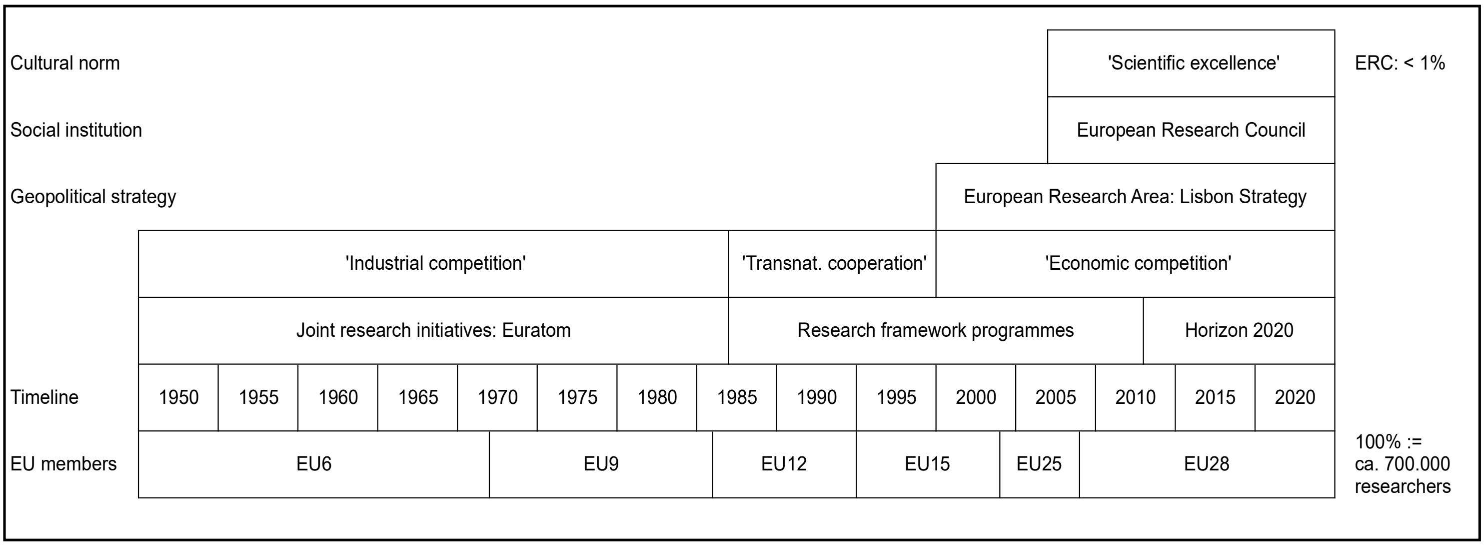
The thesis is that the countries and disciplines that perform successfully in the competition for ERC grants are those that can also be conceived of as relatively close to powerful forces in terms of social and economic capital. Since the specific case of the ERC grant so represents high scores of scientific capital and symbolic reputation, the analysis of the transnational scientific field must consider the high transferability of one form of capital towards another. Equally it might be the case that the European transnational field is structurally influenced by strong actors *beyond* the European space, such as U.S. elite universities, which hold a powerful position in a global hegemony of higher education and research (Marginson and Ordorika 2011). Apart from the fact that several ERC panelists are based in U.S. research universities, a large number of ERC grantees have also been trained there, so there is a significant transatlantic influence upon the ERC. Organizationally, the ERC explicitly takes the U.S. National Science Foundation as one of its role models, which also heavily influences its normative concept of 'frontier research' (Flink 2016; Hoenig 2017). This also mirrors the ERC's emergence as an institutional instrument to realize the ambitious goals of the EU's Lisbon Strategy *vis-à-vis* its American and Asian competitors.

A Short History of European Research Funding for 'Excellence'

As both a social phenomenon and approach, Europeanization initially emerged in the field of international relations, political sciences and law, but more recently also found resonance in sociology. Usually a distinction is made between two approaches (for example, Graziano and Vink 2007): The 'institutionalist' approach interprets Europeanization as supranational institution-building that affects institutions and policies at the domestic level of EU members; the 'interactionalist' approach is interested in transnational practices of populations in border regions, tourism, for example. In fact, the ERC exemplifies an innovative case of institution building at the supranational level, which is of great relevance to the social organization of science in Europe.

The history of European science policies shows a fundamental continuity, in that from the beginning science and research was not understood as an end in itself, but rather as instrumental for reaching other economic and political goals of the European Union (Guzzetti 1995, 2009; Hoenig 2010). Nevertheless, since its founding, several normative shifts have occurred in the overall cultural goals of European science, indicating distinct phases of science policies, as outlined in Figure 1.

Figure 1: Dimensions and phases of European research policy, 1952–2017



From the 1950s onwards, the founding members of the European Union (Belgium, France, Germany, Italy, Luxembourg, the Netherlands) aimed to start joint research initiatives, such as Euratom, which were led by the idea of strengthening 'industrial competition'. In 1973, three additional states joined the EU (Denmark, Ireland, United Kingdom), and in the 1980s three further countries, with fragile economic structures, became new EU members (Greece, Portugal, Spain). Both events increased the need for a better transnational cooperation of existing research initiatives aimed at economic innovation, as implemented by the Research Framework Programmes (FPs). A focus on the social sciences and humanities in the FPs resulted from the new members' efforts to integrate social coherence and cohesion as an additional goal in European research policies.

