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Paradoxes of Equality in European Research Funding for "Excellence"

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Abstract: This paper focuses on assumed paradoxes of gender equality in recent European research funding towards promoting "excellence", insofar equality and excellence as cultural goals often are seen rather as area of conflict than as conditioning each other. European research policies are normatively framed by criteria of scientific excellence, with strong market-driven, technically defined, partially gendered underpinnings. We suppose that implementing gender mainstreaming principles in contexts that are institutionally pre-structured by other, more powerful criteria, might prove too weak to effectively affect structural inequalities. Empirically scrutinizing policy documents and gender statistics from a case study on the European Research Council, we arrive at a weak effect of implementing gender policies in supranational research funding. However, in-depth interviews show social support and action strategies of female top researchers to successfully perform in the competition for excellence.

Keywords: Equality policy, Gender mainstreaming, Research funding for excellence, European Research Area, Paradox

Paradoxien der Gleichheit in der europäischen Förderung „exzellenter" Forschung

Zusammenfassung: Der Beitrag geht von der Annahme eines Paradoxons von Gleichstellungspolitik in europäischer Förderung „exzellenter" Forschung aus, insofern Gleichheit und Exzellenz gemeinhin als Spannungsfeld denn als einander bedingend aufgefasst werden. Exzellenz-Kriterien europäischer Forschungsförderung setzen die ökonomisierung und technokratische Vermessung wissenschaftlichen Wissens voraus, die ihrerseits einen gender bias aufweisen. Dies lässt vermuten, dass das Implementieren von Gender Mainstreaming in diesem Kontext kaum dazu führt strukturelle Ungleichheiten wirksam zu verändern. Analysen von Dokumenten und statistischen Sekundärdaten zum empirischen Fallbeispiel des European Research Council zeigen eine schwache Wirksamkeit von Gleichstellungspolitik auf suprana-

tionaler Ebene. Tiefeninterviews mit Fördernehmerinnen liefern hingegen Einsichten in deren Unterstützungsstrukturen und soziale Praktiken, an diesem Wettbewerb erfolgreich teilzunehmen.

Schlüsselwörter: Gleichstellungspolitik, Gender Mainstreaming, Exzellenzförderung, Europäischer Forschungsraum, Paradoxon

Introduction

The short history of the European Research Area has always been defined by cultural norms and goals of scientific research that occasionally turned out as ambivalent and controversial, conflict-ridden and even paradox to each other. As part of European integration processes in science, scientific 'excellence' and other cultural goals were either enfolding as different norms in time or co-existing in distinct institutional structures. When in the late 1980s the idea of a genuinely European research policy fostered 'transnational collaboration' of scientists in Research Framework Programs for combating a perceived fragmentation of the European research landscape, national policy actors were far from speaking in an unanimous voice (Guzzetti 1994, p. 124ff.). Meanwhile, the focus of European research funding has significantly shifted from transnational cooperation towards 'scientific excellence', as visible in various Excellence Initiatives at (supra-)national level. This paper focuses on the gender implications of that recent development in European funding policies, insofar 'equality' and 'excellence' as cultural goals of European policies often are seen as area of conflict than as conditioning each other.

We will show that the more recent turn of funding policies towards promoting scientific 'excellence' reveals sociological ambivalence (Merton 1976; Nowotny 2011) or a paradox that might significantly constrain the implementation of gender equality policies in that area of European integration. The notion of paradox conceptually refers to a scholarly interest in social, mostly unanticipated consequences of action, as coined by Robert K. Merton and Raymond Boudon (Merton 1936; Boudon 1977). In feminist social theory, it has self-reflexively been used to designate paradoxical effects of feminist thinking and movements proposing social change (Knapp 2009), while complementing rather than substituting a similar concept of 'contradiction' (Hartmann 2002; Wetterer 2006). Here we argue that implementing equality policies led by the gender mainstreaming principle in contexts that are normatively pre-structured by other, more powerful criteria, might in effect result in sorting out gender issues. European research policies are culturally and institutionally framed by criteria of scientific 'excellence', with strong market-driven, technically defined, partially gendered underpinnings. Equality policies led by the mainstreaming principle in consequence might prove too weak to effectively affect structural inequalities in science. In addition, if measures proposing equality and social justice make use of neo-liberal rhetoric for being implemented, they may in effect de-legitimize other forms of

critique (Wetterer 2002; Knapp 2009). Though in this paper we are far from fully demonstrating empirical evidence for that paradox, we give some exploratory findings indicating the limited scope of gender policy effects in that institutionalized context.

