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The gendered nature of independence in the context of research funding and excellence

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Part of…

Gendered dimensions in ERC grant selection – gendERC

Project Information

GENDERC

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Defining excellence

Excellence ~ ability to achieve outstanding and innovative results
~ highest level of scientific quality and performance
~ meritocracy

Measurement of excellence:

- Publications (citations, impact points…)
- Patents
- Memberships in scientific boards, societies…

Evaluation of excellence deeply interwoven with the social identity of the reviewer (Lamont, 2009)

Gender equality perspective: reproducing the hegemonic male order of academia

The gendered nature of excellence

1. Masculine norms dominate the science system:
   The ideal scientist =
   - Devoted entirely to research
   - Spending unlimited time at work
   - Free of demands from family/community

2. Habitus based on competition and performance more highly valued
   - Stereotypically masculine characteristics: analytical competence, creativity, objectivity, rationality
   - Stereotypically feminine characteristics: interpersonal skills, collaboration → considered less

3. Selection processes are influenced by social identity processes
   - Favoring ECRs who are similar to the decision makers

The gendered nature of excellence

4. International mobility
    - Female researchers are generally less mobile ~ care responsibilities
    - Tacit criterion

5. Excellence neglecting power of gate-keeping and networking
    - Supportive (male) networks take male scientists‘ competence and excellence for granted
    - Women have a harder time to gain access to networks, have to invest actively
    - Informal, closed recruitment procedures favor male ECRs (Van den Brink et al., 2006)
    - Female life scientists need a higher involvement in professional networks than male colleagues (Sabatier, 2006)

The gendered nature of excellence

Gender bias in the application of criteria of excellence (Correll 2007)

- Benchmarking bar is higher for women
- Evaluators inquire performance and merit of women more throroughly
- Weighting and shifting criteria to support favored ECR
- Conflicting judgements of competence and likability for women but not men

Independence as an element of excellence

- Traditional excellence indicators ~ past achievements
- Excellence indicators ~ potential?
- Independence from former supervisor
  ~ autonomous publication record

- Quantitative independence indicator for ERCs (Besselaar et al. 2012)
  - Social independence from a former supervisor (own co-author network)
  - Cognitive/thematic independence
  - Novelty/quality of the research focus