With successive rounds of enlargements in 1995, 2004, 2007 and 2013, economic and social disparities between EU members were not only seen as those between the north and south of western Europe, but also between western and eastern Europe. In 2000, the ERA was called into life, focused on the economic goals of the Lisbon Strategy 'to become the most competitive knowledge region in the world.' Simultaneously, it was envisioned as a genuinely supranational institution for research funding, the ERC, to realize the ERA's ambitious cultural goals and to strengthen scientific excellence. In 2004, the supranational institution ERC was founded by the European Commission, launching its first call for research proposals in 2007. This European research policy was primarily a normative shift from promoting transnational integration of research institutions towards the sponsoring of individual researchers and their institutions, exclusively based on the criterion of 'scientific excellence'.[3]

The ERC's history as an institution[4] is a rather short one and, with less than 1% of the entire research capacity of researchers in Europe, its quantitative relevance also seems quite limited. Nevertheless, the supranational funding institution is of particular relevance in several ways. The ERC represents a new *institutional* invention of supranational scope and of potential importance to other similar research funding councils. By setting a new indicator of symbolic reputation, its *normative* impact upon the entire scientific community is remarkable. For those researchers and institutions successfully competing for ERC grants, it also results in considerable *material* resources for research in particular fields of science. In this way, ERC funds are also influential for the *cognitive* definition and future vision of research of 'excellence.'

The need for a common supranational level of science policy is legitimized in the way of a whole constellation of argument first laid out in the Lisbon Strategy of 2000 and within the ERA as a policy-concept. This then served as a starting point for the development of the ERC as a supranational institution, which became regarded as a means of implementing the cultural goals of the ERA, culturally authorized by four main arguments. Based on an assumption of Europe's innovative backwardness and infra-structural fragmentation, an increasing demand for developing scientific 'excellence' through competition was identified and the international mobility of its researchers was seen as necessary to promote.

In order to reduce internal disparities within the ERA, ERC science policy actors frequently hint at the structural funds that support regional research capacity and infrastructure in respective member states. However, the ERC itself has made a considerable contribution to the enforcing of social stratification and inequalities between public universities and entire science systems, which is confirmed by the recent findings of the FP evaluation.[5] The notion of the ERA is characterized by a general belief in the primarily beneficial effects of research of extended scales and scopes. But are the consequences of these always the same for any fields of science? To answer this question,

[3] Both early careers and established researchers can submit proposals for five-year projects to the ERC; although the approval rate is only about 10%, indicating a fierce evaluation process, successful projects are funded with about 1.5 to 2.5 million euro. The ERC aims at promoting scientific independence of young researchers after their PhD and at generating investigator-driven, ground-breaking research. While the ERC is generally open to all fields of science, the share of projects in the social sciences and humanities nevertheless remains limited to 15–17% of the overall budget.

[4] The history of the ERC has been scrutinized by several authors: Winnacker (2012) as the previous Secretary-General of the ERC has given an experience-based account of these formative years. Flink (2016) provides a historical account of the science policy leading to its institutionalization. Based on the author's experience, interviews with policy experts, and archival material, König (2017) reconstructs the institutional formation of the ERC as an European agency. Gornitzka and Metz (2014) also conducted interviews with European science policy experts and explain the ERC history as a sequence of successive phases along institutional theories of various kind. Based on insights into processes of cumulative advantage (Zuckerman 1977, 1998), an empirical analysis of how the ERC contributes to elite-formation and sharpened stratification in science is given by Hoenig (2017).

[5] More particularly, of the overall ERC budget of 7,673 million euro from 2007 to 2013, the EU-15 (pre-2004 members from western Europe) received 84%, the EU-13 (post-2004 EU members from central and eastern Europe) received 1.5%, associated countries received 14.3%, and countries beyond Europe received 0.3%. Among countries of the EU-15, 26% went to the U.K.; 17.6% to Germany; 15% to France; 10.7% to the Netherlands; 6.3% to Spain; 6.2% to Italy; 4.3% to Sweden; 3.8% to Belgium; 2.8% to Austria; 2.3% to Denmark, and to Finland each; 0.8% to Portugal, Greece and Ireland each; and 0.01%, or 1 million euro, to Luxembourg (see HLEG 2015: 32).

empirical research on its effects upon scientific disciplines and its competitive dynamics and classificatory struggles is needed.

Research Design

In this short study, effects of ERC funding upon countries, disciplines and their development are quantitatively examined for a sample of 12 countries and 30 disciplines. I compare a sample of researchers differently located in the social structure of the ERA[6] by secondary statistical analyses of publicly available data. Comparing research capacity and performance by country and discipline allows me to derive insights into which disciplines and countries are encouraged as winners in the competition for symbolic recognition and economic reward, and which are the losers in that comparison. In addition, to describe the selection of applicants by evaluators at panel level, I compare the number of ERC proposals submitted to those approved within seven calls (2007–2013). The empirical results obtained provide answers to the question of whether, and to what extent, the panelists' consensus on approvals differed by cohort or grant type, by country and discipline.

Documenting research capacity by country and discipline provides insights into their relative weight within the internal structure of the European transnational field, as a capacity baseline against which performance indicators can be contrasted. Following Merton and Ben-David, the indicator of the total number of researchers can be treated as a valid predictor of the rate of scientific advance in the respective country and scientific field. Supranational databases, such as EUROSTAT and OECD, provide only aggregated data on researchers in six groups of scientific disciplines—as defined in the OECD Frascati Manual (OECD 2002, 2007)—in different economic sectors, but not data at the disciplinary level. This lack of supranational data forces us to look for data on university researchers per scientific discipline at a country-specific level,[7] which is publicly available as part of higher education statistics in most European countries. Nevertheless, the rather time-consuming data gathering provides a good empirical baseline for cross-national comparisons of scientific disciplines across Europe.