Recent developments in (supra-)national research policies find support by the marketization of public science as ‘entrepreneurial universities’ (Clark 1998) enacting principles of New Public Management (Schimank 2005; De Boer 2007) consequential for women and men in science (Riegraf et al. 2010; Aulenbacher 2012). Research on ‘gendered organizations’ (Acker 1990; Wilz 2002; Müller et al. 2013) revealed that the standardization of performance and evaluation criteria is derived from work profiles of dominant groups. Thus, scientific organizations are assumed to contribute to gendered impacts of European research funding, or absence of funding, on scientific careers as well. Nevertheless, among the most eminent set of top scientists we also find women. Self-reflexively taking the possibility of ‘self-fulfilling’ research on discrimination and its paradoxical effects into account, here we are interested in identifying resources of social support and action strategies of top female researchers successfully performing in the competition for ‘excellence’.

Empirically, we focus on a case study of the genuinely supranational institution of research funding, the European Research Council (ERC), and reconstruct notions of equality and excellence incorporated as cultural goals in its institutional structures. First, how and to what extent has the ERC, as institution of European research funding for ‘excellence’, defined, identified and implemented gender issues in its funding policies? Second, with a view to structural inequalities in grant competition which social resources and action strategies nevertheless have helped female top researchers to overcome these obstacles? While the first question addresses European research policies and its gender effects at supranational level, the second question is more concerned with revealing social practices at organizational level that either generate or contradict these outcomes. The paper is structured as follows: We start with giving an account on the EU’s equality policy literature, with particular regard to gender effects in research funding. The second section focuses on the case of the European Research Council and outlines its research design, followed by empirical findings on its gender policy implementation. Assessing the ERC on its own terms, we compare its policy documents with statistical data on gender effects in application and evaluation processes. In addition, we report results of in-depth interviews with a sub-sample of 24 ERC grantees from a variety of disciplines and countries in the European Research Area. These allow provisional insights both in gender disparities resulting from funding strategies and in social practices and support of researchers in overcoming these hurdles. Finally, we come to some conclusions concerning the assumed paradox of implementing gender equality in European funding for ‘excellence’.

1 State of Research: Gender Effects in European Research Policies

In European Union's (EU) legislations, anti-discrimination and equality issues traditionally play a significant role (Guiraudon 2007; Wobbe and Biermann 2007). In particular for countries lagging behind in equality policies, EU membership has been an important institutional condition for revising their national legislations towards gender equality (Rosenberger 2009). From the 1990s onwards, gender research was promoted by Research Framework Programs and Community Initiatives that otherwise would not be funded by national governments or local universities at all, for instance, on equal pay (Egger et al. 2002; Hönig and Kreimer 2005). Rees identified three ideal-typical approaches towards gender equality in European research policy (Rees 2001): equal treatment, positive action, and gender mainstreaming. While equal treatment refers to equality of access based on formal rights of women as workers, positive action is concerned with equality of outcome, for instance, by implementing quota strategies to improve women's presence in gatekeeping positions. Conversely, gender mainstreaming as a principle designates a systematic incorporation of gender issues throughout all relevant institutions and policies. Initially having been developed at the United Nations Bejing Women's Conference, the EU adopted it in a Communication of a High-Level Commissioner's Group (EC 1996)[1] that was then strengthened in the Amsterdam Treaty. Thus, at a particular historical point, the EU has been relatively open to gender issues. Since then, however, changes in European equality policies led to many critical assessments of implementing gender mainstreaming, insofar it has fallen behind positive action in favour of promoting the predominance of market forces (Stratigaki 2005; Jacquot 2010; Macrae 2010; Aulenbacher et al. 2015; Rubery 2015). Implementing objectives of gender mainstreaming had more or less intended effects in different Directorates General (DG). Reasons were seen in the fact that its advocates were apt in strategically framing the issue in order to gain acceptance by fitting with the dominant frame of a particular DG: Those more interventionist in character and more experienced in dealing with gender issues, were relatively open to consideration of social justice issues. Conversely, DGs on 'Competition' and 'Science, Research, and Development', primarily oriented towards market or technical criteria, were much less receptive to it (Pollack and Hafner 2000, p. 439ff.). We regard these critiques as still relevant to gender issues in European funding, although investigating gender effects in research funding is a relatively newly emerging research field.

