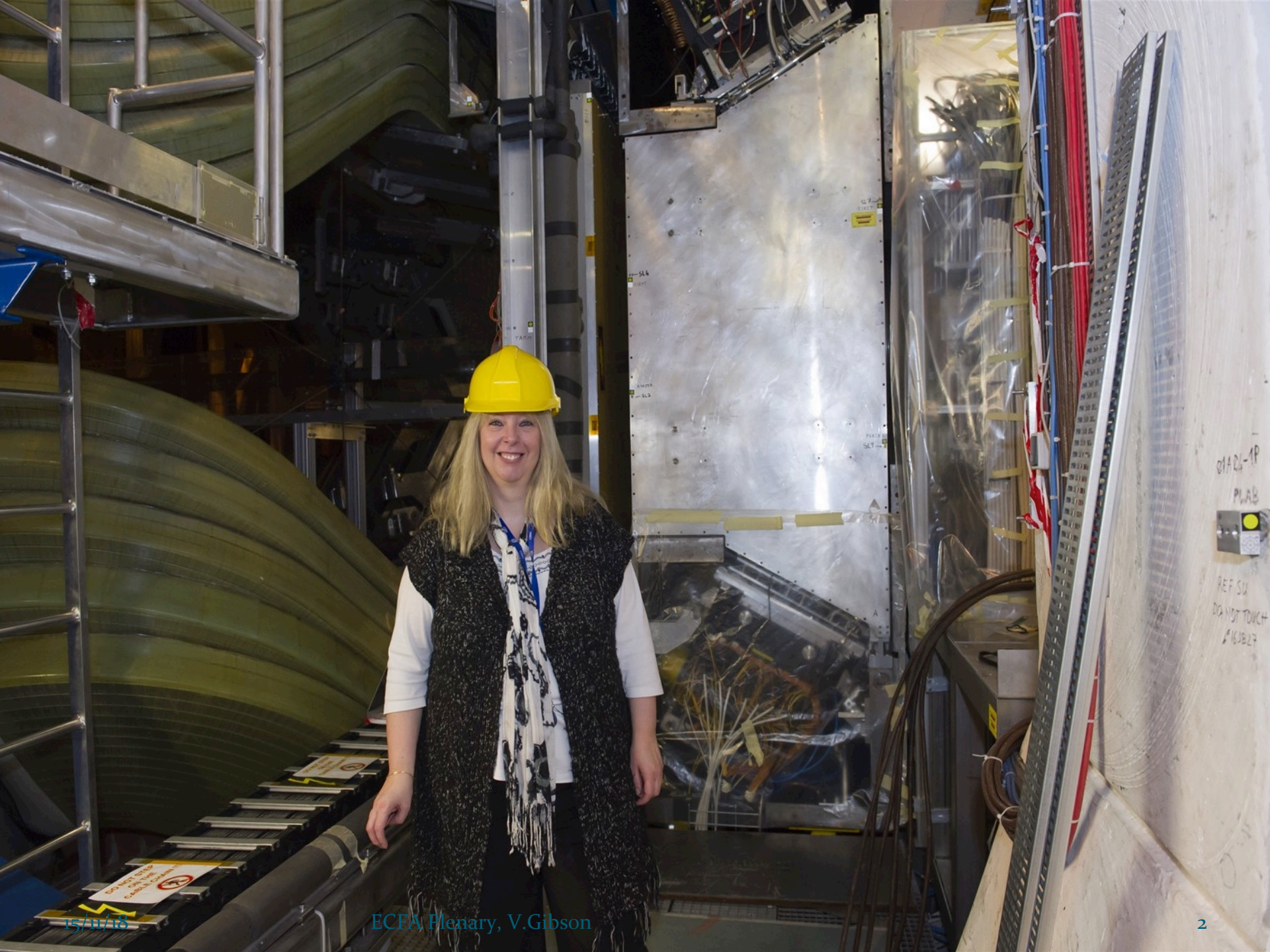


Research Culture & Reward

Prof. Valerie Gibson
University of Cambridge, UK





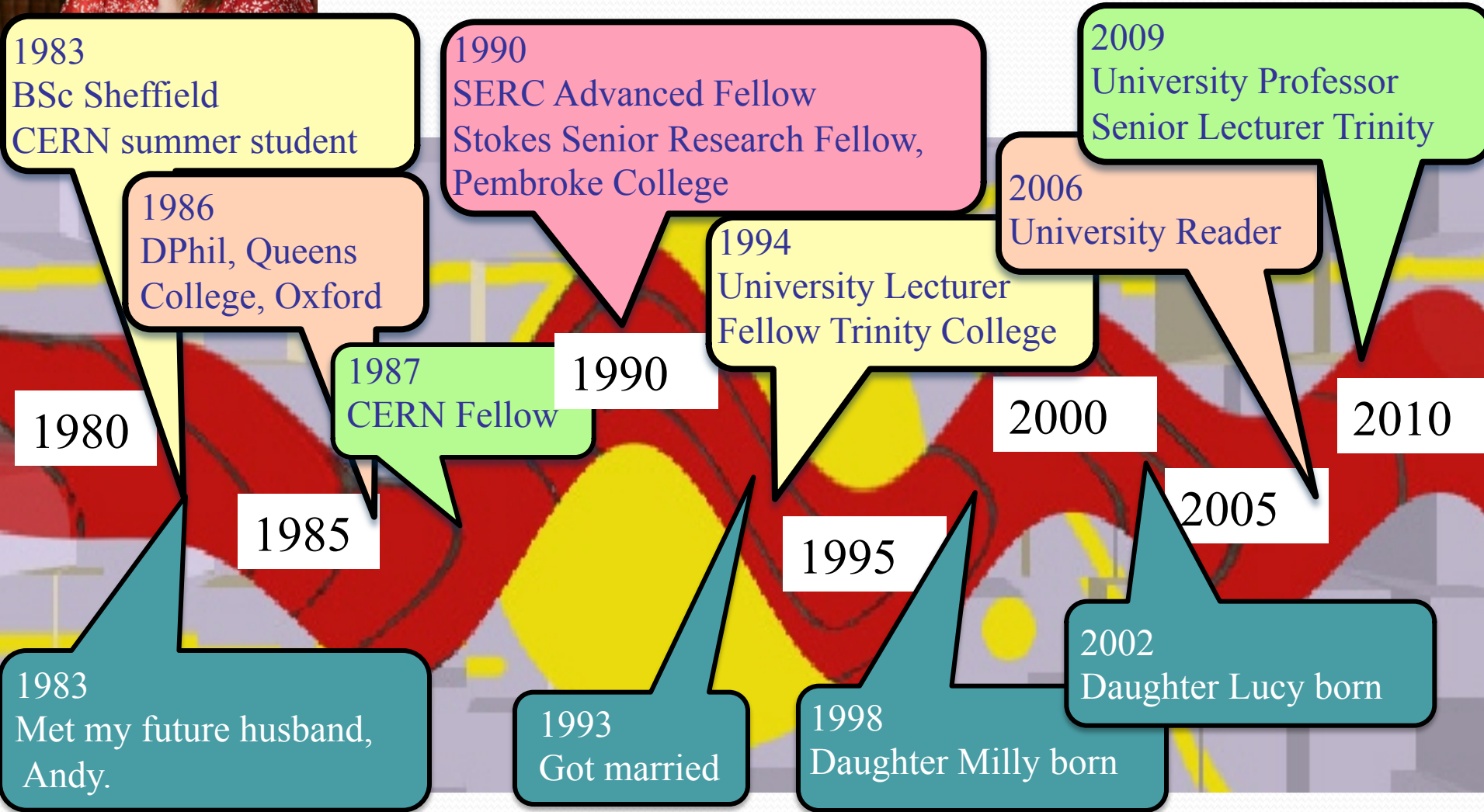
15/11/18

ECFA Plenary, V.Gibson





My Life & Career (so far)



My Greatest Personal Achievement



Research Culture and Reward

Royal Society conference on Research Culture: changing expectations:

<https://royalsociety.org/science-events-and-lectures/2018/10/research-culture-conference/>

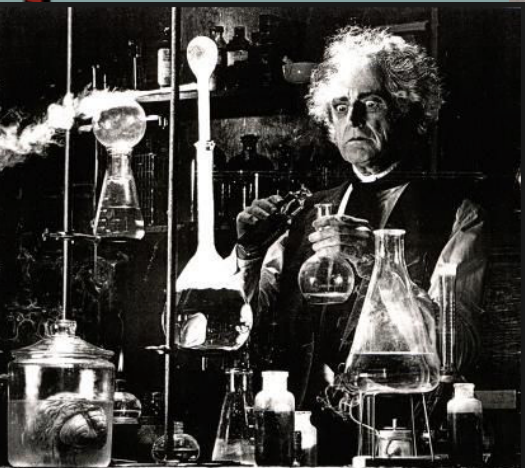
<https://royalsociety.org/topics-policy/projects/research-culture/>



Evidence-led approach

e.g. Nuffield Council report on the culture of scientific research

MAD SCIENTIST



WEDNESDAY, The Daily Mail SEPTEMBER 14, 1933

<p>PSYCHOLOGY Dr. William Drows, Wilda Reader in Mental Philosophy, Oxford University.</p>	<p>PHYSICS Lord Rutherford, Cavendish Professor of Experimental Physics, Cambridge.</p>	<p>BIO-CHEMISTRY Sir Frederick C. Hopkins, president of the B.A.</p>	<p>COSMIC SCIENCE Sir A. S. Eddington, the famous astronomer-mathematician of Cambridge.</p>	<p>PEDIGREES Lord Raglan, President of the Anthropology section of the B.A.</p>
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WHY WE WOMEN FEAR THOSE SCIENTISTS

By SYLVIA BROOK

anything at all to stem the flow of the river of fear which is continually running in our minds—the fear of another war — and soon?