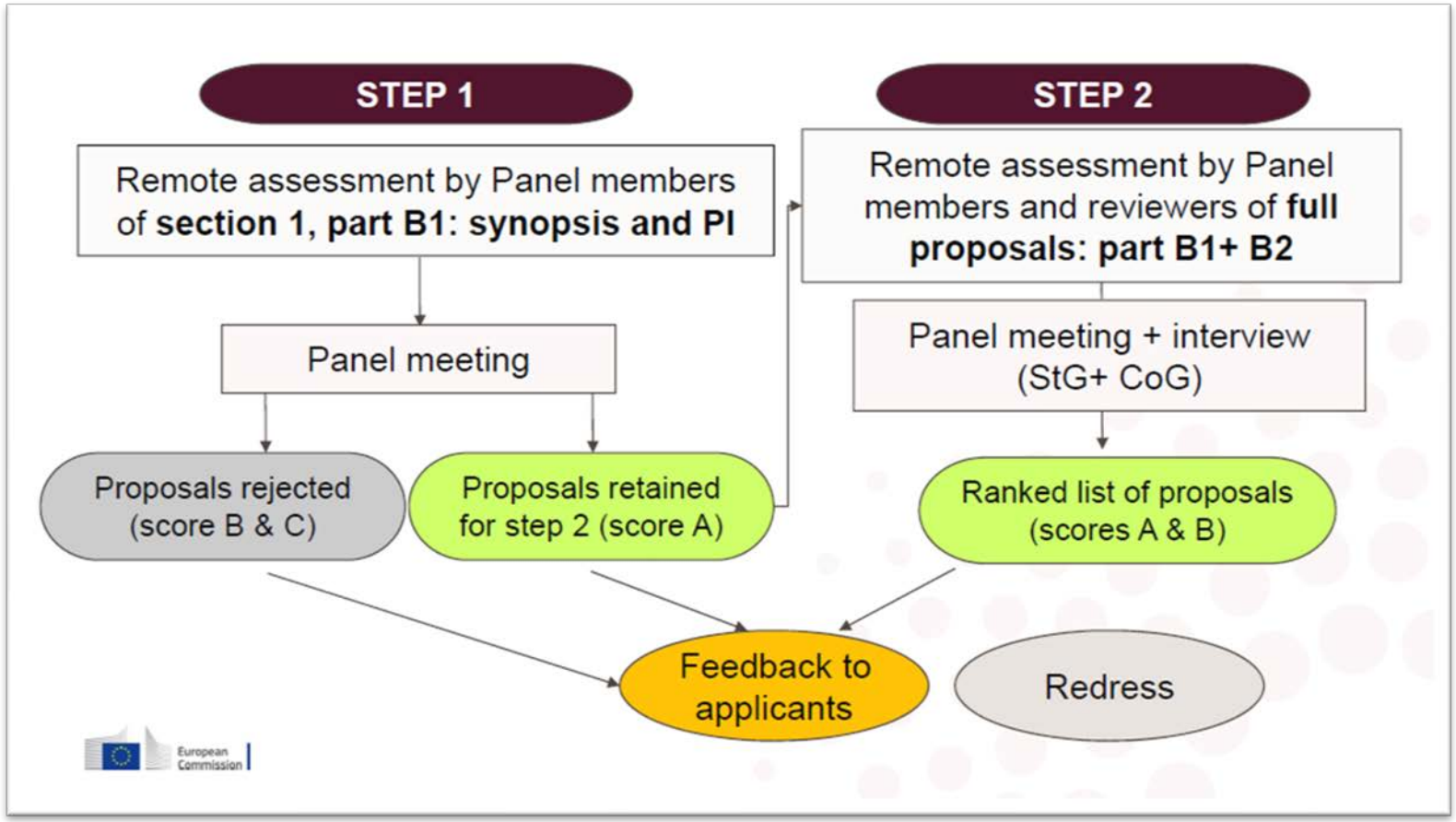
Background: ERC Starting Grants

- 2-7 years after PhD
- Max. €1.5 Mio
- Decisive criterion = excellence

- Different success rates for female/male applicants :

  2014:
  Life sciences (-3%)
  Physics, Engeneering (+2%)
  Social Sciences & Humanieies (no difference)

Background: ERC Starting Grant Application Process



- Reviewers from different backgrounds (nations, institutions, research communities) need to agree on collective norms
- Views on ideal ECR likely differs

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Background: ERC Starting Grant Application Process