1 The EU Communication defined the principle of gender mainstreaming as 'not restricting effects to promote equality to the implementation of specific measures to help women, but mobilizing all general policies and measures specifically for the principle of achieving equality by actively and openly taking into account, at the planning stage, these possible effects on the respective situations of women and men (gender perspective). This means systematically examining measures and policies and taking into account such possible effects when defining and implementing them' (EC 1996, p. 2).

A path-breaking study on the Swedish Medical Research Council in the 1990s brought evidence on dynamics of favouritism and gender discrimination in peer-review grant selection, showing that female researchers had to be more productive to the factor 2.6 in order to be as likely to be selected for research funding (Wenneras and Wold 1997). Ten years later, a re-study found that both gender discrimination and favouritism among grantees and panellists as important factors influencing grant approval rates prevailed (Sandstroem and Hallstein 2008). Following from these pioneering studies, evaluation procedures of other national research councils were subject to investigation regarding potential bias. Several studies found that gatekeeping activities for defining scientific research of 'excellence' to a large extent are undertaken by male middle-aged academics (Rees 2001; EC 2004, 2009, 2012). These EU-funded studies partially reflect that improving women's presence in gatekeeping positions has been an early and persisting concern of research for the European Commission. Husu et al. (2010) found that severe differences in the overall representation of women in research funding had significant effects on scientists' careers. Even in Scandinavian countries females' proportion among grant evaluators did not exceed 30%, irrespective of national quotas. Reasons of that were seen in their low proportion among full professors particularly in the natural sciences and in persisting recruitment practices aiming at university personnel only. Ranga et al. (2012) have identified four main reasons for women's underrepresentation in a majority of research funding programs: a) both vertical and horizontal gender segregation in scientific institutions; b) self-selection in applications, as influenced by academic mentorship and its absence; c) selection by gender effects of peer review, depending on country- and discipline-specific differences; and d) selection in the evaluation of scientific merit, both concerning perceived productivity and the valuation of researchers' contributions to science. The latter is particularly relevant in assessing social constructions of merit and a parallel 'excellence' discourse, revealing gender-based double standards in judging scientific competence (Rees 2011; Brink 2012; Riegraf 2013). Evaluations of scientific merit often relate to differences in perceived productivity of women and men (Cole 1984, 1991). In the structural tradition of the sociology of science, these differences are explained as a form of cumulative disadvantage that systematically disfavours women. Similar to the dynamics of the so-called 'Matthew effect' (Merton 1968), a 'triple penalty principle' (Zuckerman and Cole 1975) is assumed to be operative affecting women and minorities in science, resulting in cumulative negative consequences of lower status over time, so that gender disparities in senior positions and gate-keeping roles prevail. Though given the strong increase of female researchers among undergraduates and even at the doctoral level in the last decades, it is 'the movement into the upper reaches of scientific careers that remains the blockage to productivity and to the research funding that enhances research productivity' (Ranga et al. 2012, p. 25).

2 The Case of the European Research Council: Research Design

The European Research Council (ERC) has been called into life by the European Commission (EC 2007), aiming at promoting investigator-driven research of ground-breaking quality in all fields of science. Both early career and advanced researchers can apply on an annual basis for five-year-project grants of about two million Euros on average. Two-step evaluation procedures are led by the criterion of scientific 'excellence' only, resulting in approval rates of about 10% of all applications. Since its first call in 2007, approximately five thousand researchers have been approved a research grant.

Our research design on the ERC consists of both quantitative and qualitative methods of social research. Sampling choices have been oriented at integrating a broad disciplinary and country sample of ERC grants into the analysis in order to identify and analyse anticipated disparities in European science. Here we report only those parts of the methodology and results that are directly relevant for its gender equality policy (for a more comprehensive analysis, see Hönig 2015). Starting with documentary analyses of ERC gender policies, we compared them with secondary statistical data on ERC grantees and panellists that were publicly available on its webpage. Relying on these data was necessary since, because of data protection regulations, access to a larger pool of applicants, whether unsuccessful or not, has been denied. Thus, we based our analysis on publicly available data on ERC Starting and Advanced grantees[2] from 2007 till 2013, and on data on panellists of these funding programs for the same time period. The universal set of grantees amounted to n= 3 897 grantees in three scientific domains (social sciences and humanities; physical and engineering sciences; life sciences). Usually, a grantee has received one grant, a very small sub-set was successful in getting more than one proposal approved. The universal set of evaluators active for the ERC during that period were n= 1 837 panellists. A small group of scientists were active in both roles.