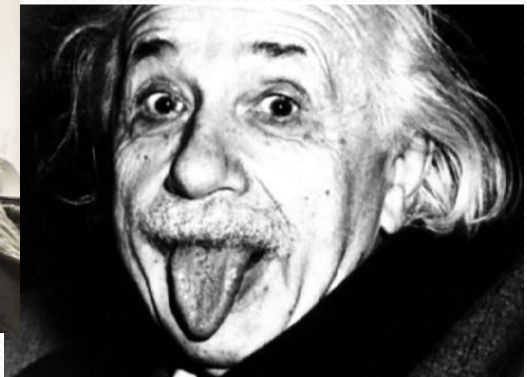
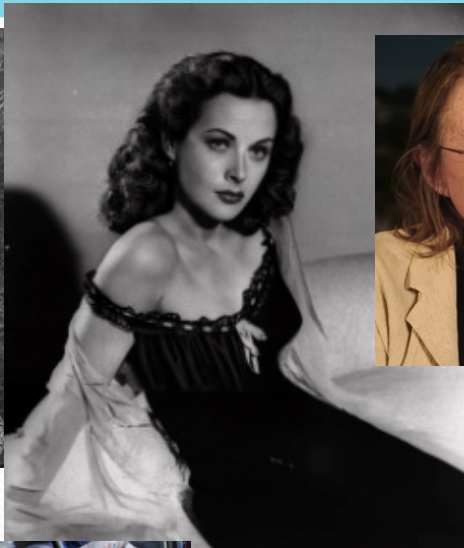
The scientists this year have given us a few really practical and interesting ideas; for example, the psychology of the small child (every parent is interested in this), the recognition of the effects and disabilities of the modern world. The quality of some of the work done, even if it is not immediately of practical use, is of a high order.

Professor Valentine exposed the childbirth safe and comparatively painless drive away fear from the minds of expectant mothers. This is a vital and important question which should have been answered by the scientists some time ago.

Why haven't they given us some helpful information, to about the use of sunlight? It seems to me that despite our brilliant summer we are still in the dark on this important question.

Great...

1933



Research Culture

Social behaviours and normalities associated with valued systems:

Liberal democracy: respect for each other and the rule of law, equality, diversity, inclusion, tolerance, freedom of speech and personal autonomy.

Research: openness, respect, curiosity coupled with skepticism, rigorous methodology, reproducibility and openness to challenge.

All have responsibility to uphold these values.

Research Challenges

Competitive environment

Pressure to publish

- In prestigious journals
- New & exciting results rather than state of knowledge.

Individual rewards, jobs, promotions, prizes

Lack of diversity, full breadth of talent

Grant and report writing

Inadequate mentoring & support

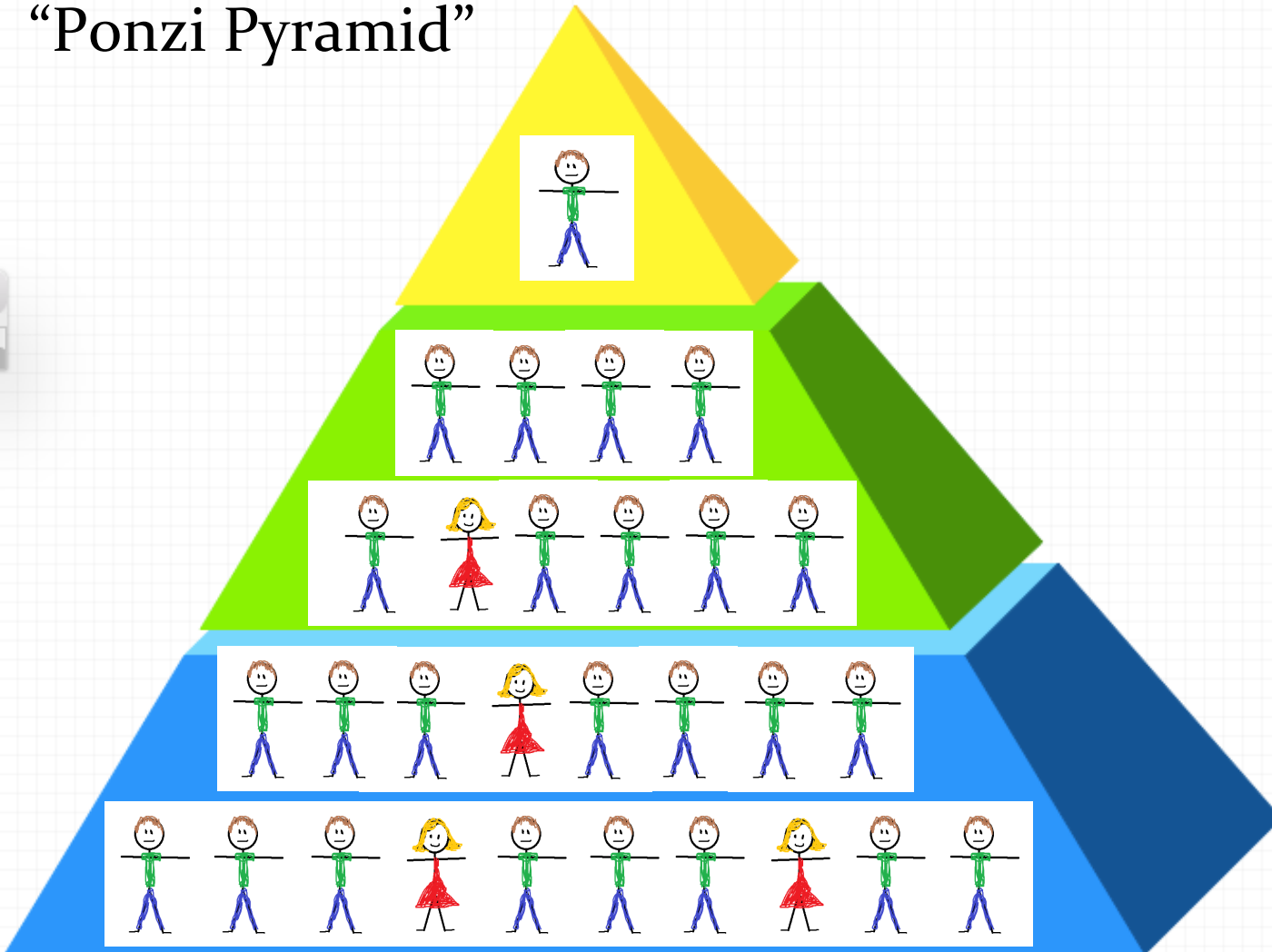
Misconduct

- Non-reproducible findings, data dredging, failure to share data
- Bullying & harassment

Narrow view of "What is Success?"

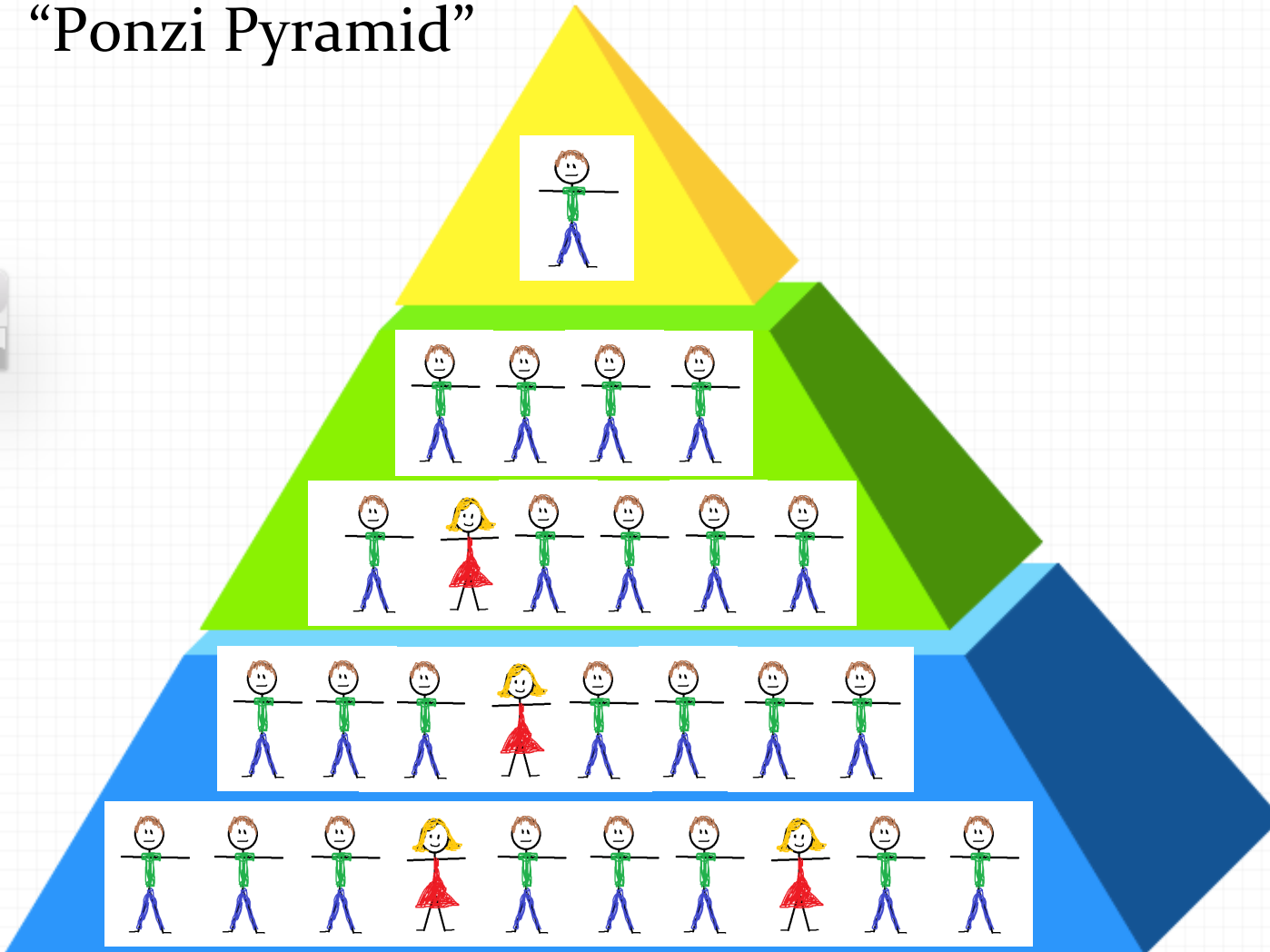
Class structure

“Ponzi Pyramid”



