

# Gender equality plans in research councils

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# Influence of research councils

- Linking research funding to equality, diversity and inclusion (EDI) is a strong lever for change.
- This talk is based on work in Holland (NWO and FOM research councils), and the UK (STFC, EPSRC and Royal Society).
- I will also touch on measures introduced by other councils, such as the ERC.

# My own trajectory

- I was a PhD student with Stephen Hawking in Cambridge.
- Following a research fellowship in Cambridge (mostly spent in Harvard and Princeton!) I moved to Holland.
- My partner and I worked in Amsterdam from 2004 to 2012.
- We then moved to the UK to start a new research centre.



# **Initiatives by Dutch research councils**

# Gender issues in Dutch academia

- In 2005 the Faculty of Sciences in Amsterdam had six permanent female staff - out of around 200.
- Most female academic staff were not Dutch.
- Monitoring of gender data had just started and there was a growing realisation that Amsterdam (and Holland) were below EU averages.



# Examples of issues identified

- 1. Strong culture of Dutch mothers taking career breaks, working shortened hours and getting stuck at assistant professor level.
- 2. Many academic positions were not openly advertised but were filled by “scouting” within academics’ networks.
- 3. The process for universities converting tenure track grants into tenured positions was obscure.



# FOM/v

- The Dutch physics council FOM established a women in physics programme FOM/v. (V = vrouw = woman)
- Led by senior women in Dutch physics such as Petra Rudolf (president of European Physical Society) and Els de Wolf.
- Petra was one of the instigators of the Rosalind Franklin programme for tenure track positions for women in Groningen.



# FOM/v action plan

- The Dutch science community can feel like an extended “old boys network”.
- FOM/v funded network meetings for women in physics across the country - like many others, I was the only woman staff member in my institute.
- The FOM/v meetings included training from experts e.g. writing grant proposals; managing research teams; identifying career goals.
- One of the earliest initiatives on dedicated career development and leadership training for women!



# Grant and fellowship policies

- Application and success rates for grants were significantly lower for women than for men.
- Effect reinforced by feedback loop: lack of success at early career fellowships led to lower success rates throughout the career.
- ***Policy:*** make extra funding available, to fund applications from women placed just below the funding cutoff by panels.

# Impact of policy

- Success rates for women became more in line with those for men.
- BUT men felt resentment: “It’s *twice as hard* to get a grant if you are a man...”.
- Panels placed women just below the funding cutoff to get extra grants - even if the women should have been funded anyhow.
- Quick fix: panels were not asked to reflect on possible gender biases in peer reviews, citation metrics, career opportunities,...

# Fellowship policies

- Holland has a Veni, Vidi, Vici system of fellowships analogous to the ERC starter, consolidator and advanced grants.
- Process for creation of permanent position or promotion to professorship for fellowship holders was obscure - very few women were becoming professors.
- ***Policy:*** Research council made extra funds available for universities to promote female fellowship holders.

# Impact of policy

- The number of female professors in Holland increased following this policy.
- Policy only applied to those who already had permanent positions - in physics and other sciences the main problem was turning the fellowship into a permanent position.
- Institutes would claim to be unable to create a position for a fellowship holder - while simultaneously appointing elsewhere in the institute!

# Policy: dual career and family responsibilities

- FOM/v realised that a large fraction of female physicists in Holland had dual career issues and/or family responsibilities.
- **Policy:** a dedicated fund to support either bridging funds for permanent positions or fixed term positions for those who would otherwise leave academia.
- Example: institute wanted to hire a woman in 2006 but next retirement was not until 2010. Fund covered most of her salary until 2010.
- Example: a woman could not take up postdoctoral position abroad due to caring responsibilities. Temporary position funded to retain her in academia.

# Impact of policy

- Negotiations of funding between FOM/v, institute and university were often complex; this approach would not scale to larger countries.
- Institutes put forward exceptionally strong women for this funding and used the savings made to hire other staff (often men!).
- Use of funds required proactive approach from institutes - women with little local support were not put forward.
- The temporary positions did retain women in academia - but often not permanently, if their career trajectory was not strong enough to be competitive.