In addition, we conducted in-depth interviews with a sub-sample of 24 grantees, either in German or in English, on average taking 70 minutes. Interviews with scientists, though few in numbers, can nevertheless be useful for obtaining insights in processes of cumulative (dis-) advantages leading to gender disparities in application and approval rates. They take notice of interpretations of researchers concerning the ERC's institutional procedures, their strategies of dealing with them, and resources of social support when having successfully overcome potential hurdles. In contrast to notions of statistical representativeness, the generalizability of results obtained by qualitative interviews is based on methodically controlled procedures of theoretical sampling, as coined by Grounded Theory. Grounded Theory is interested in the variation of concepts and their relations, proceeding by theoretical comparison of typical in contrast to

2 Focusing exclusively on Starting and Advanced grants, we excluded Interdisciplinary, Consolidator, Synergy, and Proof of Concept grants that were awarded by the ERC as well.

deviant cases or ‘far-out’ comparisons (Corbin and Strauss 2008, p. 65ff.), in order to enhance the scope of the theory thus generated. Here we were particularly interested in the special cases of female top researchers that, despite being less likely both to apply for and to get approved an ERC proposal, have successfully performed in that competition. Taking literature on interviewing elite scientists into account (Zuckerman 1972; Laudel and Gläser 2007), we asked grantees to reconstruct how institutional conditions of research and their intellectual productivity have influenced each other in their careers. We did not actively raise questions on gendered issues, in order to prevent a suggestive interview style; only in case explicitly gendered incidents were reported or foreshadowed we asked them to elaborate the point. Though we are aware of a strong stream of feminist methodologies (Reinharz 1992), in analysing interview transcripts we applied Grounded Theory methodology (Glaser and Strauss 1967; Charmaz 2006; Corbin and Strauss 2008). The latter supported our conceptual interest in career trajectories and in investigating strategies of researchers in resisting perceived structural obstacles and discrimination. Recall that interpreting action strategies of agents is at conceptual core of Grounded Theory’s axial coding paradigm (Corbin and Strauss 2008, p. 195ff.) that has also led our choosing of interview results reported here. Concerning Grounded Theory’s notion of theoretical sampling, from each discipline we interviewed four grantees, trying to arrive at as much variation as possible in terms of institutional and country contexts, while keeping the scientific specialty mostly stable. The ratio of Starting and Advanced grantees interviewed has been 2:1; interviewees were affiliated to public universities in eleven European countries. The majority of female researchers we spoke with, were younger and more frequently from a middle- to upper-class stratum when compared to their male disciplinary colleagues; thus, both a class and an age bias apply. In addition, female scientists were more frequently migrating from one country to another on a permanent basis, without returning to their country of origin.

3 The ERC Gender Equality Policy

Since its emergence in July 2008, the Gender Balance Working Group of the ERC, chaired by Isabelle Vernos, has launched two Gender Equality Plan policy papers for six-year program periods each (ERC 2010, 2014). The Working Group has been founded on behalf of the ERC Scientific Council, in order to monitor gender equality throughout the entire institutional process. The first gender equality plan, applicable from 2007 onwards, is explicitly based on the view that women and men are ‘equally able to perform excellent frontier research’ (ERC 2010, p. 2). Its aim is to

‘take into account and confront structural gender differences, so that the ERC can fulfil its mission to support excellent frontier researchers across Europe, irrespective of nationality, gender or age. The gender equality plan takes its starting point in the principles of ‘gender main-

streaming and gender balance' with the focus kept on excellence. By gender mainstreaming is meant that *each* process within the ERC – from creating awareness about the ERC to grant signing – is designed to include *both genders*, giving *equal opportunities* to men and women.' (ERC 2010, italics in original)