In addition, the relation of performance indicators, such as those of scientific publications and ERC grant distributions, can be compared systematically and correlated. Bibliometric indices on scientific publications can be obtained from the Web of Science database, and are also available from the Leiden Ranking.[8] In fact, bibliometric country profiles correlate with the funding indicator or the number of grants.[9] Conceptually this indicates a relatively close and direct transformation of scientific towards economic capital.

[6] The social structure of the ERA refers to stratified features of public science systems such as increased market-based competition and institutional differentiation between universities as largely determining the institutionalized means of researchers to realizing the ambitious cultural goals of the European Lisbon Strategy.

[7] I am indebted to Charles Crothers for suggesting this line of inquiry.

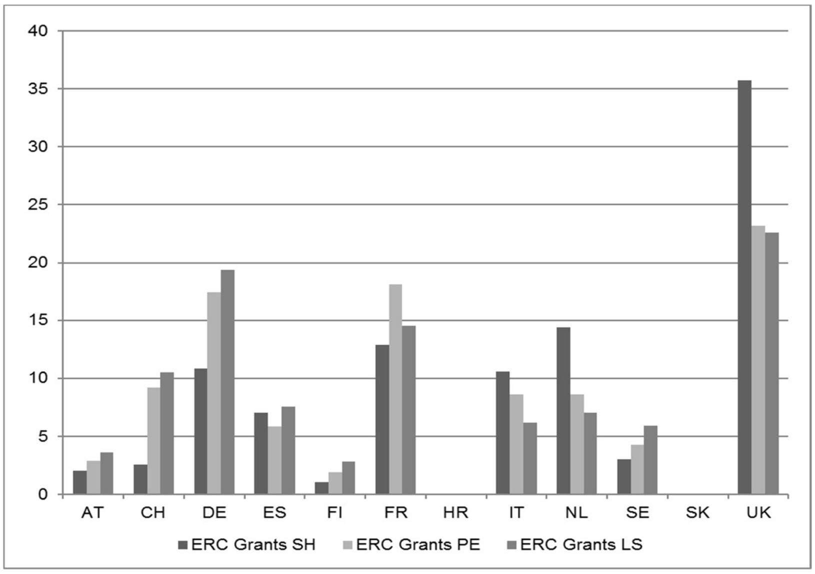
[8] www.leidenranking.org. A recent evaluation report on the Research Framework Programmes found high correlation scores for these two indicators (HLEG 2015).

[9] But the rank correlation between bibliometric performance, measured by the Leiden Ranking, and grant performance measured in grants, partly depends on characteristics of the respective public science systems: In countries where public universities are the most important actors of scientific research, such as Britain or Sweden, these are generally high. In countries where public research organizations, such as the French CNRS or the German Max Planck Society, are much more successful in obtaining ERC grants, these correlations are low. The Leiden Ranking is restricted to universities only, and thus public research organizations are often excluded from the analysis.

Results: Comparing Research Capacity and Performance[10]

Research capacity was measured using the number of full-time employed academic university personnel by country and discipline, while the relative weight for countries and disciplines was also calculated in the ERA sample at large.[11] In terms of the number of researchers, Germany, Britain, Spain and France contribute most to the sample, while Italy and Sweden are in the middle field, and each of the remaining countries amount to not more than 1 or 2%. In terms of research capacity by scientific domain, in Britain, Switzerland, Sweden and Finland the proportion of the social sciences accounts for a quarter of the research capacity, while in France, Slovakia and Spain the same is true for the humanities. The natural sciences are strong in Austria, Germany and Britain, and the engineering sciences are represented particularly strongly in France, Croatia and Slovakia. The proportion of medical and agricultural sciences is higher than average in the Netherlands, Switzerland, Italy and Germany. These findings support other studies (Glänzel et al. 2008; Schulz and Manganote 2012) that show the share of social sciences to be particularly high in Anglo Saxon countries, natural and engineering sciences to be strong in former socialist countries, and biomedical sciences highly represented in western countries.

Figure 2: ERC grants 2007–2011 in sample, per country and scientific domain, in %



Source: Own calculations based on ERC Indicative Statistics 2007–2011. Numbers of grants given in relative frequencies within the sample. SH: social sciences and humanities; PE: physical and engineering sciences; LS: life sciences.

Figure 2 gives data for grant distribution 2007–2011 in three domains by country, based on ERC Indicative Statistics.[12] While the social sciences and humanities contribute less than 20% to the

[10] The following sub-section is based on findings that are outlined in more detail in chapter 9 of Hoenig (2017).

[11] Country-specific data were retrieved from the internet in 2013 and in most cases refer to the academic year 2011 (see Table 1 in the Appendix). Academic university personnel refers to public and private universities of the higher education sector; non-university research organizations had to be neglected, since the comparability of statistics on these remains restricted.