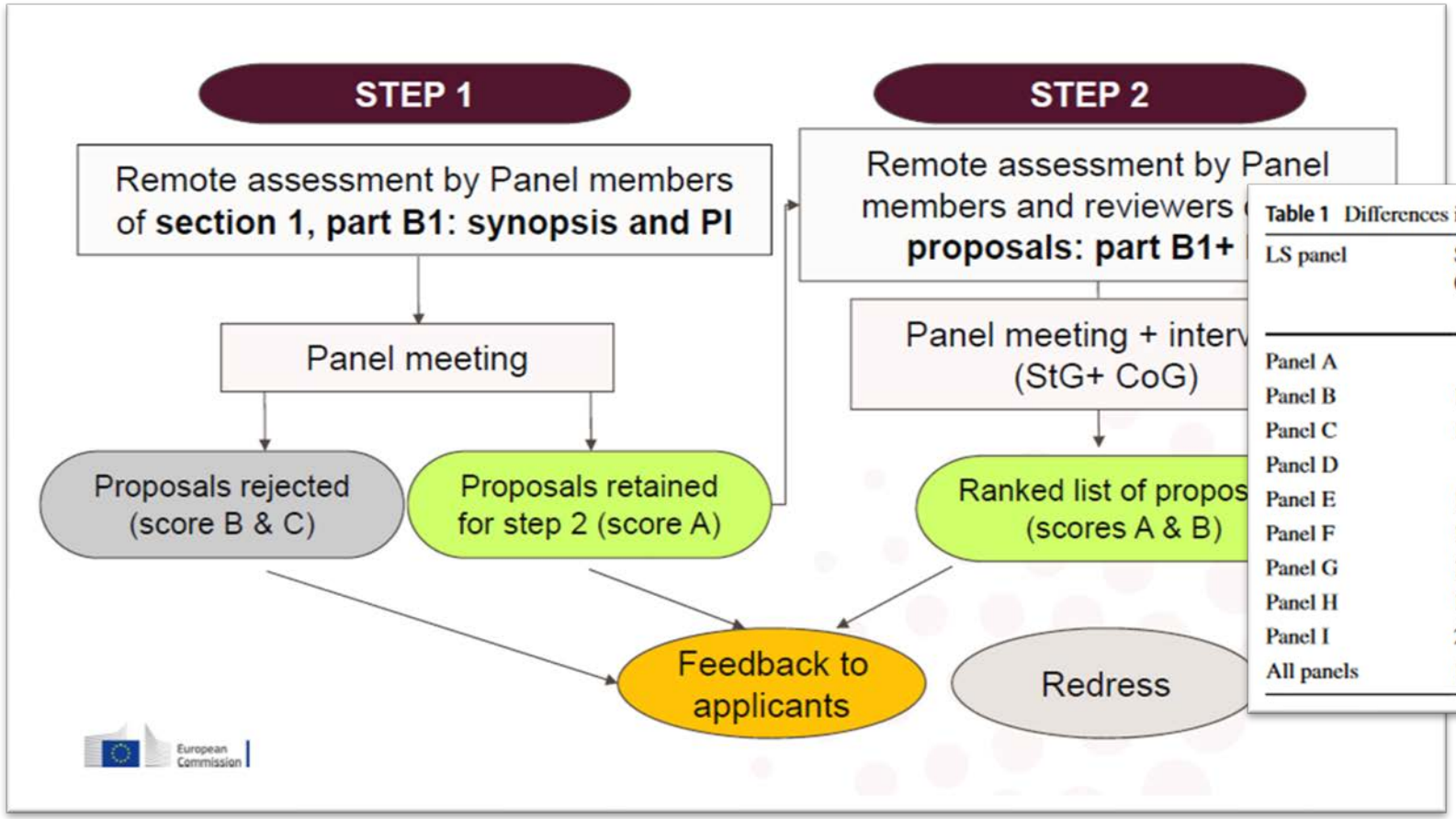

Table 1 Differences in success rates in Life Sciences panels by sex, ERCStG 2014

LS panel	Success rate women (in %)	Success rate men (in %)	Success difference (success rate of women minus success rate of men; in %)
Panel A	7	21	−14
Panel B	10	17	−7
Panel C	11	17	−6
Panel D	9	13	−4
Panel E	14	17	−4
Panel F	12	15	−3
Panel G	13	15	−2
Panel H	14	14	±0
Panel I	21	10	+11
All panels	12	15	−3

-6% -2% -3% total

Interviews

- Semi-structured interviews with 32 reviewers (18 male, 14 female) from the 2014 life science panels
- Incl. 3 panel chairs

Interview topics:

1) Understanding of being a reviewer
2) Criteria and definitions they personally apply when assessing applicants‘ excellence
3) Challenges and contradictions they faced in panel negotiations

Research questions:

1. How are different perceptions of ECRs included in the assessment?
2. How do reviewers understand/evaluate independence?
3. Are the different dimensiones intertwined with gendered images and gendered practices?

-> Grounded theory approach

Grounded theory

- Inductive generation of theory
- No predefined categories or hypothesis

1) Two researchers read the interview transcripts repeatedly, identifying all parts that explicitely or implicitely refer to **independence** and **dependence**

2) Open coding procedure: descriptive codes were assembled, data summarized into categories

3) Identification of concepts behind the categories

„Through different forms of structuring, restructuring and discussion […]“

Result: inductively generated dimensions of independence

Results - topical dimensions of independence

Table 2 Dimensions of independence and their notion of gender

Topical dimensions
1. Independence demands distancing from a former supervisor
2. Independence needs to be negotiated
3. Independence is associated with originality
4. Independence is demonstrated by a distinct network
5. Independence requires geographic mobility
Evaluation challenges and practice
1. Independence is problematic to identify in research teams
2. Independence is difficult to judge for juniors
3. Independence is ascribed to male rather than to female applicants

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Topical dimensions of independence and related gender bias

Independence demands distancing from a former supervisor

> I think we really need to encourage the younger researchers to strive for independence and really distance themselves and come to a new level. (…) I think peer research will really suffer if we get this 'inbreeding' in science, which this ultimately will lead to when you work closer with your former supervisor. (Reviewer 12)

> In general, women are publishing longer with their doctoral advisor than men. (…) In my experience women are more content working with someone they already know. It gives them security. Men, on the other hand, strive to break free as soon as possible and make something of their own. (Reviewer 31)

(male reviewer)

Women ~ team-oriented & relying on social ties

Topical dimensions of independence and related gender bias

Independence needs to be actively negotiated by the junior

> The supervisor doesn't want any competition. This competitiveness is still very dominant. And perhaps women think that they don't want to work against their former boss. And men think: 'I will show him!'. Women are perhaps less brutal negotiating [for independence]. (Reviewer 1) *(female reviewer)*

Women ~ less competitive, seeking collaboration & consensus

Topical dimensions of independence and related gender bias?