# Other policies

- Eligibility for fellowship schemes is based on years of research post PhD; these limits were extended for each maternity leave (before ERC did this).
- Extra funding was added to grants for mothers of babies to take their children on research trips.
- Research council would also allow travel funds in grants to be used for accompanying children, on a discretionary basis.

# Mothers or parents?

- The European Research Council allows mothers 18 month extensions to eligibility for Starting/Consolidator grants for each child, regardless of the length of the maternity leave.
- Some parents argue that this rule is biased towards (biological) mothers, and does not take into account the disruption to fathers' careers caused by young children.
- Most mothers would argue that the disruption to their careers caused by pregnancy and birth is much larger!
- But what is the right balance?

# Sector plan

- The research councils worked together with the Dutch government on strategic expansion of physical sciences from 2010 onwards.
- Wim van Saarloos (now head of Dutch Royal Society) incorporated targets for increased female participation into the sector plan.
- E.g. if a university got five positions at least one had to be for a female: “20 in 2020”.



# Combined impact

- While each of these actions had disadvantages, the combined impact was a significant increase in women in physics in Holland.
- Actions were often driven by instinct and intuition, rather than evidence and research!
- Several Dutch universities introduced tenure track positions for women and Dutch Physics departments are now 10+% women.
- However, retention and career progression for women remains a serious problem: underlying issues of the environment have not been addressed.

# **UK research councils**

# UK versus Dutch initiatives

- The Dutch system put itself into “emergency measures”: the soft quotas in the sector plan; dedicated funding schemes for women.
- There was instinctively a strong focus on networking and mentoring, actions which consistently help minority groups thrive.
- There was in general less effort put into addressing underlying culture and behaviours (e.g. implicit biases in reviewing and ranking proposals) mainly because women in physics had little confidence that this would be effective.
- University policies were often non-existent - many Dutch universities still do not have a process for promotion from assistant to associate and full professor.



# UK versus Dutch initiatives

- Returning to the UK in 2012, I found that most work on gender equality was based around Athena SWAN principles.
- Focus on monitoring data; improving policies in universities; training staff on EDI issues such as implicit bias; providing support for career development of minority groups.
- However, there was little recognition that improved policies and training sessions will not address consciously biased behaviour or serious bullying/harassment.
- Quotas/schemes specifically for women were rarely used: the Royal Society changed its Dorothy Hodgkin fellowship scheme from women only to parents/carers.

# Athena SWAN/Juno awards

- National accreditation for university gender action plans.
- Need to demonstrate detailed self assessment and action plan.
- Can be very effective when leadership team is engaged.
- Can also be a human resources exercise e.g. establishing a policy for reporting harassment usually won't address a culture of harassment...



# UK research funding and gender action plans

- In 2011, the UK Chief Medical Officer, Sally Davies, stated that an Athena SWAN award (silver level) would be required to access NIHR medical research funding.
- This created a huge increase in Athena SWAN as it was anticipated all research councils would adopt similar policies.
- In fact this has not yet happened, not least because of doubts about the value of Athena SWAN.