[12] ERC Indicative Statistics, http://erc.europa.eu

overall sample of funded research projects, this is 45% for the physical and engineering sciences, and 36% for the life sciences. An according distribution of project budgets across disciplines is annually renewed in the ERC work program, and legitimized by similar distribution rates among the disciplines in national research funding.[13] In the social sciences and humanities, Britain, the Netherlands and France are particularly strong, accounting for 63% of all grants in the sample; a higher grant concentration in that domain when compared to the two other domains.[14]

Reasons for this might lie in the weak position of these disciplines in non-Anglo-Saxon countries, or in the relevance of language issues in this field that positively discriminates countries with more pronounced proficiencies in English. In addition, both the British and the Dutch science systems introduced country-wide evaluation procedures among public universities from the 1980s and 1990s onwards. They also developed attractive national funding schemes, especially for early-career researchers. France's strong position in the social sciences and humanities can be explained partly by a sharp institutional differentiation of research-only organizations, such as the CNRS, from mostly teaching-oriented public universities. In the physical sciences, France in particular performs strongly; in the life sciences, several western and northern European countries are better represented than in other domains.

Figure 3 indicates these capacity country profiles (pillar 1), which are compared with a bibliometric indicator[15] and ERC grants (pillars 2 and 3), given in relative frequencies. The comparison results in varying groupings of countries. First, countries winning in that comparison—in the sense that their research capacity is to a higher extent reflected and valuated in the performance indicators—are Britain, France, the Netherlands and Switzerland. To some extent this is also valid for Italy. The second grouping of countries includes Sweden, Austria and Finland, which are represented, to a balanced extent, on the capacity and the performance sites. The third grouping consists of one western and four southern or eastern European countries (Germany, Spain, Italy, Slovakia, Croatia) that lose in the comparison.

Since the late 1990s, European programs have been explicitly interested in promoting problem-oriented, interdisciplinary research projects instead of funding discipline-oriented knowledge production. Therefore, the ERC's panel classification system is not structured along scientific disciplinary lines, but by research specialties that mirror the expertise of the multidisciplinary panels' evaluators. For the researcher, this creates some practical difficulties in unambiguously assigning research projects to particular disciplines. Nevertheless, on a more fine-grained level, scientific disciplines in these domains can be compared, allowing definite statements about which of them have a better chance of success in the supranational competition than others.[16] By retrospectively applying ERC panel descriptors to the project title of approved projects, these can be

[13] This refers to national funding organizations such as numerous British research councils, the German DFG, the French ANR, the Spanish CSIC, the Dutch NWO, the Swiss SNF, the Italian CNR, or the Austrian FWF.

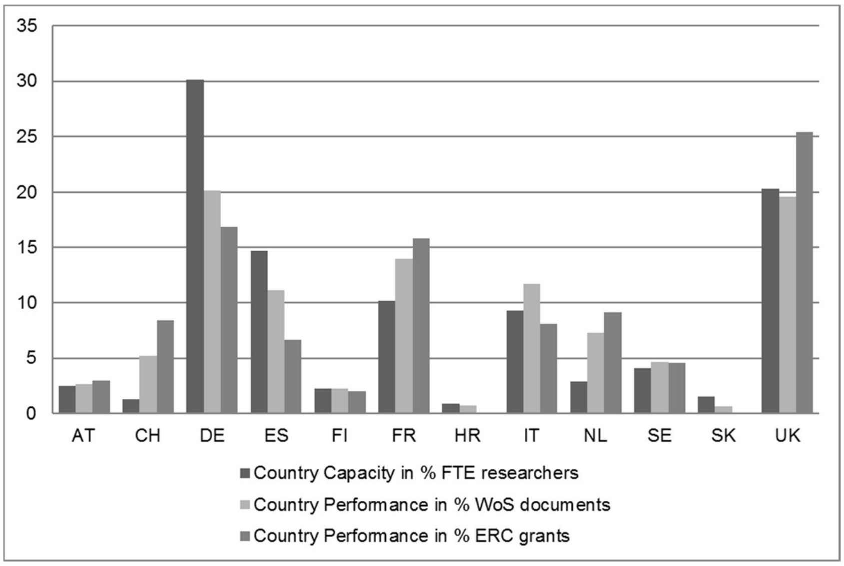
[14] By contrast, the three countries with the largest number of grants in the physical and engineering sciences account for 58% of the sample and five countries for 75%. In the life sciences, three countries account for 56% and five countries for 74%.

[15] The bibliometric indicator gives relative frequencies of the country profile of publications covered by the Thomson Reuters Web of Science (WoS) in 2012 for the country sample (n = 449,519 documents). For details, http://isiknowledge.com/wos.

[16] For comparing capacity with performance sites by discipline, the OECD Frascati Manual Classification (OECD 2002, 2007) was used for aggregating data of national higher education statistics, bibliometric data obtained from Web of Science research areas, and ERC statistics obtained from panel descriptors.

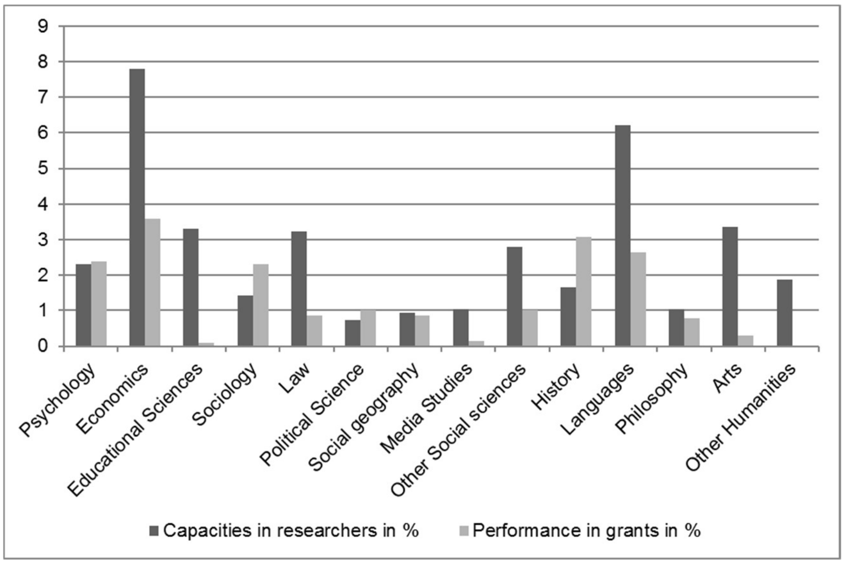
differentiated by their anticipated disciplinary fit; Figures 4, 5 and 6 give domain-specific results by discipline.