Class structure

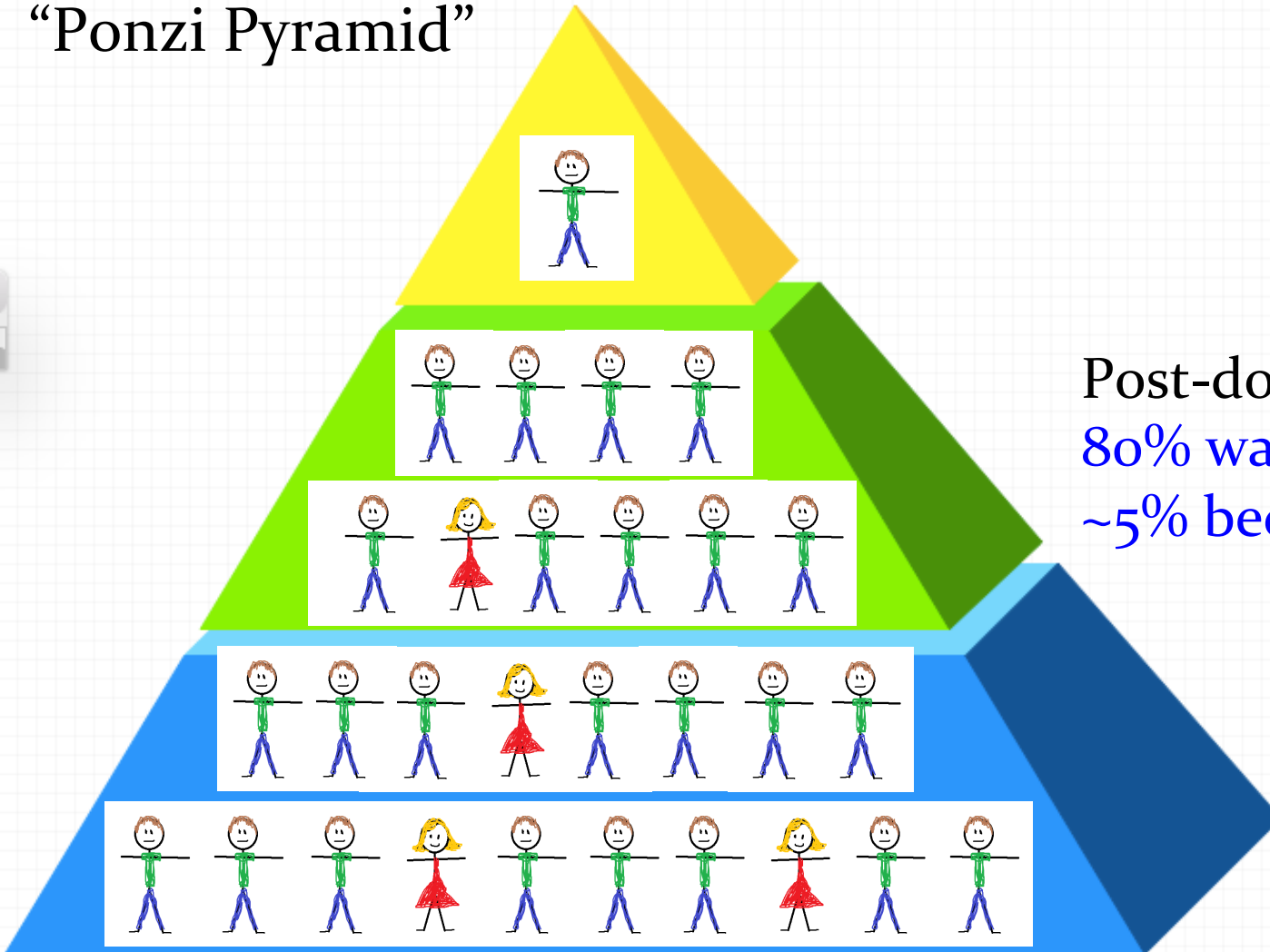
“Ponzi Pyramid”



PhD students
6% continue in
research

Class structure

“Ponzi Pyramid”

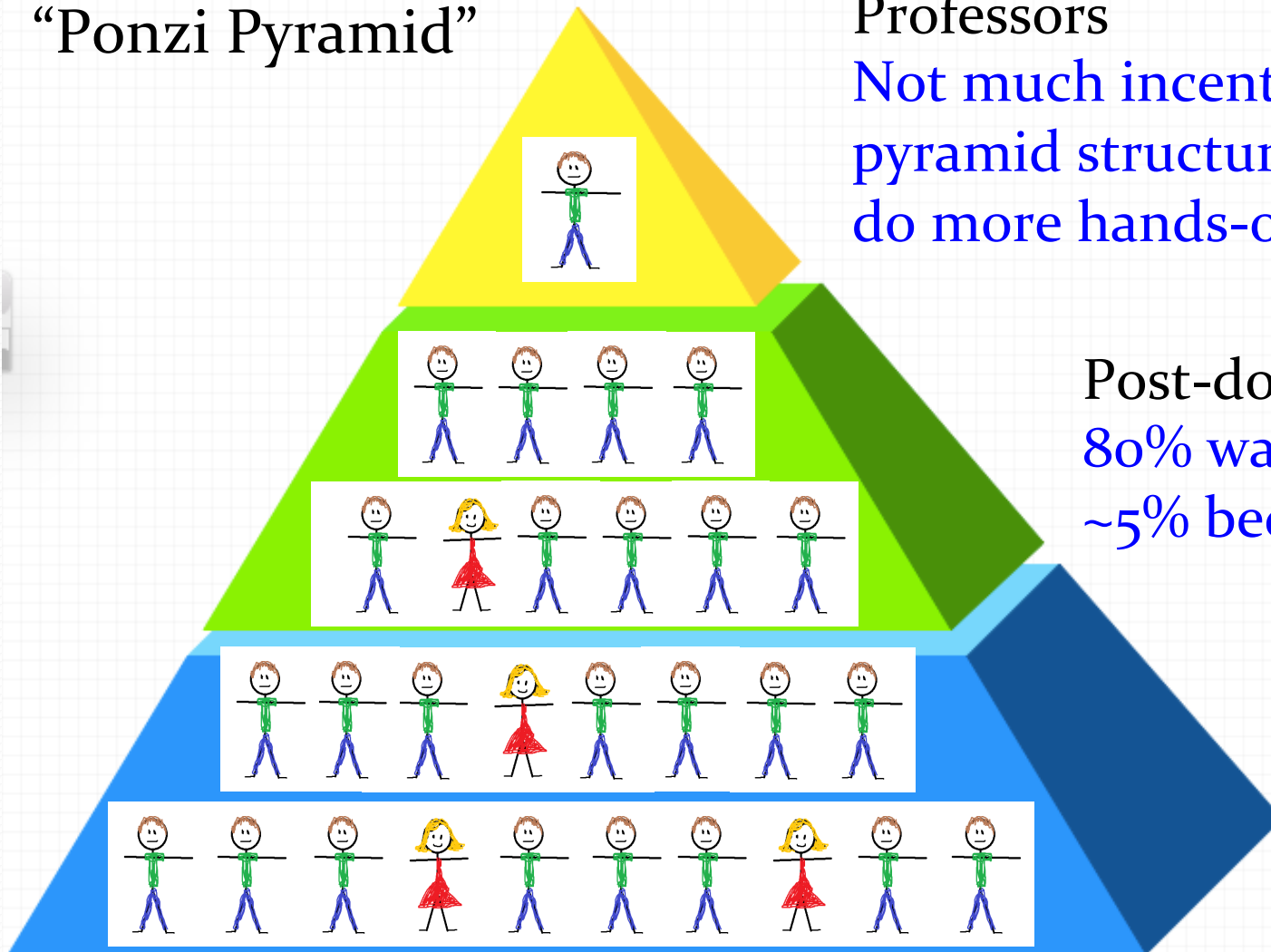


Post-docs
80% want to be Profs,
~5% become Profs

PhD students
6% continue in
research

Class structure

“Ponzi Pyramid”



Professors

Not much incentive to change pyramid structure. 90% want to do more hands-on research.

Post-docs

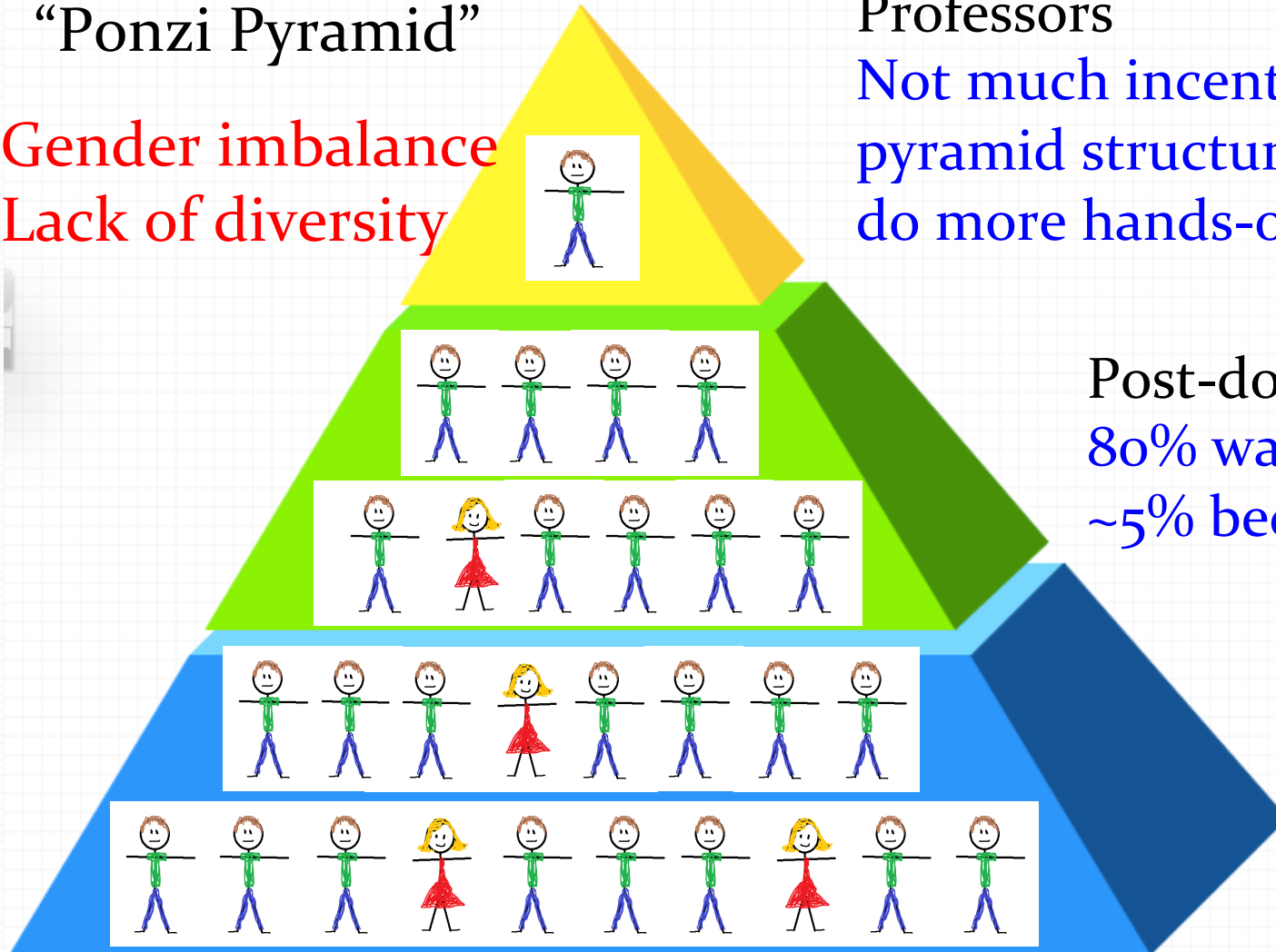
80% want to be Profs
~5% become Profs

PhD students
6% continue in research

Class structure

“Ponzi Pyramid”