The first sentence quoted above reveals that the existence of structural gender differences is regarded as hindrance for implementing the 'universalism' norm (Merton) on which scientific activities are based. Presupposing the acceptance of the universalism norm both logically and in content, the second sentence nevertheless remains a bit ambiguous. It can be interpreted to regard the full realization of equality, by means of gender mainstreaming and gender balance, as a precondition for a successful implementation of the ERC's 'excellence' criterion. More critically, it might also be read as relativizing gender objectives in the light of the excellence criterion. In addition, process-orientation and equal opportunities for both genders are specified as constitutive for gender mainstreaming, also pointing to the legal basis of gender balance as part of the Seventh Research Framework Programme. What follows from that general definition of gender mainstreaming is a specification of objectives and measures to arrive at these, a) addressing awareness raising for achieving a more balanced proportion of applications; b) identifying potential bias in evaluation procedures and monitoring effects on scientific careers; and c) achieving gender balance among peer reviewers and decision-making bodies such as the Scientific Council, 'with a minimum participation of 40% of the underrepresented gender.' (ERC 2010, p. 2). Concerning the latter, it is acknowledged that this may take time, depending on the overall gender proportion in particular scientific fields, and requiring the formulation of panel specific goals. The first Gender Equality Plan has been adopted by the Scientific Council in December 2010, the Scientific Council and the ERCEA Director are responsible for the implementation of the gender policy objectives and actions (ERC 2010).

The second gender equality plan (ERC 2014a) has largely re-iterated policy objectives and strategic measures, but includes a short paragraph on objectives identified in the Horizon 2020 program, such as gender balance in research teams, decision-making, and integrating gender analyses in research content. On the one hand, it intends to 'embed gender awareness within all levels of the ERC processes … while keeping the focus on excellence' (ERC 2014a, p.2). On the other hand, it formulates the specific aim that 'the proportional representation of genders should be at least equal to that of the applications by the underrepresented sex in the Advanced grants in the same area, aiming at the level of 40% in the future' (ERC 2014a, p.2) It is encouraging that the ERC sets new normative guidelines concerning gender policies, and it is clear that reducing significant gender imbalance in procedures and decision-making bodies takes some time. Here we rather present and discuss some empirical results on the status quo that may tell us how and to what extent ERC gender policy objectives have been realized since 2007.

At the end of the first program period, the ERC communicated data on the existence of both a country-specific gender application gap and approval gap (Rabesandratana 2013; ERC 2013).

Successfully submitted proposals by female applicants reached only 85% of the approval rate among males, remaining relatively stable since 2007 (ERC 2013). In addition, it was found that the gender approval gap apparently did not correlate with women's participation in evaluation panels, 'suggesting that increasing the number of women in the panels will not be a 'quick fix' to equalize the success rates of men and women.' (ibid.). ERC Statistics indeed suggest that among Starting Grants 30% of all applications come from women, whereas only 25% of the grants go to them (ERC 2014b). Among Advanced Grant applications 15% are from women, and 13% of all grants go to them. Unfortunately, we do not have access to more specified data on female applicants. However, we can rely on data indicating women's presence among the eligible pool of potential applicants. When contrasting application rates with these data, we find that across countries and disciplines in 2010 about 45% of university staff at level of first postdoc position and about 20% of professors affiliated to universities were women[3] (Commission 2012, p. 86ff.; Kreckel 2014, p. 242ff.). Thus, we estimate an unexplained gender application gap of about 15% among Starting and about 5% among Advanced grants because potentially eligible female researchers in fact did not apply.

Concerning the gender gap between applied and approved proposals, there are significant disciplinary disparities and differences between cohorts or ERC grant types too, indicated by the following table.

Table 1. Gender Approval Gap in applied versus funded ERC proposals 2007-13, by domain, in per cent.

Domain	Starting Grants			Advanced Grants			All ERC calls		
	applied	funded	Gender Gap	applied	funded	Gender Gap	applied	funded	Gender Gap
PE	20	20	0	8	7	1	17	15	2
LS	35	24	11	17	15	2	30	21	9
SH	42	38	4	24	21	3	36	31	5
All SG	30	25	5	15	13	2	25	20	4

PE: = Physical and engineering sciences; LS: = Life sciences; SH: = Social sciences and humanities.
Source: ERC Gender Statistics 2014b, own compilation.