Figure 3: Comparing research capacity and performance for 12 countries. Capacity in % of full-time equivalents of researchers, performance in % of Web of Science documents and in % of ERC grants



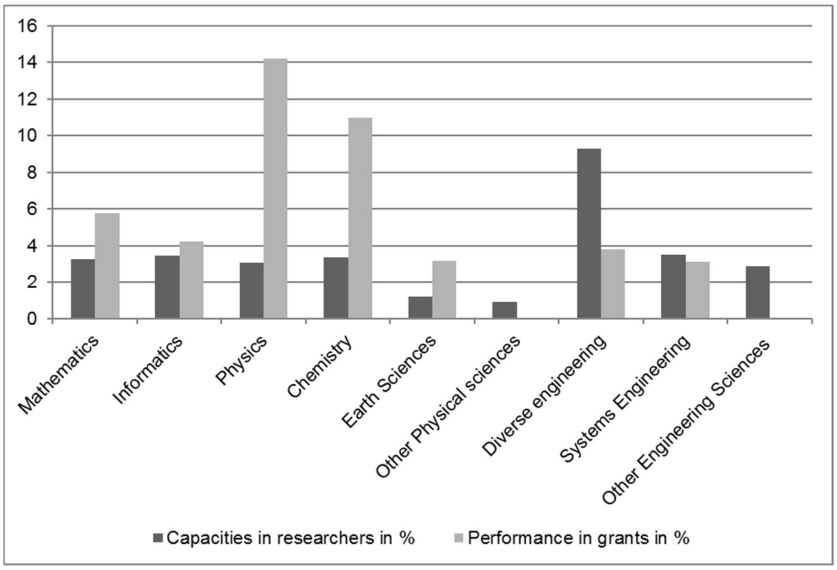
Source: Own calculations for a sample of 12 countries based on national higher education statistics (column 1), Web of Science data 2012 (2), ERC Indicative Statistics 2007–2011 (3).

Figure 4: Disciplines in the social sciences and humanities, comparing research capacity and performance



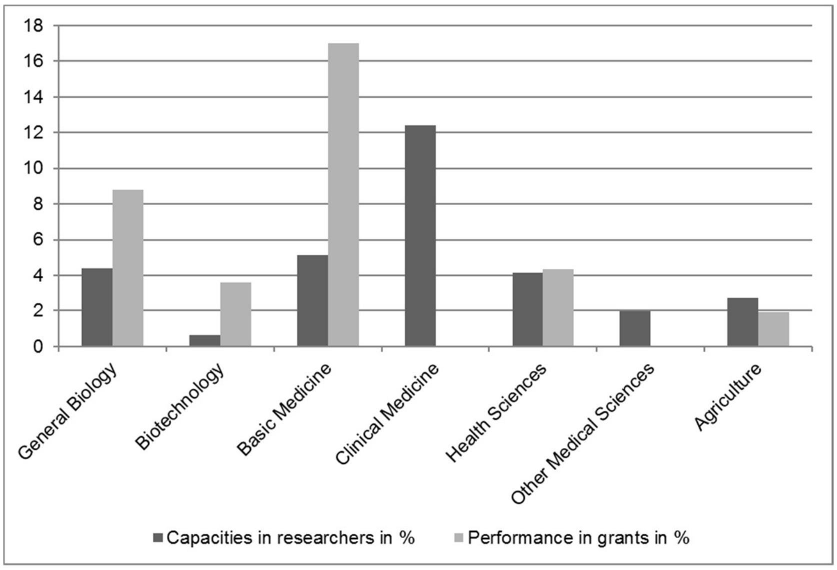
Source: Author's own calculations based on national higher education statistics and ERC Indicative Statistics 2007–2011 for a sample of 12 countries.

Figure 5: Disciplines in the physical and engineering sciences (PE), comparing research capacity and performance



Source: Author's own calculations based on national higher education statistics and ERC Indicative Statistics 2007–2011 for a sample of 12 countries.

Figure 6: Disciplines in the life sciences (LS), comparing research capacity and performance



Source: Author's own calculations based on national higher education statistics and ERC Indicative Statistics 2007–2011 for a sample of 12 countries.

Across all countries in the sample, when research capacity is measured as university personnel in full-time equivalents (pillar 1), all three domains have a relative weight of about a third. Among the social sciences and humanities, the large disciplines are economics, language and literary studies, education and law, while the cross-national weight of sociology is between 1 and 2%. Mathematics, informatics, physics and chemistry are comparable in size, while there are also many smaller-sized sciences. Among the life sciences, biology and clinical medicine can be thought of as large disciplines.