Gender imbalance
Lack of diversity



Professors

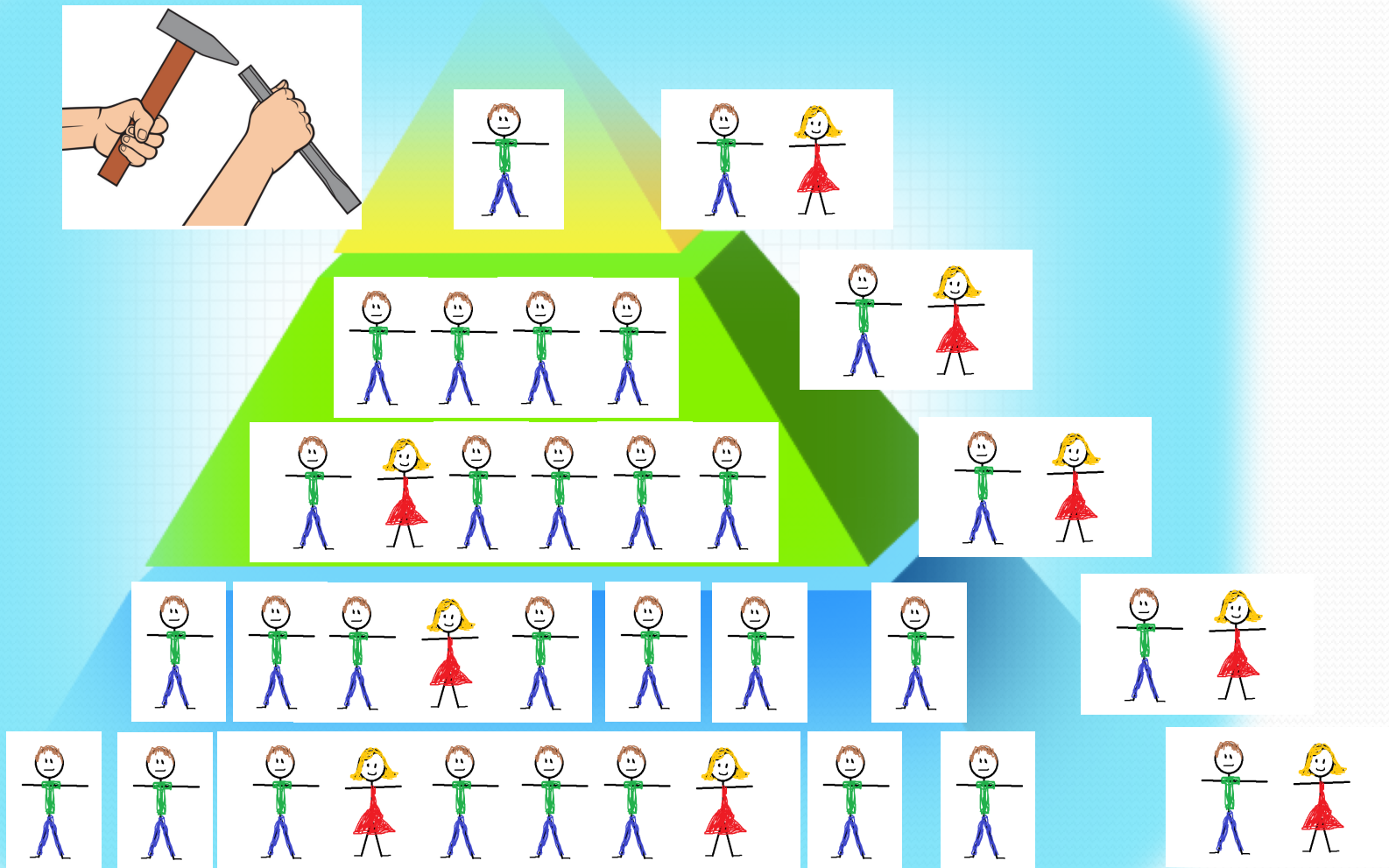
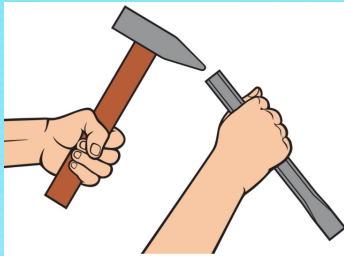
Not much incentive to change pyramid structure. 90% want to do more hands-on research.

Post-docs

80% want to be Profs
~5% become Profs

PhD students
6% continue in research

Blurring the Pyramid



Blurring the Pyramid

- PhD students: “Centre for Doctoral Training” model, taught by many, interdisciplinary, transferrable skills training, industrial placements.
- Post-docs & technical staff: Remove “class structure”. Allow 20% time to develop own activities, opportunity to change direction, longer contracts, secondments to other institutes, industry etc.
- Profs: Technical & admin support to allow time for research, mentoring, sabbaticals/secondments etc.

Expose all to success/role models outside academia – bring back alumni and develop external networks.

Collaboration

Science research is a creative enterprise, which thrives on both collaboration and competition.

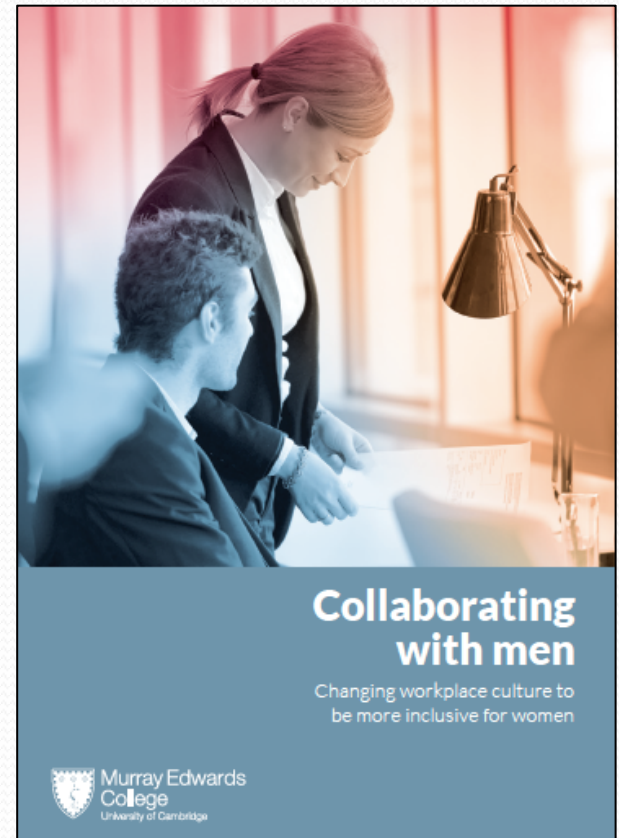
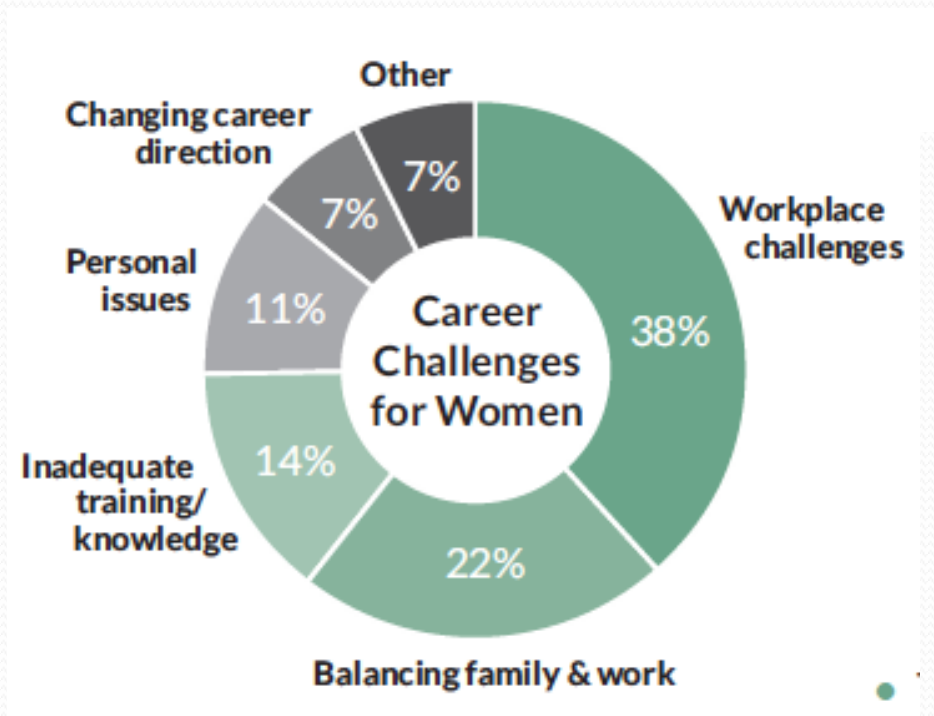
Competition: **Limit in a reasonable way, otherwise leads to stress, anxiety and insecurity.**

Collaboration: **Evidence supports individual thought and collaborative discussion from a diverse team leads to best outcomes.**



Collaboration

The “Collaborating with Men” project investigates how the workplace culture can be more inclusive.



Men and women experience workplace culture differently.