Data in Table 1 represent the proportion of women among all researchers having applied for respectively having got funded a grant: Among all applicants for a Starting grant in the physical and engineering sciences (PE), 20 per cent were female, and among the authors of approved

3 Respective female proportions in the natural and engineering sciences for 2010 were 32% females at level of first postdoc position and 11% at professorial level (Commission 2012, p. 86ff.).

proposals, females were 20% too. While a gender approval gap thus seems to be inexistent in the natural sciences, both among young (Starting) and established (Advanced) cohorts the gap is significant among young life scientists (LS). In the social sciences and humanities (SH), we identify a gender gap both among young and established researchers. When success rates of men and women are compared from 2007 till 2013, cumulative data on all domains (ERC 2014b) show that the approval gap among Starting and Advanced grantees have been around 2-3 % per call year, resulting in a lower propensity of women of about 15-20% to have their proposal approved. This is independent of the actual approval rate, which is 10% for male Starting grantees and 15% for male Advanced grantees. Cumulative data show a relatively stable gender gap by domain, low in the natural and high in the life sciences, with the social sciences and humanities somewhere in between (ERC 2014b). In a country comparison among young researchers, the gap in success rates is smallest (0-1%) among applicants from the Netherlands, United Kingdom, and Finland; in most other countries of our sample it is about 3-5% in favour of men. Corresponding data for established researchers show that female applicants are more successful than their male colleagues in Germany, Austria, the United Kingdom, Hungary, and Finland; among the remaining countries the gap is between 2 and 6% in favour of male applicants, with 10% biggest in Switzerland (ERC 2014b).

Under the working assumption of the ERC gender equality plan that both women and men are equally capable of doing excellent scientific research, we cannot explain that gap; so, which other explanations may be possible? We suggest two provisional explanations, addressing gender bias as result of a) those actors evaluating applicants, or of b) the social construction of 'excellence' criteria as implicitly gendered ones, embedded in social contexts that systematically disfavour female researchers. While the former assumption might apply independent of the actual gender of the respective panellists involved, it can hardly be scrutinized as such; however, we may generate data on gender (im-)balance among ERC panellists and external reviewers. The latter assumption might at least partially be investigated by in-depth interviews with grantees, interpreting their perceptions of the application and approval process.

Findings from quantitative data on the universal set of panellists between 2007 and 2013 suggest that roughly a quarter of them is female. While the number of panellists for Starting respectively Advanced grant programs with a 54:46 ratio is comparable, 27% of the former, but only 12.5% of the latter are female. Panel Chairs amount to only 4% of all panellists, with a female proportion among them of 20%. When differentiated per domain, horizontal segregation per field applies: 25.5% of all panellists are in the social sciences and humanities, and 31% of them are female; 36% of all panellists are in the life sciences (27% of them female); 39% of all panellists are in the physical and engineering sciences (18% of them female). Thus, horizontal segregation by field contributes to a high overall proportion of male panellists, since exactly in those disciplines that are quantitatively strong by number of panellists, the share of females is low. In our sample of disciplines the proportion of female panellists is 27% in economics,

36% in sociology and adjacent social scientific disciplines, 28% both in history and in applied biotechnology, 27% in economics, 17% in the branch of synthetic chemistry, and 15% in the physics-branch of fundamental constituents of matter. So, while the current proportion of females in some disciplines such as sociology is rather close to the formulated 40% objective of participation, for other disciplines reaching that objective remains ambitious. Table 2 shows that while the absolute number of panellists has steadily increased, the relative female share across all scientific domains with approximately 23% remained relatively stable.

Table 2. Female shares among ERC panellists, 2007-13, in per cent.

Panellists	2007	2008	2009	2010	2011	2012	2013
Total n of panellists	207	296	606	651	694	682	623
Female panellists, %	23	19	21	23	23	23	23
Female chairs, %	24	12	24	12	19	22	26

Note: The number of panellists includes chairs as well. Data is counted on the basis of their last panel membership.
Source: ERC Panel Data, own calculations.

Neither the female proportion among chairs nor among panellists has strongly changed over the years, as this has been defined as a goal in the gender policy documents twice towards a 40% female proportion. While an increased female share among panellists might indeed prove unimportant concerning potential gender effects in the evaluation process itself, nevertheless it reflects that advocates of the ERC's gender policy may encounter some persisting hurdles for realizing their self-defined objectives in a not too distant future.