In Figures 4, 5 and 6, the second pillar refers to the ERC grant distribution in relative frequencies in each of the disciplines. The total number of grants in the social sciences and humanities is less than half of those in the physical and engineering sciences, and about half of the life sciences. Quantitatively, most grants are acquired by economics, history and psychology, sociology is located in the middle field, with education and media studies rarely represented. The majority of disciplines in the social sciences and humanities, therefore, lose in the comparison of capacities and ERC grants. Among the physical and engineering sciences, the majority of disciplines obtain much more importance than is actually indicated by their research capacities.[17]

The relative success of any single discipline in the ERC system depends on the characteristics of the institutionalized research program itself, such as its classification system. While the ERC panel system cannot be fully explicated here, it should be provisionally mentioned that the relative amount of space dedicated to different disciplines within it indicates, at least in part, which disciplines are of particular interest for European research policy (Fleck and Hoenig 2014). Therefore, these disciplines are expected to perform better in the Europe-wide competition for grants. In a quantitative comparison, the relative weight of the SH domain decreases from 37% capacity to only 19% in terms of ERC grants. Conversely, the physical, engineering and life sciences are increased from about 60% to 80%, because they are positively discriminated against by the funding program.

Recently, the ERC has published data on evaluated, versus granted, research proposals, which allows me to undertake a data analysis on approval rates of submitted ERC proposals per cohort and discipline. While that analysis does not allow clarification of *why* applicants apply or not, it does describe to what extent the panelists' consensus in evaluating proposals may differ among disciplines at panel level[18] as well as how approval rates change over time.

Average approval rates among advanced researchers with 10–15% of all grant applications are higher than among starting ones with 8–10%. But disciplinary differences are more pronounced than was expected, in particular among advanced researchers. In a sample of six disciplines,[19] approval rates are highest among senior physicists, and proposals from history and sociology both achieve much lower rates of approval. In the senior cohort, approval rates are generally relatively stable across time; among junior grantees, after the first call with less than 3% of all proposals approved there has been an annual increase of approvals, whereas since 2010 approval rates have been steadily decreasing in all disciplines.

How can we explain these reputation differentials of cohorts among the disciplines involved? Stronger differences of reputational scores among the older scientists seem to create higher consensus and approval rates by panelists, and do not find any similarity with the early career

[17] Because bibliometric coverage varies by discipline, bibliometric indicators were omitted in that comparison.

[18] For research on varying degrees of consensus among multidisciplinary panelists of grant peer review in the United States, see also Lamont (2009).

[19] Sample disciplines were sociology, history, economics, physics, chemistry, biotechnology.

applicants. Dynamics of cumulative advantage and disadvantage might magnify with ageing in science and across a researcher's biography, indicating a stronger Matthew Effect (Merton 1973) among senior researchers than among those more junior. Differences in approval rates of the two cohorts might also reflect that senior and junior candidates for ERC grants are exposed to different evaluation procedures. While the early career applicants have to pass a second stage of the evaluation process, consisting of an interview with evaluators, this is not applied to senior candidates whose research is assumed to be 'already known' to their peers. Because panelists are expected to come to a unanimous decision concerning candidates' approval, mechanisms of collegiality among panelists that reduce uncertainty in collective decision-making might be stronger *vis-à-vis* senior candidates who are already considered highly reputable.

Less internally coherent disciplines, or more heterogeneously composed panels, such as biotechnology, sociology and history, show more uncertainty among panelists in coming to a consensus. There are also panel specific differences in the number of researchers acting in dual roles; i.e. being recruited as a panelist after having previously successfully acquired a grant, or receiving a grant after having acted as a panelist. These differences in panel composition might also contribute to differential approval rates among the disciplines through mechanisms of social closure, both among potential grantees and panelists.

Some countries perform better in disciplinary approval rates than others. Among junior grantees, the average approval rate is 9% of submitted proposals across all domains. In the social sciences and humanities, Britain, France and the Netherlands perform particularly well. In the physical and engineering sciences, and the life sciences, Switzerland and France are more successful than countries from southern, eastern and northern Europe. For senior grantees, parallel data show a slightly different picture. In the social sciences and humanities the strongest rates are those of France, Switzerland and the U.K with an average approval rate of 11% in which senior scientists seem to have some advantage. In the physical and engineering sciences, the average approval rate among seniors is 14%. Several countries perform above that level, such as Switzerland, the Netherlands, Sweden and Austria. Among senior life scientists, the average approval rate is the highest at 17%. Switzerland, Germany, Austria, the Netherlands and the UK, however, achieve an even higher level. Thus, in most scientific domains, northern, southern and eastern European countries perform weaker than the western European countries. In the social sciences and humanities, country-specific grant concentration seems to be highest among senior scientists from STEM disciplines (science, technology, engineering, mathematics) with the distribution of grants more dispersed across countries.

Conclusions

In this paper I hoped to highlight some relevant features of dynamic social processes that are crucial for the scientific community involved in deep structural transformations initiated by European research policies. In particular, I was interested in the question of how the emergence of transnational research funding affects competition for status among scientific disciplines and what this means for the social sciences and humanities located in an anticipated hierarchy of the sciences. Two research streams were of conceptual and empirical importance for the analysis of status competition among disciplines. First, the idea of a European transnational field, something explicitly envisioned by European science policies, and partly emerging through new funding agencies such as the European Research Council has only recently been subject to sociological analysis. Second, the notion of disciplines has scarcely been investigated both in terms of research capacity and performance, something that seems highly relevant in the development of an adequate understanding of power relations in the field.

Conceptually, the analysis was oriented towards Bourdieu's distinction between scientific and academic capital, in order to understand the hierarchy of the disciplines in a supposed European transnational field. The analysis has revealed the relative weight and position of disciplines both towards a powerful European funding agency, external to the scientific field, as well as within the internal structure of disciplines in a transnational framework. The fact that at the macro-level of analysis the bibliometric indicator seems to be systematically related to the funding indicator also provides supporting evidence for Bourdieu's notion of the transformation of scientific to economic capital at transnational level.