Pilot survey (2017, 300 respondents, 67% women)

75%

**Senior women
concerned about
male dominated
informal networks**

81%

**of men
reported they
had not
noticed the
issue**

32%

**of women
reported they had
been interrupted
in meetings**

80%

**of men
reported they
had not
noticed the
issue**

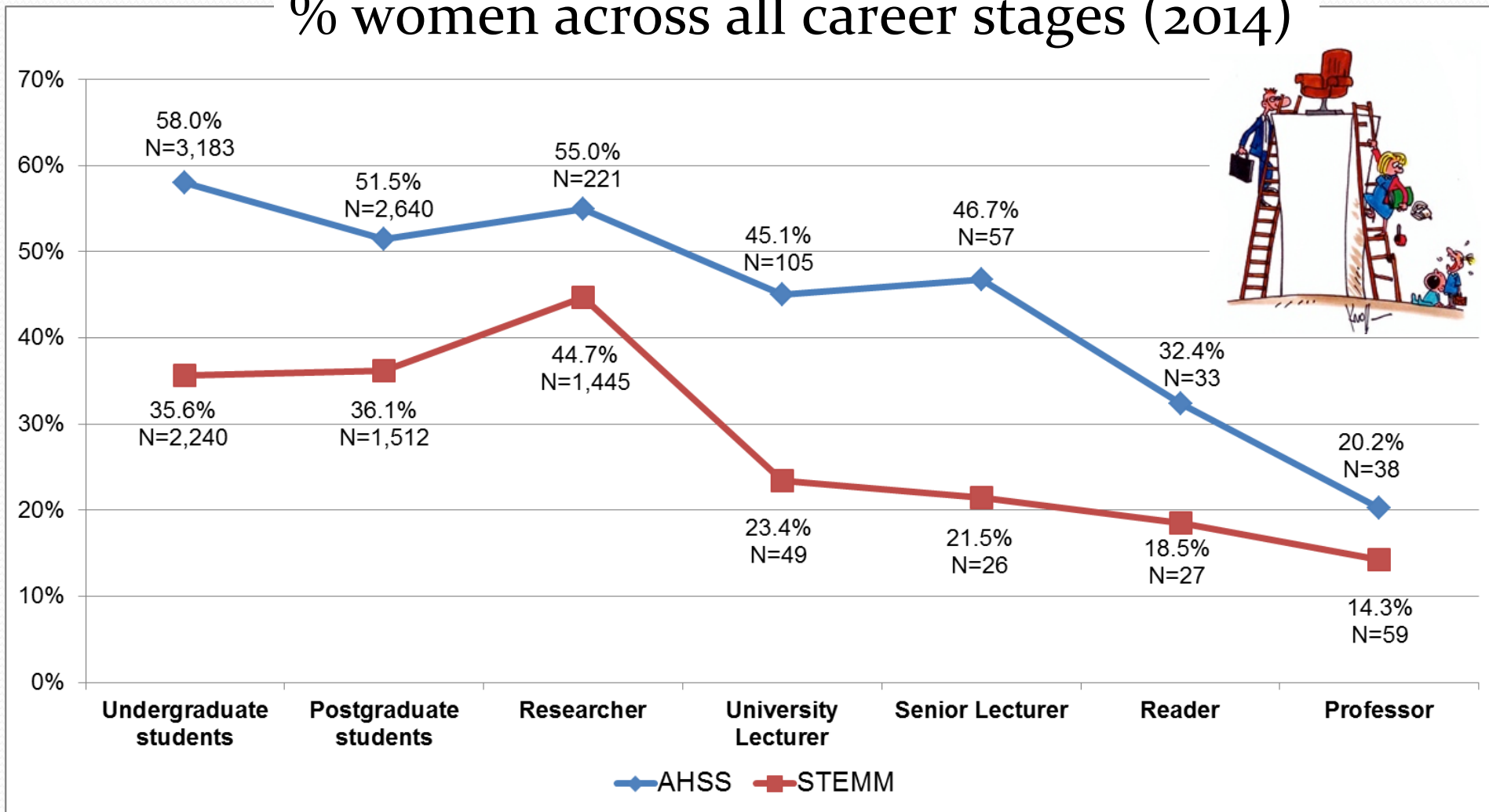


**Collaborating
with men**

Changing workplace culture to
be more inclusive for women

Gender Equality

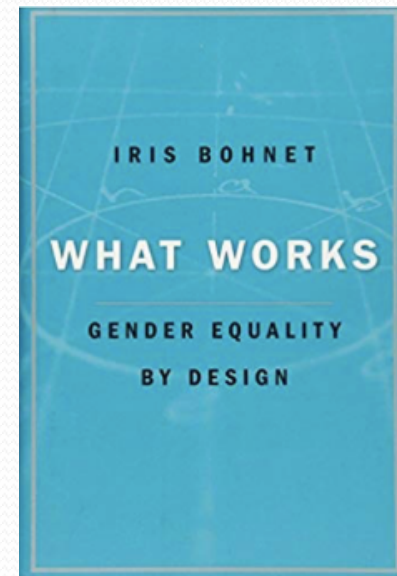
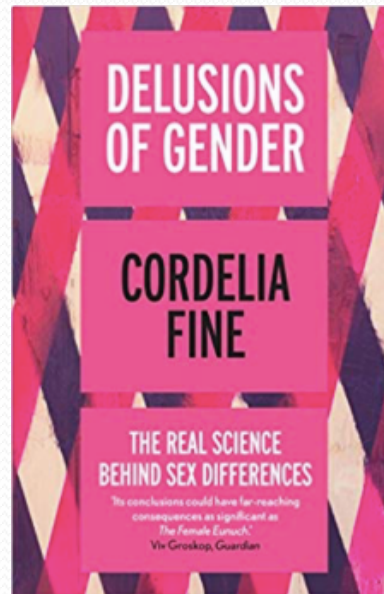
% women across all career stages (2014)



Gender Equality

Factors disproportionately influencing retention of women in science:

- Uncertain career path
- Bullying & harassment
- Imposter syndrome
- Unconscious bias
- Maternity leave & childcare



Gender Equality

Also matters to men....

70%

of men believe that a more equal society between men and women will be better for the economy

2016 Fawcett Society, nat. rep. sample of 4,000 men¹²

39%

of men believe that greater gender equality would be better for them personally

2016 Fawcett Society, nat. rep. sample of 4,000 men¹²

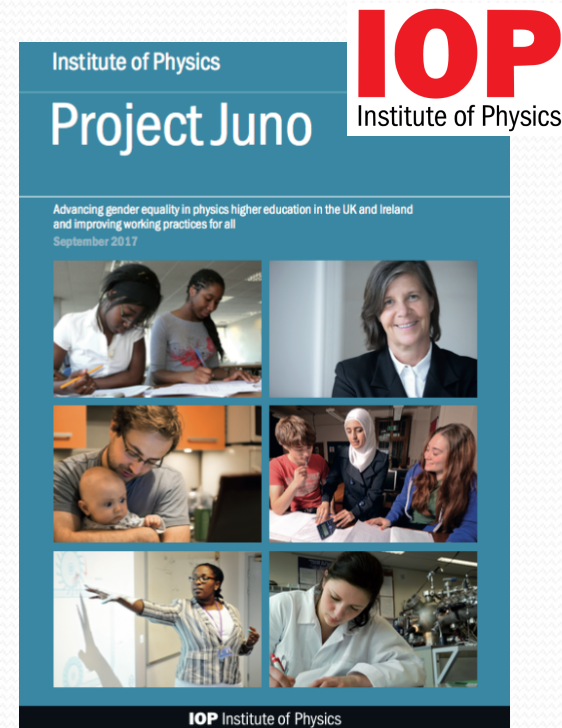
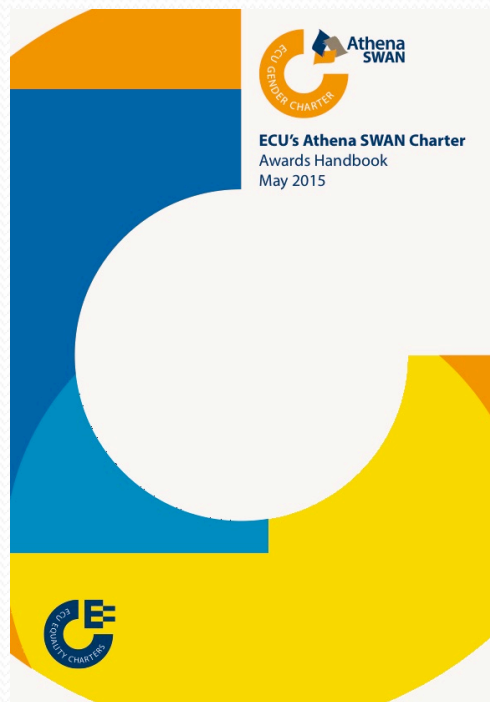
More than half

of (usually) male CEOs saw gender diversity as a top 10 item on their strategic agenda

2012 McKinsey and Company's survey of 235 large European companies²

UK Equality Schemes

Athena SWAN & Project Juno Charters introduced in 2005 & 2007 to address the attraction and retention of women in science.



<http://www.ecu.ac.uk/equality-charters/athena-swan/>
<http://www.iop.org/policy/diversity/initiatives/juno/index.html>

6 Juno Principles

- [1] A robust organizational framework to deliver equality of opportunity and reward.
- [2] Appointment and selection processes and procedures that encourage men and women to apply for academic posts at all levels.
- [3] Departmental structures and systems that support and encourage the career progression and promotion of all staff and enable men and women to progress and continue in their careers.

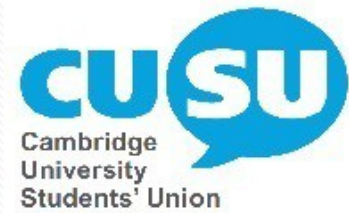
6 Juno Principles

- [4] Departmental organisation, structure, management arrangements and culture that are open, inclusive and transparent and encourage the participation of all staff.
- [5] Flexible approaches and provisions that enable individuals, at all career and life stages, to optimise their contribution to their department, institution and to SET.
- [6] An environment where professional conduct is embedded into departmental culture and behaviour

BREAKING THE SILENCE

CAMBRIDGE SPEAKS OUT AGAINST
SEXUAL MISCONDUCT

Launched
2017



Breaking the Silence

A cultural change programme to address sexual misconduct and harassment focussing on prevention, reporting and supporting students and staff.