# UK funding landscape

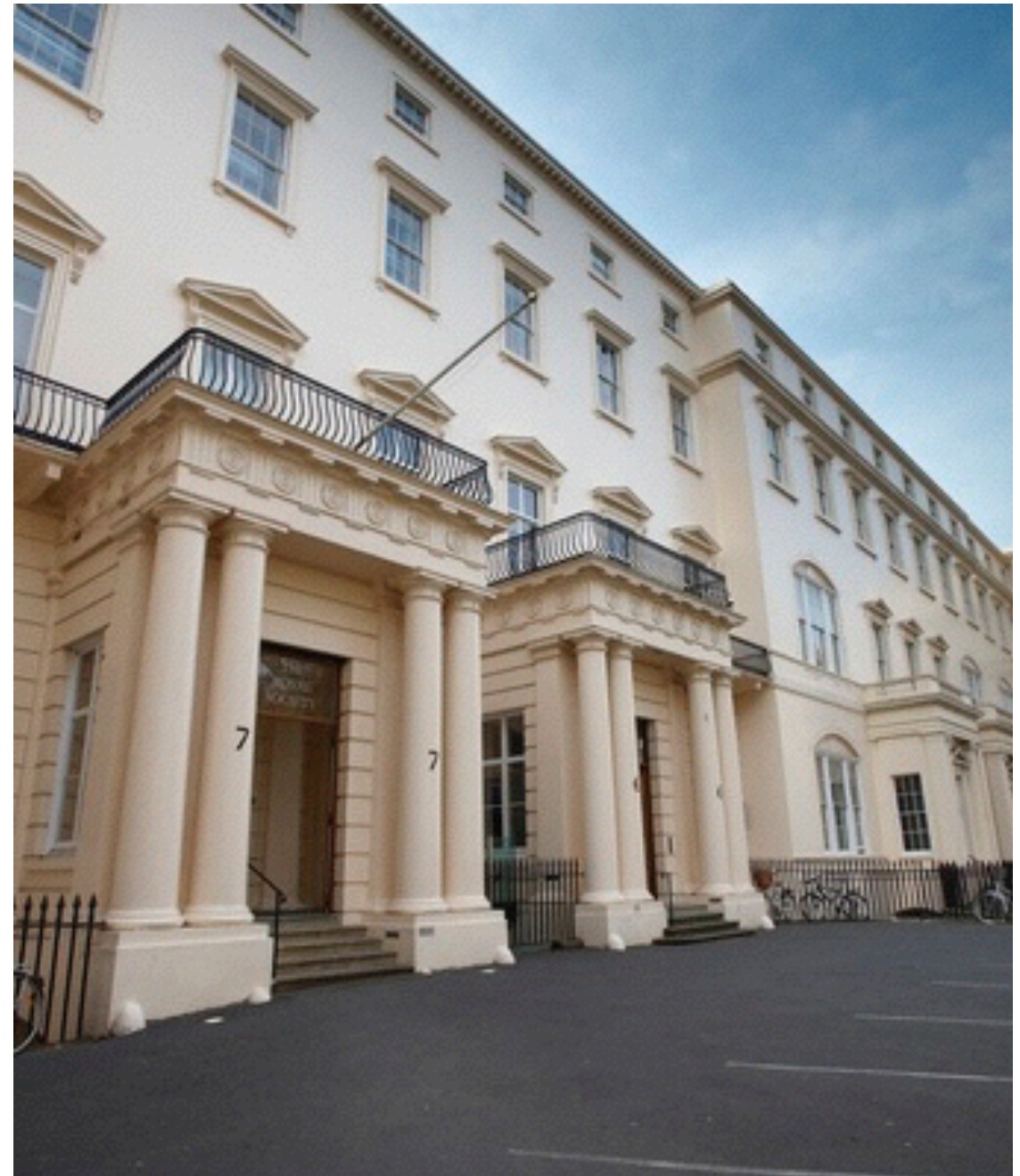
- The UK has seven main research councils, under the umbrella of UK Research and Innovation.
- Research funding is also provided by the Royal Society, the Royal Academy of Engineering, the British Academy and so on.
- There are also research charities such as the Leverhulme Trust and the Wellcome Trust.
- Within this complex funding landscape a variety of approaches to EDI are being explored.

**Royal Society**



# Royal Society

- The Royal Society is the UK national academy of sciences and funds high prestige grants and fellowships.
- Funds 5+3 year University Research Fellowships.
- Tenure track scheme for future leaders, with most holders becoming professors on completion of fellowships.
- Main route for feeding new staff into UK high energy theory!





# Fellowship success rates

	Total appointments	Number of women	% of total that are women
2010	30	10	33%
2011	40	9	22.5%
2012*	37	7	18.9%
2013	41	7	17%
2014	43	2	4.6%

Approximately 20% of applications (post 2012) were from women.