Merton's insight that research capacity determines the rate of scientific advance in any country has led to a systematic comparison of the number of researchers by country with the country's performance in terms of scientific and academic capital. Empirically I operationalized these sorts of capital by bibliometric profiles of disciplines derived from the Web of Science database and by research grants approved by the ERC in the first five years of its existence. I investigated the internal structure and power relations between countries and disciplines in that European transnational field by statistical comparisons for a sample of 12 countries from the European Research Area and 30 disciplines from all scientific domains.

Neither in transnational media of scientific communication, such as the Web of Science, nor in European grant distributions does the representation of the social sciences seem to fully reflect the remarkable research capacity of scholars actively researching in that domain across Europe. This might also depend on the higher importance of regional collaborations and public audiences within the social sciences and humanities, on their historically close relation to the nation state and that they significantly retain national funding. Although there are remarkable country differences in ERC funding, through that most recent European program of 'funding for excellence,' the social sciences do not apparently encounter many opportunities to improve their position within the hierarchy of the sciences. Rather, they seem to be confined to the position of the structural owner of a '41st chair of the academy' (Merton 1973) in European science.

Acknowledgements

A first draft of this chapter was presented at the INTERCO-SSH workshop 'The Social Sciences and Humanities in the European Research Area' at Erasmus University Rotterdam in February 2016. I am indebted to the workshop participants and to two anonymous reviewers of a previous version for helpful critique and comments.

References

Abbott, Andrew (2001) *Chaos of Disciplines*, Chicago: University of Chicago Press.

Ben-David, Joseph (1971) *The Scientist's Role in Society: A Comparative Study*, Englewood Cliffs: Prentice Hall.

Bourdieu, Pierre (1975) The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason, *Social Science Information* 14(6): 19–47.

Bourdieu, Pierre (1984) *Homo Academicus*, Paris: Minuit.

Bourdieu, Pierre (2001) *Science of Science and Reflexivity*, Cambridge: Polity Press.

Bourdieu, Pierre, and Louis J. D. Wacquant (1992) *Réponses pour une anthropologie reflexive*, Paris: Edition du Seuil.

Clark, Burton R. (1983) *The Higher Education System: Academic Organization in Cross-National Perspective*, Berkeley University of California Press.

Cole, Stephen (1992) *Making Science: Between Nature and Society*, London: Harvard University Press.

Cole, Jonathan A., and Harriet Zuckerman (1975) The Emergence of a Scientific Speciality: The Self-Exemplifying Case of the Sociology of Science, in: Lewis A. Coser (Ed.*) The Idea of Social Structure. Papers in Honor of Robert K. Merton*, New York: Jovanovic, 139–174.

Comte, Auguste (1851) *Systéme de Politique Positive, ou Traité de Sociologie, Instituant la Religion de l'Humanité*, Paris: L. Matthias.

Crothers, Charles (2000) Austrian Sociology: A Case Study in the Production of Social Knowledge, in: Christian Fleck (Ed.) *Soziologische und historische Analysen der Sozialwissenschaften* (Special Issue 5 of Österreichische Zeitschrift für Soziologie), Opladen: Westdeutscher Verlag, 267–286.

Fleck, Christian, and Barbara Hoenig (2014) European Sociology: Its Size, Shape, and 'Excellence', in: Sokratis Koniordos, and Alexandros-Andreas Kyrtsis (Eds.) *The Routledge Handbook of European Sociology*, London: Routledge, 40–65.

Flink, Tim (2016) *Die Entstehung des Europäischen Forschungsrates*, Weilerswist: Velbrück.

Genov, Nikolai (Ed.) (1989) *National Traditions in Sociology*, London: Sage.

Gingras, Yves (2002) Les formes spécifiques de l'internationalité du champ scientifique, *Actes de la recherche en sciences sociales* 141–142: 31–45.

Glänzel, Wolfgang, Konrad Debaeckere, and Martin Meyer (2008) 'Triad' or 'Tetrad'? On Global Changes in a Dynamic World, *Scientometrics* 74(1): 71–88.

Gornitzka, Ase, and Julia Metz (2014) Dynamics of Institution Building in the Europe of Knowledge: The Birth of the European Research Council, in: Meng-Hsuan Chou and Ase Gornitzka (Eds.) *Building the Knowledge Economy in Europe: New Collaborations in European Research and Higher Education Governance*, Cheltenham: Edward Elgar, 81–110.

Graziano, Paolo, and Marten P. Vink (2007) *Europeanization: New Research Agendas*, New York: Palgrave Macmillan.

Guzzetti, Luca (1995) *A Brief History of European Union Research Policy*, Brussels: European Commission Directorate General XII Science, Research, Development.

Guzzetti, Luca (2009) The 'European Research Area' Idea in the History of Community Policy-making, in: Henri Delanghe, Ugur Muldur, and Luc Soete (Eds.) *European Science and Technology Policy: Towards Integration or Fragmentation?*, Cheltenham: Edward Elgar, 64–77.

Heilbron, Johan (2004) A Regime of Disciplines: Towards a Historical Sociology of Disciplinary Knowledge, in: Charles Camic, and Hans Joas (Eds.) *The Dialogical Turn: New Roles for Sociology in the Postdisciplinary Age*, Oxford: Rowman & Littlefield, 23–42.