- foster a **zero-tolerance culture** free from coercive behaviour, harassment and sexual misconduct
- provide **support and guidance** to members of the University affected by sexual misconduct
- streamline procedures **handling allegations** of harassment and sexual misconduct between students and employees
- **Training** and **development** for staff and students

Reward vs Award

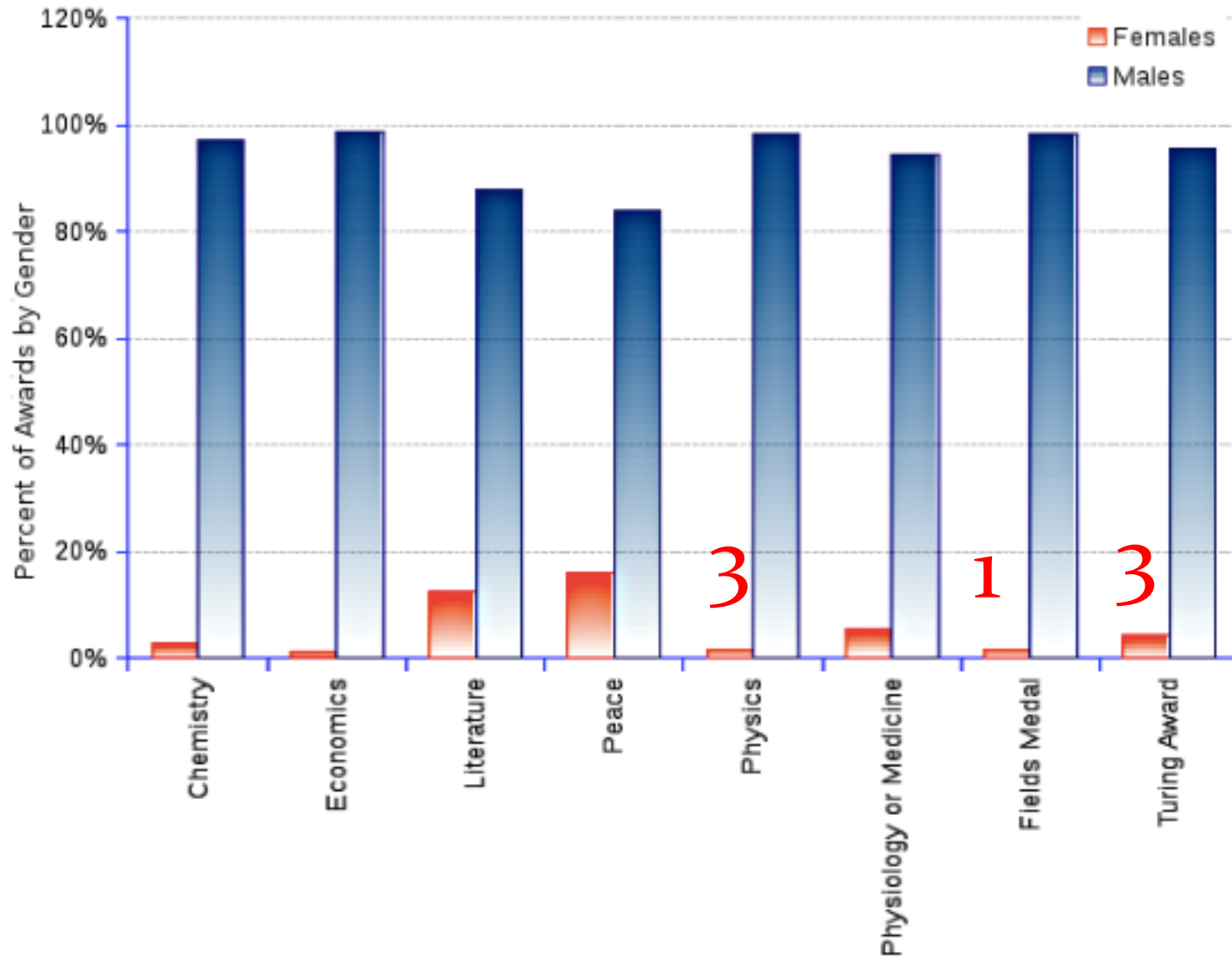
A “**reward**” is an incentive or compensation for doing something, e.g., money given for capturing a criminal, an iPhone for getting good grades.



An “**award**” is a prize or other recognition given in honor of an achievement, e.g., a trophy, a medal, a scholarship.




Major Awards (Nobel, Fields, Turing)



Reward

An opportunity to recognise the individual or collective contributions of others




Collaborative
skills



Mentoring
& support



Communication
skills



Sustained
technical support

Research Culture & Reward

I look forward to hearing the results of the ECFA survey on reward and hope that the community will...

Research Culture & Reward

I look forward to hearing the results of the ECFA survey on reward and hope that the community will...

- Introduce “**Team Rewards**” that feed intrinsic motivation to do research (e.g. time, contract extension, sabbaticals, travel).

Research Culture & Reward

I look forward to hearing the results of the ECFA survey on reward and hope that the community will...

- Introduce “**Team Rewards**” that feed intrinsic motivation to do research (e.g. time, contract extension, sabbaticals, travel).
- Keep the “Research Culture” discussion alive.
European Strategy for Particle Physics 2020 &
Strategy to address Research Culture



Thank you

In memory of a great colleague and friend...

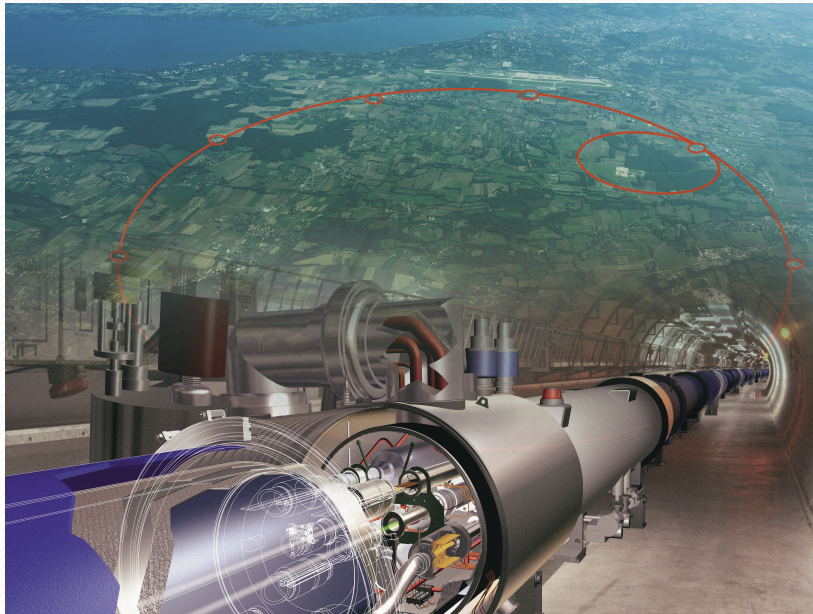


Prof. James Stirling CBE FRS

A snapshot of my work

The Cavendish Laboratory

Head of High Energy Physics
Lecturer, final year projects,
Examiner...



CERN

The Large Hadron Collider (LHCb)
Matter- antimatter asymmetries
Search for New Physics
Chair of Collaboration Board

A snapshot of my work

Trinity College

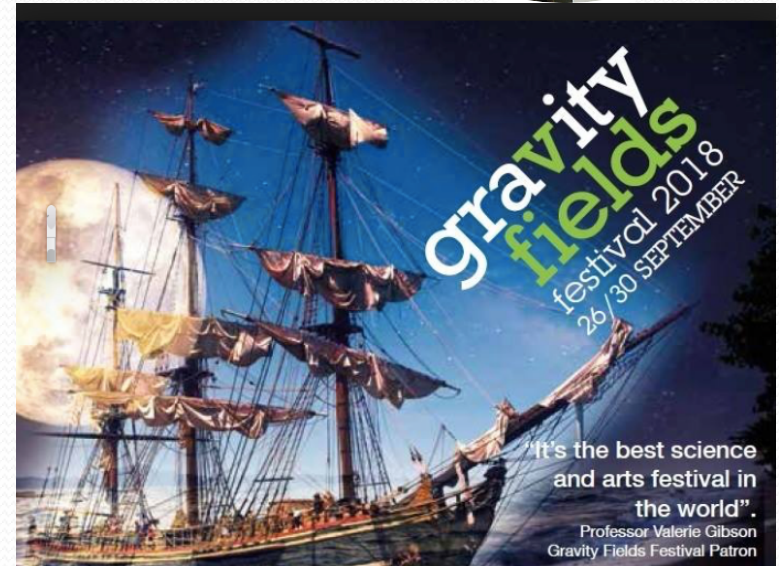
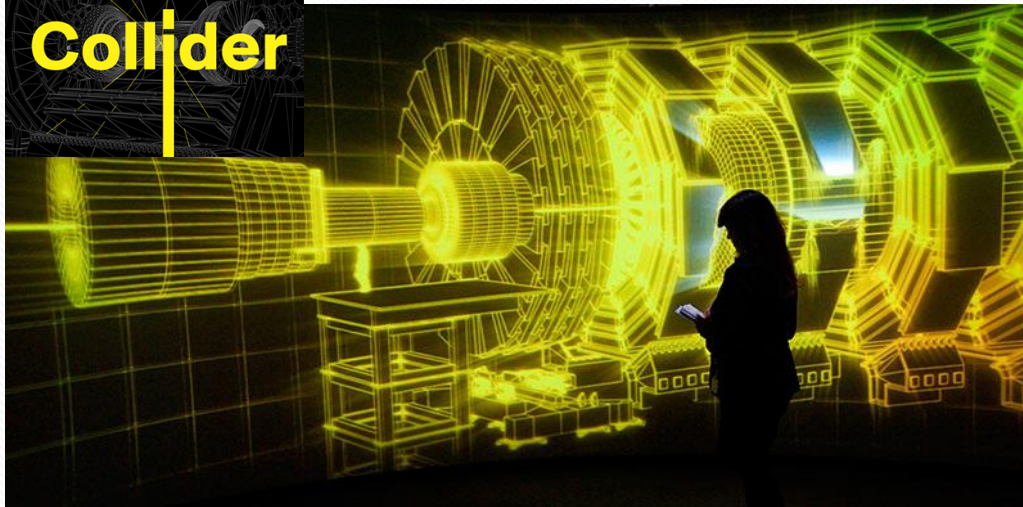
Senior Woman Fellow
Director of Studies
Admissions Officer
Undergraduate Supervisor



Equality & Diversity

University Gender Equality Champion
Chair Institute of Physics Juno panel

A few fun things...