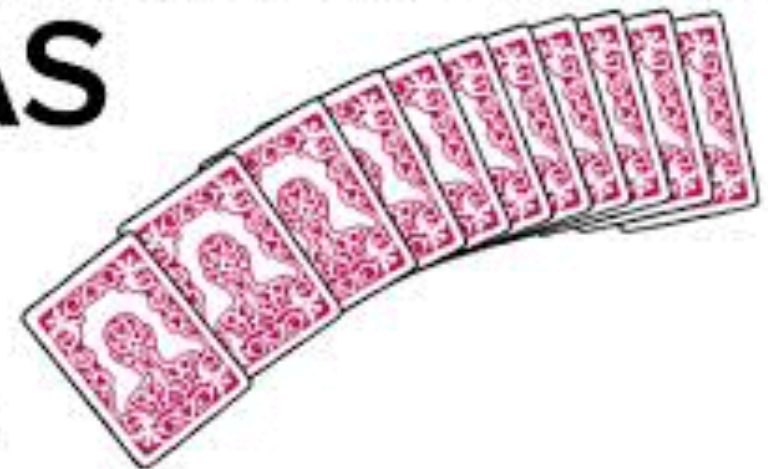
Post 2014 results, procedures were reviewed to identify why female award rate was low.

# Unconscious bias training

- The Royal Society training materials on unconscious bias are now widely used.
- Gender statistics are reviewed at first sift, shortlisting for interview and award level.
- Success rate of women is now in line with application rate.
- This year 14 out of 43 (33%) of fellowships went to women.

**UNCONSCIOUS  
BIAS**

THE  
ROYAL  
SOCIETY



<https://www.youtube.com/watch?v=dVp9Z5k0dEE>

So training for panels and changing procedures have  
removed gender issues....?

# Uneven distribution of women fellows

- On the maths/theoretical physics panel only 1 out of the 10 fellowships went to women.
- The female application rate is around 20% but the award rate averages out at less than 10% women.
- This is the most competitive of all the fellowship panels, with a success rate of 5-8% overall.

*At every stage of the process, this panel looks closely at the gender distribution and finds clear justification for retaining a lower fraction of women.*

# Reasons for lower success rate by women

- Variable levels of support are provided to candidates applying for such fellowships (also ERC) - this can significantly affect the quality of the proposal.
- Some of the very top women don't apply, either because they are not "scouted", because they are not confident about their chances of success or because of dual career issues/lower mobility.



# Effect of research environment

- Such ultra competitive fellowships are awarded to superstars - coming from the top groups in the world, collaborating with world leading scholars.
- Poorer collaboration opportunities; weaker citation statistics; fewer opportunities to publicise work at conferences all affect chances of success.



*How can panels take into account the effects of previous research environments when awarding such highly competitive awards and fellowships?*

**STFC - fundamental physics and large facilities (CERN, Diamond etc)**

# STFC gender data

- The overall success rate for women in STFC is very similar to that for men.
- The vast majority of STFC funding goes into facilities, programmes and group grants.
- Women are a small fraction of the PIs of these large programme and group grants - but these applications are funded at the same level as male PIs.
- The lower number of female PIs has been viewed as an issue for the research collaborations, not the research council.

So STFC has no significant gender issues in its distribution of research funding.....?

*<https://www.ukri.org/files/rcuk-diversity-headline-narratives-april2017-pdf/>*

# Gender data for STFC fellowships

- Universities have quotas on applications for the five year fellowships: there are 160 applications per year for 12 fellowships.
- Overall, around 20% of applications and awards are for women.
- But (as for the Royal Society) this hides huge variations between research fields: many women astronomers but in particle theory the application rates for women are low, with women's success rate much lower.
- The most recent offer to a woman in hep-th was 15 years ago!

# University selection procedures

- The STFC committee leading these fellowships is exploring how universities select which candidates to put forward - qualitative research study!
- Women are scouted less; selection often relies excessively on citation data (violating DORA agreement); preference is given to current collaborators.
- STFC can never completely control university selection procedures: should quotas on applications be dropped? Should universities lose their quotas (rights to apply) for discriminatory practices in selection?

# Small funding schemes

- STFC has a very small fraction of its funding in outreach fellowships, industrial fellowships and so on.
- Gender data was not analysed until recently - but men are cumulatively significantly more successful at these schemes.
- So again the overall balanced success rate within the research council hides issues in some areas.