4 Female Top Researchers: Their Action Strategies and Resources of Social Support

In conducting interviews with 24 eminent ERC grantees, 10 of them female, we were interested in supportive resources and action strategies of those 'deviant cases' who proved to have successfully overcome empirical evidence for structural obstacles for women in science. We asked them how they have experienced the application and evaluation process and what they have learned from it, since some of them applied for several times before their proposal has been approved. Not all of the grantees were significantly feminist in their attitude but articulated ambivalence towards promoting gender issues in science. One of the unintended results of gender policies might be that female researchers, in case they are upwardly mobile, have to take into account to be addressed as 'quota woman' by colleagues and have to deal with the imputation of being promoted because of their gender, not because of their competence.

Most incidents of discrimination reported can be interpreted as gendered variants of well-known 'cooling out' strategies in higher education (Clark 1960): Specific groups of students or researchers are intentionally discouraged from taking higher aspirations by university staff, the latter anticipating that only very few among students can successfully make a career. Females often reported having perceived institutional discrimination in distinct career phases when showing aspirations towards upward mobility and asking for more scientific autonomy: for being allowed to build their own research team, to lead an important project, or for being encouraged to apply for professorship. They experienced discouragement not only by bosses and supervisors, but also by university's project officers when being advised in applying for research funding. They also reported having been insufficiently informed when designing a project budget: Several of even experienced female researchers asked for much less money than they would have needed to complete their project in time. In addition, 'cooling out' may start significantly prior to university enrolment, since most discouragement of females in the natural sciences takes place in secondary school. This observation of a female scientist fits results reported in recent studies on gender in education; several countries, such as Austria, disadvantage females in completing their university studies in all fields of science (OECD 2014, 2015).

We will not describe the details of institutional discrimination female researchers reported here, since readers presumably will not be surprised about these. Rather, we are interested in the female researchers' strategies in order to come to terms with what they have experienced as discrimination. These can be characterized as: resisting highly gendered normative expectations in the workplace in favour of enhancing their scientific autonomy; performing strong international mobility behaviour at early career stage; enjoying support in dual career couples with co-scientists; and making effective use of institutionally provided advisory structures, often exposing themselves more than once to the ERC application and evaluation procedures prior to successfully performing in that grant competition. These action strategies and resources of support were significant for arriving at permanent positions as well, although the speed and form of the grant impact on career trajectories varied according to country and institutional context, depending also on researchers' vulnerability caused by additional factors of potential cumulative disadvantage.

First, these women resisted reacting according to normative expectations ascribed to them because of their group membership, to assist, support and help others, instead of developing scientific independence themselves. Their ambitions in gaining intellectual independence have been institutionally blocked in various ways, but they opposed acting according to gendered behaviour expectations, sometimes even risking conflicts. In their action strategies, they rejected what has been called a 'bitch-avoiding phenomenon' (Ranga et al. 2012, p. 23): When pursuing their own professional interests, women implicitly are required to break with normative expectations assigned to them because of their gender; however, they have to take into account eventually being negatively viewed as uncooperative scientist. Conversely, the same behaviour

when performed by male scientists is likely to be assessed in more positive terms, since cultural norms towards males emphasize competition, autonomy, and toughness.

Second, female researchers could significantly alter their careers, competence and also confidence, by developing international mobility at early stage, in particular towards Anglo-Saxon contexts. Mobile researchers interpreted 'cooling out' practices as part of culturally disadvantageous environments, disfavouring young and female researchers, in contrast to Anglo-Saxon research cultures. The importance of international mobility particularly in early stages of one's career has frequently been underscored. Early decisions turn out to become significant much later as a precondition for outstanding academic success. Concerning the complex relationship of gender and mobility, we arrived at ambivalent results: On the one hand, permanent migration to another country seems to be a female experience, mostly from Southern and Eastern Europe to Western Europe. Among men interviewed, those internationally mobile seem to more frequently return to their country of origin and take a university post there. On the other hand, mobility decisions unfavourable in terms of careers, but caused by social obligations in caring for others, have been reported more frequently by women too. The argument has not as frequently been addressed by male scientists, which may be an outcome of different opportunity structures towards mobility, but also a result of not telling the interviewer the whole story.