Heilbron, Johan, Lars Magnusson, and Björn Wittrock (1998) *The Rise of the Social Sciences and the Formation of Modernity*, Dordrecht: Kluwer.

Heilbron, Johan, Nicolas Guilhot, and Laurent Jeanpierre (2008) Towards a Transnational History of the Social Sciences, *Journal of the History of the Behavioural Sciences* 44(2): 146–160.

HLEG, High Level Expert Group (2015) *Commitment and Coherence: Essential Ingredients for Success in Science and Innovation*. Ex-Post-Evaluation of the 7th EU Framework Programme (2007–2013). Report of a high-level expert group led by Chair Louise O. Fresco.

Hoenig, Barbara (2010) European Union's Research Policies and the Social Sciences, *European Perspectives* 2(1): 37–58.

Hoenig, Barbara (2017) *Europe's New Scientific Elite: Social Mechanisms of Science in the European Research Area*, Abingdon and New York: Routledge.

Koniordos, Sokratis, and Alexandros-Andreas Kyrtsis (2014) *The Routledge Handbook of Sociology*, Oxon: Routledge.

König, Thomas (2017) *The European Research Council*, New York: Polity Press.

Lamont, Michèle (2009) *How Professors Think: Inside the Curious World of Academic Judgment*, Cambridge and London: Harvard University Press.

Lepenies, Wolfgang (1985) *Die drei Kulturen: Soziologie zwischen Literatur und Wissenschaft*, Reinbek: Hanser.

Levine, Donald N. (1995) *Visions of the Sociological Tradition*, Chicago: University of Chicago Press.

Marginson, Simon, and Imanol Ordorika (2011) 'El central volumen de la fuerza': Global Hegemony in Higher Education and Research, in: Diana Rhoten and Craig Calhoun (Eds.) *Knowledge Matters: The Public Mission of the Research University*, 67–129, New York: Columbia University Press.

Merton, Robert K. (1973) *The Sociology of Science: Theoretical and Empirical Investigations* (Edited and with an Introduction by Norman W. Storer), London: The University of Chicago Press.

Nedelmann, Birgitta and Piotr Sztompka (Eds.) (1993) *Sociology in Europe: In Search of Identity*, Berlin, New York: de Gruyter.

OECD (2002) *Frascati Manual, Proposed Standard Practice for Surveys on Research and Experimental Development*.

OECD (2007) *Working Part of National Experts on Science and Technology Indicators, Revised Field of Science and Technology Classification in the Frascati Manual*. 26 February.

Schulz, Peter A., and Edmilson J.T. Manganote (2012) Revisiting Country Research Profiles: Learning about the Scientific Cultures, *Scientometrics* 93: 517–531.

Snow, Charles P. (1959) *The Two Cultures and the Scientific Revolution*, New York: Cambridge University Press.

Wagner, Peter, Björn Wittrock, and Richard Whitley (Eds.) (1991) *Discourses on Society: The Shaping of the Social Sciences Disciplines*, Dordrecht: Kluwer.

Winnacker, Ernst-Ludwig (2012) *Europas Forschung im Aufbruch: Abenteuer in der Brüsseler Bürokratie*, Berlin: Berlin University Press.

Zuckerman, Harriet (1977) *Scientific Elite: Nobel Laureates in the United States*, New York: Free Press.

Zuckerman, Harriet (1998) Accumulation of Advantage and Disadvantage: The Theory and Its Intellectual Biography, in: Carlo Mongardini and Simonetta Tabboni (Eds.) *Robert K. Merton and Contemporary Sociology*, New Brunswick: Transaction Publishers, 139–162.

Appendix

Table 1: List of data sources used for cross-country comparison of research capacity.

Code	Year	Language(s)	Source	Responsible institution
AT	2011	German	Annual intellectual capital reports of universities	Federal Ministry of Science and Research. http://eportal.bmbwk.gv.at/portal
CH	2012	German, French, English	Database on professors at universities in Switzerland	Rectors' Conference of the Swiss Universities. www.proff.ch/professor.search.do
DE	2011	German	Annual report education and culture: higher education personnel	Federal Ministry for Education and Research, National Statistical Institute. www.destatis.de
ES	2011	Spanish	Database on higher education statistics in Spain	National Institute for Statistics. www.ine.es
FI	2009	Finnish, Swedish, English	Report on higher education institutions 2011. Universities and polytechnics as implementers of higher education policy	Ministry of Education and Culture. www.minedu.fi
FR	2007	French	University staff reports 2006–2007	Ministry for Higher Education and Research. www.enseignementsup-recherche.gouv.fr
HR	2012	Croatian, English	Research database on who is who in Croatian Science	Ministry for Science, Education and Sports. http://tkojetko.irb.hr/en/
IT	2011	Italian	Statistical office of the Ministry for University and Research	Ministry of Education, University and Research. http://statistica.miur.it
NL	2011, 2012	Dutch, English	Assessment reports of universities QANU quality assurance, Netherlands	QANU Quality Assurance Netherlands Universities. www.qanu.nl respective university websites and reports, Royal Academy of Sciences Netherlands. www.knaw.nl
SE	2011	Swedish, English	Swedish official statistics. Higher education: employees in higher education 2011	Swedish National Agency for Higher Education, Statistics Sweden. www.hsv.se
SK	2012	Slovakian	Annual statistics for higher education 2012	Ministry of Education, Science, Research, Sport, Department of Higher Education. www.minedu.sk
UK	2011	English	Staff in higher education institutions 2010/2011	HESA Higher Education Statistics Agency. www.hesa.ac.uk

Source: Hoenig (2017).