*What can the council do to influence research culture  
at universities?*

# PhD funding

- STFC funds about 150-200 PhD students per year, through grants distributed amongst 80 departments.
- PhD funding is calculated based on staff numbers and research grant income.
- However, STFC requires departments to be accredited for their training and research environment.
- This is taken seriously: several departments currently have their accreditation suspended...

# Accreditation and EDI/gender issues

- Female PhD students can become isolated, particularly when they have issues with their advisors.
- Accreditation requires a second independent advisor for every student.
- Procedures for dealing with harassment and bullying must be in place.
- Support for progression into academic and non-academic careers must be available to all students.

STFC students are surveyed each year to pick up issues and to check that departments are carrying out the promised actions and training.

*Accreditation (and hence funding for new students) is suspended if necessary!*

**EPSRC: Engineering, physical sciences,  
computer science and mathematics**

# Gender data within EPSRC

- Success rate of women is within 1.5% of that of men.
- However, only around 17% of the research community is female, although 28% of PhD students are female.
- Percentage female PIs for large grants is significantly less than 17%.

# ESPRC gender actions

- EPSRC increasingly trains PhD students in large centres, with projects clustered around specific themes.
- The bidding process for these centres requires new actions to attract and retain minorities.
- However, EDI is graded as a secondary criteria i.e. a reasonable action plan is sufficient.
- Centres will not be penalised financially for not improving representation of minorities.

One should not penalise those who try to improve diversity but don't manage to make much progress.... but this also means that many centres won't try very hard.

*Should EPSRC copy STFC in actively monitoring efforts, with the serious possibility of suspending funding?*



# EPSRC Inclusion Matters



The Inclusion Matters call will fund projects aimed at improving equality, diversity and inclusion within the engineering and physical sciences. Funding of up to £5 million is available to support inspiring and innovative activities which will create a more diverse, fair and inclusive research community.

#InclusionMatters

#InclusionInSTEM



# EPSRC Inclusion Matters

- A call for pilot projects by universities to explore new approaches to EDI, including evaluation of their impact.
- Each project receives around £500k over two years.
- The idea is that successful approaches will be rolled out to the entire scientific community.
- Part of a larger shift to evidence based policies and actions, acknowledging the necessity of culture change and reaching the whole community (not just minorities).

# **Bullying and harassment: studies and reviews by research councils**

# EPSRC report on computer science

“Some colleagues suffer **discrimination, harassment or aggression....**”

“Attitudes, cultures and processes in some departments can result in barriers being established preventing the advancement of some people or that make working in the environment an **unpleasant experience.**”

Understanding the status of under-represented groups in the Information and Communication Technologies

A report to the Engineering and Physical Sciences Research Council

Helen Graham, Robert Raeside and Gavin Maclean  
Employment Research Institute, Edinburgh Napier University

# Wellcome - funding removed for bullying

## Top cancer scientist loses £3.5m of funding after bullying claims

**Nazneen Rahman resigned from post before disciplinary action could be taken**



New tough actions - research councils removing funding in cases of proven misconduct

# Report on bullying and harassment

UK Research  
and Innovation

THE GLOBAL  
INSTITUTE  
FOR WOMEN'S  
LEADERSHIP



Bullying and Harassment in Research  
and Innovation Environments:  
*An evidence review*

<https://www.ukri.org/files/about/policy/edi/ukri-bullying-and-harassment-evidence-review-pdf/>

# Recommendations from UKRI report

- All universities need to put in place preventative strategies as well as responding to incidents.
- A new code of conduct for investigations is being developed and must be implemented by universities.
- Lack of compliance could lead to “increased monitoring and reduced access to funding”.
- Will the sanctions be strict, or will lobbyists get them watered down....?

# Conclusions and outlook

- We are in the midst of a significant shift in research councils - a shift from just monitoring gender data to much stronger actions and sanctions.
- One has to dig deep into the landscape of each research council to uncover issues - equal success rates overall can hide significant problems in particular areas.
- Combination of statistics with surveys/interviews/focus groups, literature reviews etc is crucial.