Hunt the Higgs

A game of chance and tactics for all ages.
Based on the fundamental particles and forces of nature.
No need for any previous knowledge of Particle Physics!
Game originated by V.Gibson and sponsored by PPARC



www.hep.phy.cam.ac.uk/mc/higgs.html
www.boardgamegeek.com

Project Juno

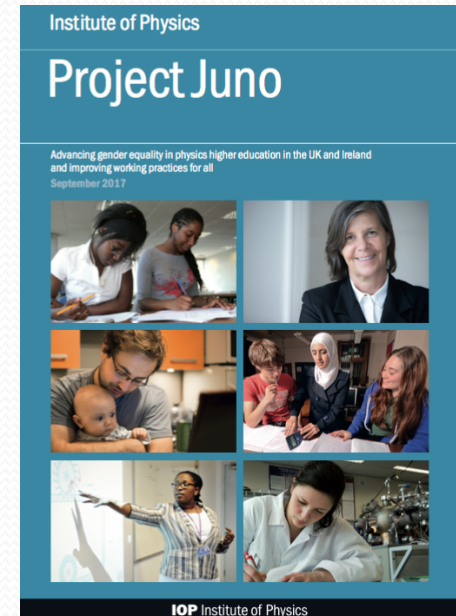
IOP

Institute of Physics

Project Juno recognises and rewards physics departments, institutes and organisations that demonstrate they have taken action to address gender equality in physics and encourage best practice for all staff and students.

Diversity team, Institute of Physics
76 Portland Place
London
W1B 1NT

+44(0)20 7470 4800
diversity@iop.org / juno@iop.org



<http://www.iop.org/policy/diversity/initiatives/juno/index.html>

Project Juno – the last 10 years

Project Juno always evolves to meet the needs of the community.

- 2007 Project Juno launched with 5 principles
- 2008 First Juno Champion awards
- 2010 Practitioner level introduced to provide a step towards Champion
- 2013 Juno evaluated and positive benefits reflected back to IoP
- 2015 Extended Juno to research institutes and other organisations, such as NPL
- 2016 Champion site visits introduced in renewal process
- 2017 Introduced Principle 6 and Juno Excellence

6 Juno Principles

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- [3] Departmental structures and systems which support and encourage the career progression and promotion of all staff and enable men and women to progress and continue in their careers.

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- [4] Departmental organisation, structure, management arrangements and culture that are open, inclusive and transparent and encourage the participation of all staff.
- [5] Flexible approaches and provisions that enable individuals, at all career and life stages, to optimise their contribution to their department, institution and to SET.
- [6] An environment where **professional conduct** is embedded into departmental culture and behaviour

Juno Awards

Supporter

IOP | Institute of Physics
Juno Supporter

Start the Juno journey by endorsing the 6 principles and make a commitment to work towards Practitioner and Champion.

Practitioner

IOP | Institute of Physics
Juno Practitioner

Demonstrate that the Juno journey is well underway. Evidence is gathered and an initial action plan demonstrates how the department aims to achieve Champion.

Champion

IOP | Institute of Physics
Juno Champion

Demonstrate that the 6 principles are embedded throughout the department. Further evidence is gathered and the action plan demonstrates how the department will continue to further good practice.

Benefits of Juno

Juno enables departments to develop an equitable working culture for all.

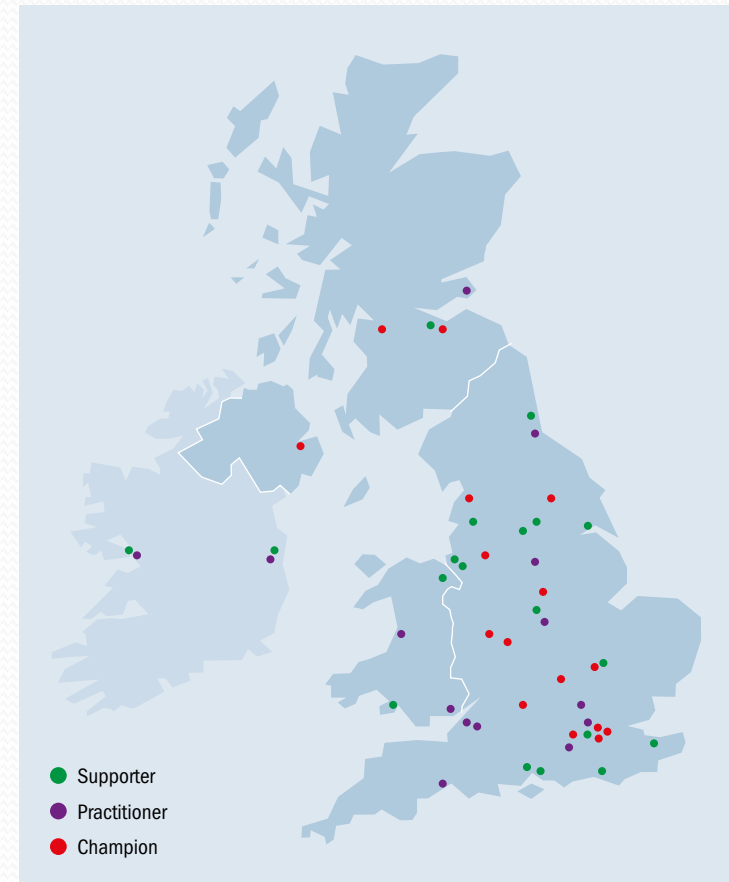
- Run “By Physicists for Physicists”
- Juno panel members published
- Panel interacts with Juno contacts and departments
- Site visits with comprehensive feedback
- Buddying /mentoring system with nearby departments
- IoP provides access to benchmarking data, networking etc
- It is reciprocal with the UKS’s Athena SWAN Charter at Practioner (bronze) and Champion (Silver)

Juno is more than an awards scheme; it acts as a peer support network for physicists wishing to address gender equality.

Juno Status

- 58 departments offering undergraduate physics in the UK & Ireland
- Juno started with 19 supporters in 2008
- 54 currently engaged with Juno

Status	2010	2013	2018
Supporters	21	20	19
Practitioners	7	14	16
Champions	3	7	19
Total	31	41	54



Juno Excellence

Launched 2017

- To encourage a partnership approach and community ownership
- Working with the IoP to “step out” rather than “step up”
- To transfer successful activities and practice that works into other departments
- To undertake activities that will benefit the community at large
- To encourage and foster innovative, creative and ambitious step-change

We look forward to our first Juno Excellence awards...

The Juno Excellence Programme and Award

Beyond Juno Champion

The Juno Excellence Programme and Award will recognise exceptional Juno Champions who develop a programme of activities designed to showcase and embed successful and innovative practice, enabling a step-change in diversity and inclusion across the physics community.

Aims of Juno Excellence

The aims of Juno Excellence are:

- To encourage a community-led approach to furthering equality in physics.
- To encourage ambitious and inspiring activities that will disseminate and embed best practice in equality more broadly across the physics community.
- To enable a greater impact on national imperatives for action in gender equality in physics.
- Developing a programme of career-enhancing activities for staff from other under-represented groups, such as LGBT+ activities or support for those with a disability or mental health conditions, building on the Institute's Building Momentum report.
- Developing theme-based outreach programmes that inspire young would-be physicists from all underrepresented groups on a national level.
- Developing links with industrial partners to embed the

Principle 6 – Professional Conduct

6. Fostering an environment where professional conduct is embedded into departmental culture and behaviour

6.1 Ensure that all staff and students are aware of expected professional conduct.

6.2 Address bullying, harassment and misconduct

6.2.1 Ensure all staff and students are aware of how complaints of bullying, harassment or other misconduct will be dealt with through an enforceable formal policy.

6.2.2 Ensure there is a transparent reporting mechanism within the department to address any complaints.

Principle 6: Proactive and Positive

Encouraging

- “Values for physics”
- Openness and transparency
- Departments to talk about this and open up discussion

and ensuring

- **Everyone** is in a working environment where misconduct is not tolerated and can be addressed

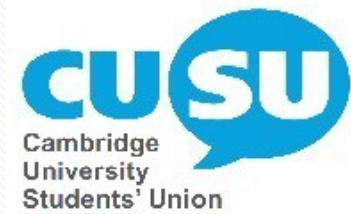
Departments will be expected to...

- Make everyone aware of university codes of conduct and any departmental codes
- Work towards developing their own set of values that all staff and students buy into
- Ensure everyone is are aware of how complaints will be dealt
- Provide training for all staff on addressing harassment and bullying
- Work towards having staff trained to deal with complaints about misconduct and towards having a confidential reporting system (department or university) to record incidences.

BREAKING THE SILENCE

CAMBRIDGE SPEAKS OUT AGAINST
SEXUAL MISCONDUCT

Launched
2017



UNIVERSITY OF
CAMBRIDGE⁵¹

Why is it important?

“If we don’t address sexual harassment seriously... we have a chance of losing some of the most talented members of our community”

Vice-Chancellor Professor Stephen Toope

What has it got to do with me?

“Dealing with sexual harassment is a responsibility for everyone in the community. People won’t come forward, there won’t be an open discussion, unless there’s an environment in which people feel at least relatively safe. So each and every one of us has to try hard to create that environment.”

Vice-Chancellor Professor Stephen Toope

What is Breaking the Silence?

A cultural change programme to address sexual misconduct and harassment focussing on prevention, reporting and supporting students and staff.

- fostering a **zero-tolerance culture** free from coercive behaviour, harassment and sexual misconduct
- providing **support and guidance** to members of the University affected by sexual misconduct
- streamlined procedures **handling allegations** of harassment and sexual misconduct between students and employees
- **Training and development** for staff and students

University Zero Tolerance Statement

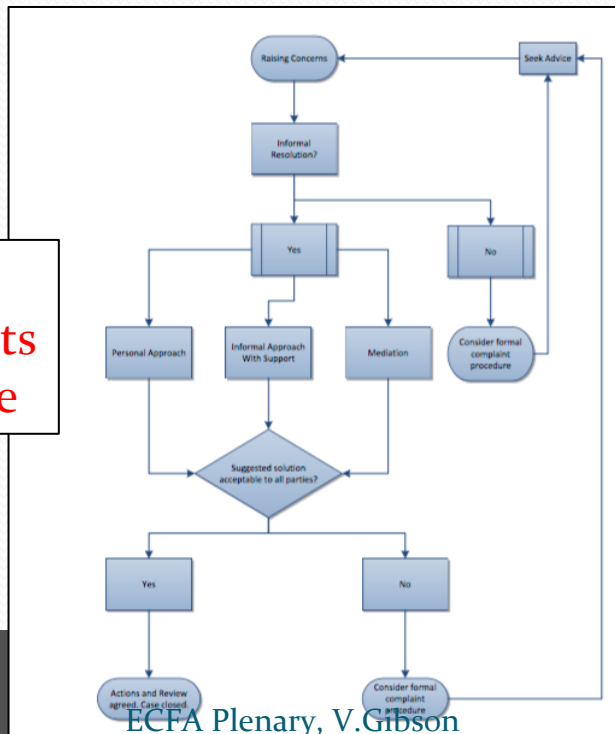
There is no place for any form of harassment or sexual misconduct at the University of Cambridge

- Cambridge is where the **brightest and the best can thrive** in a safe and supportive environment; one that welcomes and celebrates diversity and acts collectively to tackle unacceptable behaviour.
- The University will **continuously work to improve** the prevention, response, support and investigation of all instances of harassment and sexual misconduct; and to **empower staff and students** to make disclosures.
- Staff and students have an **individual and a collective responsibility** to ensure a zero tolerance approach to harassment and to foster a culture of mutual respect and consideration.
- We will work together with **all universities across the UK** to solve these issues.