Third, we found a very high proportion of double career couples among female scientists, often having a partner working in a similar field of science. It can be speculated that female scientists, who in their professional choice sometimes break with their ascribed gender role, may reduce resulting social costs of such decisions, in case they successfully foster partnerships with co-scientists. The latter not only mentally and emotionally supported their careers, but also by providing access to infrastructure, networks, and temporary employments in external research teams outside university. On the other hand, these co-operations resulted in women's higher vulnerability in being perceived by others as an equally scientifically competent, intellectually autonomous, and successfully publishing author. These women have to be prepared that their behaviour is evaluated against at least two, sometimes contradicting standards. Seasoned female scientists therefore recommended to make one's mark alone as an important career condition; only after having done so, a dual career couple eventually may appear together on the academic scene. In fact, most women we talked with had children too. Unconventional career paths caused by having children at very early career stage did exist as well. Two scientists became mothers while still studying. That even women in unfavourable starting situations are capable of developing strategies leading to successful careers should be kept in mind when we talk about developing institutional strategies for reconciling work with private life. Since having dependents and taking career breaks may be regarded as stigmatizing, usually these are not mentioned in the Curriculum Vitae, but more often in conversations with researchers.

Fourth, once a self-confident woman has successfully survived all self-selective mechanisms of being 'cooled out', she nevertheless can fail in the panel selection process. We have

talked with several researchers that have tried more than once before succeeding; seemingly, hard-headedness may be one of the skills a female scientist should cultivate. Her likelihood to re-apply and succeed in that contest does also depend on university's supportive structures in writing proposals, project budgeting, interview training, and trying again in case one has failed. Relevant information seems to be differently distributed both across countries and universities.

How much did the ERC grant help female junior scientists to arrive at a permanent position*?* Well, the options for taking action were dependent on the general competitiveness of the country and university; their individual ability to exert competitive pressure by another job offer to re-negotiate an attractive post or a tenured position; and the cumulative (dis-)advantage experienced not only because of their gender, but also because of scientific migration or other social factors. Concerning the latter, it very much depends who migrates from which home to which destination country, who possibly returns, and with which obligations involving partners and children as well. Those having permanently migrated to a foreign country, those having small children, and sometimes those with a partner employed at the same department, occasionally are less able to establish themselves as quickly as others in a tenured position. Two out of ten women are still on temporary contracts. They are waiting in the wings for being offered a tenured position only when the ERC project is completed, consciously anticipating the possibility that this may not happen either, despite their outstanding achievements in terms of 'European excellence'.

Conclusions

In this paper, we started from assuming paradoxical effects of implementing equality policies in European research funding for 'excellence'. The thesis has been that gender mainstreaming principles in research policies prove relatively ineffective in result when implemented in institutional contexts pre-structured by mainly market-driven, technically defined, implicitly gendered notions of scientific excellence. Because gender mainstreaming advocates have to design policy objectives and measures to strategically fit pre-defined contexts in order to be accepted by its relevant actors, we assumed it as unlikely that the institutional status quo may be changed in that way. Though in this paper we were far from empirically scrutinizing that thesis to the full extent, we presented exploratory findings on strategies of female scientists, despite experiencing structural disadvantages indicated by the gender approval gap, that were success in the ERC grant competition.

Quantitative data have shown that despite the relatively specified characterization of objectives, strategies and measures in gender policy documents, its actual implementation both in ERC structures and among the larger scientific community remains difficult and of only limited effect. Since 2007, both awareness raising and monitoring activities have helped to make vis-

ible gender gaps and potential bias in the application and approval procedures, and certainly they should be continued. Nevertheless we doubt whether they are sufficient for initiating more profound structural change in that area. Even despite the fact that improving women's presence in gatekeeping positions in science has been an early and persisting concern of research for the European Commission, our data do not show that women's presence among ERC panellists has changed. Simultaneously, we acknowledge that gender balance or imbalance among panellist does not necessarily correlate with gendered outcomes of evaluation procedures. Nevertheless, given still increasing female proportions among scientific staff across all domains, their steady underrepresentation among ERC grantees and panellists indicates persisting dynamics of cumulative disadvantage caused by institutional discrimination in science.

Qualitative data from in-depth interviews with scientists allowed insights in processes of perceived discrimination, but also in resources of social support and action strategies of top female researchers that proved successful in the ERC grant competition. Their ability to resist gendered normative expectations incompatible with upward mobility requirements, their strong international mobility behaviour, and also social support offered by partners and institutionalized structures have contributed to favourable conditions for pursuing their careers. Some of them have even shown the willingness to expose themselves to a tough ERC competition for several times. These female top researchers may act as role-models for others in the European scientific community and beyond, as somehow very special cases in establishing European excellence.

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