Independence is associated with originality

> "... if they come from a big lab, you follow what they are doing there, so this is not creative thinking." (Reviewer 16)

Creativity ~ trait of outstanding individuals/geniuses rather than of groups/teams

←→ Creative thinking ~ interactive and collective process
(Paulus 2000; Pirola-Merlo and Mann 2004)

„we can assume that gender does play a role in the evaluation of creativity and originality."

Topical dimensions of independence and related gender bias

Independence is demonstrated with a distinct network

> "She has not really established those collaborations yet … all her collaborations were people who'd been collaborating with her big boss, where she'd picked up his existing network." (Reviewer 1)

Access to existing networks is often limited or more difficult to gain for women:

- Lack of time resources (Schiebinger 2000)
- Lack of support to enter existing networks (Husu et al., 2004)
- Dominance of men in most networks, homosocial similarity (Brink and Benschop 2014; Hearn and Husu 2011)

Topical dimensions of independence and related gender bias

Independence requires geographic mobility

> If someone has done good things in one place and again does good things in another place it is like independent points, showing you this person is better than others that have done excellent things in just one place. You could have the contaminant effect working only in one place with the same people, so that´s an important point in that respect. (Reviewer 25)

"If you are in a new location you will naturally diverge" (Reviewer 3)

Researchers who are not mobile ~ "narrow or lacking curiosity" (Reviewer 24)

> Women don't move as quickly and as long as men to another country to make part of their research there. At the same time, I noticed that some men have never moved out of their university (...). They start their PhD at the same university ... And they also become professors at the same university. And everybody finds that they have an excellent CV. And for women it is sometimes mentioned that she didn't go abroad for her PhD or after her PhD. I think there is a gender bias in the assessment of the applicant's trajectory. (Reviewer 32)

(female reviewer)

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Challences in the evaluation of independence

Independence is difficult to judge for early career researchers

> I think ‘independent’ was also one criterion which I thought was odd because indeed these people come from their Post doc, so one cannot yet evaluate them on their independence, in my opinion. One can say: ”Ok, they have done great work as a Post doc“. And this would mean together with a supervisor. So it would be ”participated in great work”. Yes, that they have done a great job—often in a very good environment. (Reviewer 6)

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Challences in the evaluation of independence

Independence is difficult to identify in research teams

> He says that he was doing only a very small part of that big research and that he was characterizing this or that interaction for three years. So he doesn't know much about other techniques. It doesn't mean that he's coming home being able to start his own research which will be of such high quality to be published in a very good journal. (Reviewer 28)

> "Someone is in an excellent lab in the US (Harvard) and then he comes with a paper as one of many authors. He's somewhere in the middle and it is a Nature paper, so impact 30. (...) he was just doing some very particular research, one part of excellent research. But it depends on laboratory material of course, on infrastructure and how much they are independent in their research. (Reviewer 28)

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Challences in the evaluation of independence

Independence is ascribed to male rather than to female candidates

> You're not less independent as a woman, just because you still co-publish with either your PhD or Postdoc supervisor than if a man would do it. There is no difference. But that is clearly seen upon as differently. And the male candidates come out much better than the female ones in that aspect. (Reviewer 19)

(female reviewer)

> "It is sometimes observed that independence is an issue for women only and Panel members] tend to oversee it for males" (Panel member 12, female).

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Conclusions

Five dimensions of independence

1. Emancipation from the former supervisor
2. Need to negogiate independence with supervisor
3. Originality
4. Distinct networks
5. Mobility

Associated gender stereotypes / gender biases

- Competition and performance – less ascribed to women
- Men are perceived to be more agentic, creative, striving to „break free“
- Negotiation power - more strongly ascribed to men – women less willing to fight
- Women are perceived as more consensus and team oriented, collaborative
- Mobility ~ favors people without additional care/family obligations ~ gendered division of labor in society
- Collaborations and networks – privilege male candidates

Conclusions

Independence is not a formal criterion

→ Different understandings and assessments
→ Room for personal interpretations
→ Independence is constructed individually and applied unsystematically
→ Even the formal guidelines are interpreted individually against the backdrop of own experiences

→ Door open for gender stereotypes, and gender-biased evaluation practices disfavoring women

→ Gender awareness and gender competence marginal among panel members

Challenges of the study

Authors

- were not allowed to observe the decision-making process.
- did not analyze how the sex of the reviewer or panel composition affected gender practices
- did not analyze to what extent reviewers might make use of independence constructions which they are more familiar with than the ERC criteria

No explanation of the difference in female success rates between life sciences (-3%) and physics/engineering (+2%)

„Under the current regime of academic capitalism…“ – objective?

Further reading…

https://www.granted-project.eu/

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Thank you!

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