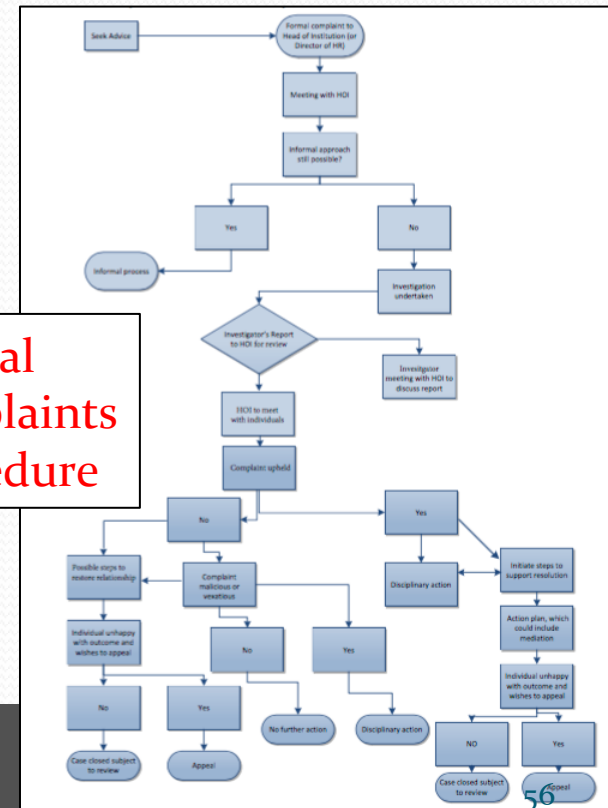
Staff Dignity at Work Policy

- Sets out the responsibilities and expectations of all members of the University community
- Clearly defines and incorporates sexual misconduct with examples
- Clarifies disclosure routes for staff vs student complaints
- Refers to additional guidance on sexual assault

Informal complaints procedure



Formal complaints procedure



Training, support and guidance

Support for students: 18 counsellors, mental health advisers and University Sexual Harassment & Assault Advisor

Support for staff: Dignity at work contacts and wellbeing advocates **in all departments**

University Counselling Service

Training

- “Consent Matters” course & workshops for students
- “Staff supporting student disclosure” briefings from the Cambridge Rape Crisis Centre.
- “Where to draw the line” training for staff, HR Division.
- “Bystander” training
- Good Lad Initiative – **Physics invited them to talk to targeted research groups**

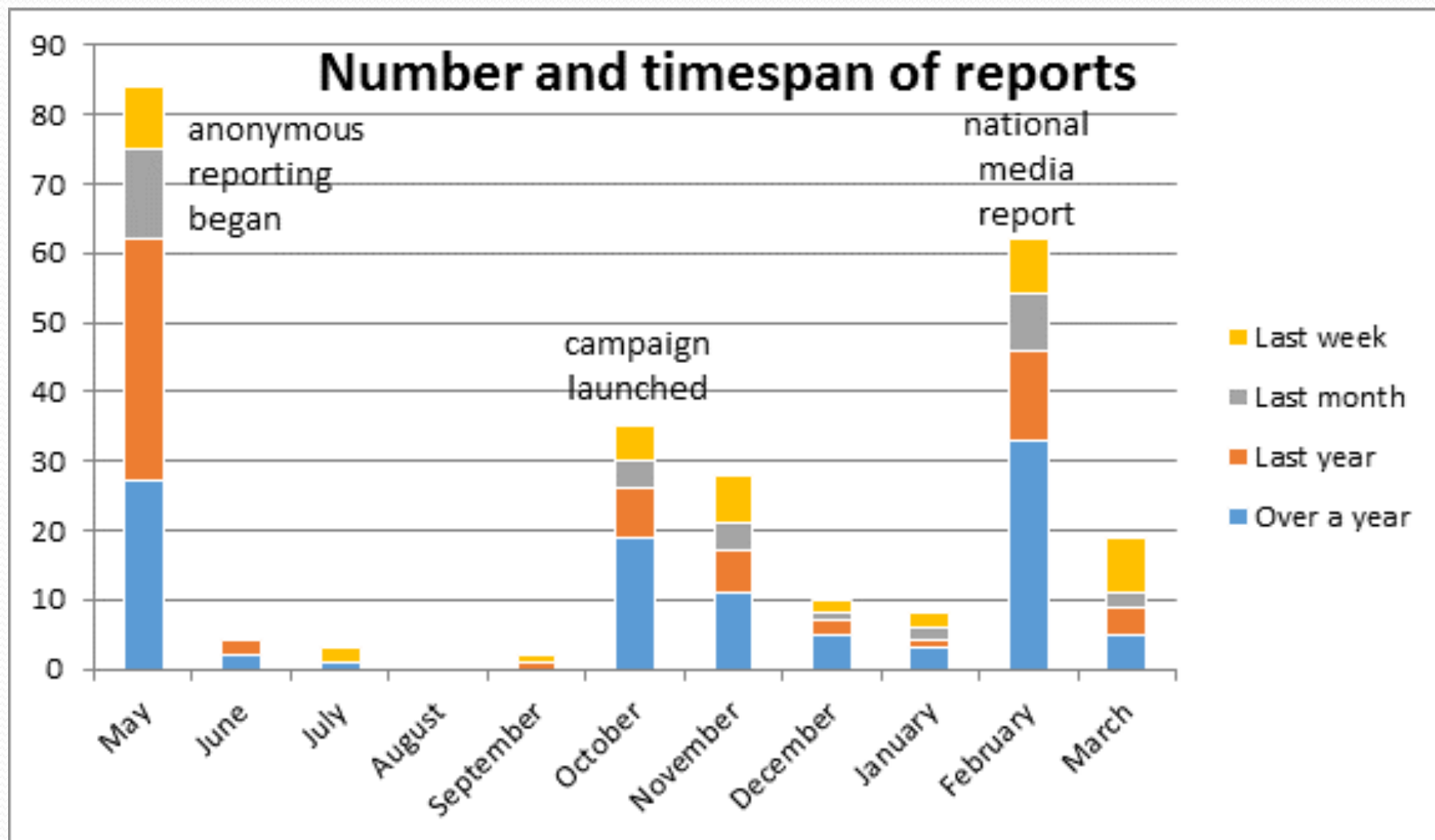
300 staff have now received training on supporting survivors of sexual violence

Anonymous reporting

- Introduced in May 2017, for anyone in Cambridge, student, staff or visitor
- Harassment, Hate Crime and Sexual Misconduct
- 311 reports as of June 2018
- The most commonly cited behaviour between students is sexual intercourse without consent or a sexual act without consent

No one should be surprised by this: we still have work to do

Anonymous reporting figures (2017-18)

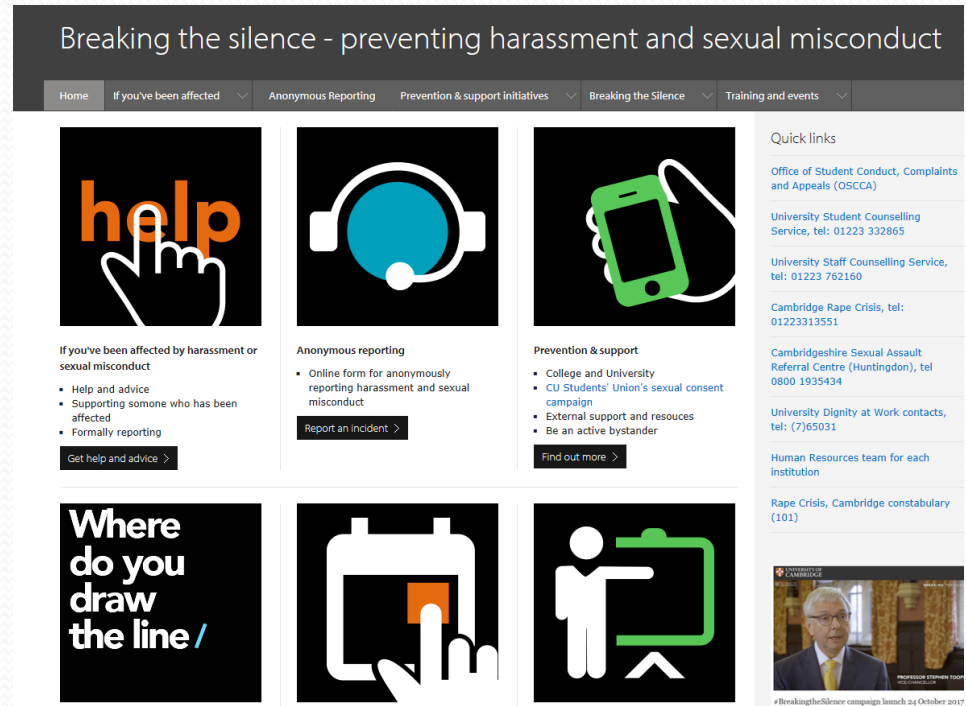


Breaking the Silence website and campaign



Think. Don't cross the line.

www.breakingthesilence.admin.cam.ac.uk



www.breakingthesilence.cam.ac.uk

A departmental toolkit is available on the Breaking the Silence website including posters, flyers and a checklist for Institutions.

Breaking the Silence (2017-18)

- Website >25,000 hits over the launch
- Films viewed >100,000 times
- Tweets reached >5 million accounts.
- More than 550 articles published about the campaign.
- Focus groups (staff and students) increased awareness from 47% to 65% in the first 6 months.
- Over 600 staff have received training in departments.
- 9 Universities from 6 different countries had been in contact, since launch.
- Caseloads within HR have increased and the University is taking (and has taken) serious action as a result.

Breaking the Silence (2017-18)

- Percentage of students anonymously reporting incidents and not reporting them formally (because they do not believe anything would be done) has dropped from 52% to 24% in 12 months.

Press and public questioned whether there was a need for a full time Sexual Assault Harassment Advisor ...

... sadly the answer is yes ...