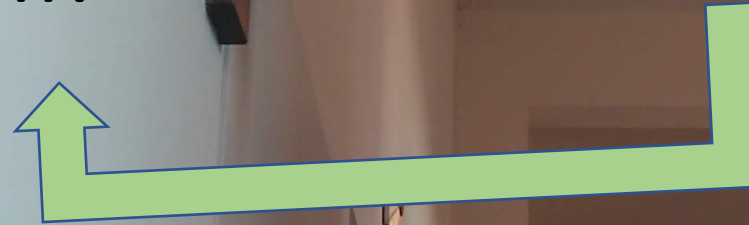


# Ethics in Astrophysics

Umm?



PSF Retreat 2019

Gesa Bertrang, Asmita Bhandare, Paola Pinilla, and Sümeyye Suri

**“(...)but it was eye-opening, raising awareness about issues such as bullying, harassment and unconscious biases that currently plague our research community. Opening up a dialogue on these topics is the first step towards building a healthier research environment.”**

**(From a Career column in Nature by C. Casey and K. Sheth)**

# Goals for the Workshop

- Identify unconscious bias → Impact on Diversity (Monday, 30-45 mins)
- Become aware of differences in perception ("The Grey Zone") (Monday, 30-45mins)
- Bullying and Sexual Harassment. (Wednesday)
- How to create positive change. How to seek help at MPIA? (Wednesday)

# **But the Main Goal is**

What's said here, stays here;  
what's learned here, leaves here



# Unconscious Bias

Social stereotypes about certain groups of people that individuals form **outside their own conscious awareness**

(Fiske & Taylor 1991; Valian, 1998, 1999)

Video:

<https://www.youtube.com/watch?v=QRZPw-9sJtQ&t=27s>

# **FACT**

(almost) Everyone has bias

Humans are natural classifiers

# Unconscious Bias Has An Effect On:

- Hiring
- Evaluation
- Promotions
- Selection of leaders
- Daily interactions

# **Implicit Bias Tests from Harvard**

## **(10 mins)**

<https://implicit.harvard.edu/implicit/takeatest.html>

(religion, gender, sexuality, age, disability...)

# **We will Share the Results in a Poll (anonymous)**

<https://implicit.harvard.edu/implicit/takeatest.html>

- Gender-Science: <http://etc.ch/mtTh>
- Gender-Career: <http://etc.ch/FaN4>

**We share/discuss the results on Wednesday**

# **Unconscious bias → Impact on Diversity**

## **Some Examples**

# Social Experiment

group of scientists created a  
fake resume for a laboratory  
manager

sent it to



100 professors  
(women and men)



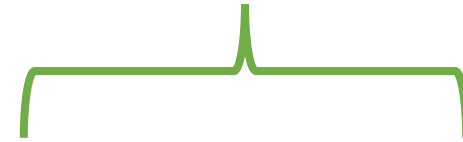
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Decide about  
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Propose a salary

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Half of the professors got the resume with  
the name *John*, and the other half with  
the name *Jennifer* (same last name)

# Social Experiment

group of scientists created a  
fake resume for a laboratory  
manager

sent it to

100 professors  
(women and men)

Decide about  
whether they would  
hire them or not

Propose a salary

**RESULTS:**  
The professors rated John as  
more competent, more  
qualified, and offered 15%  
higher salary than Jennifer

Half of the professors got the resume with  
the name *John*, and the other half with  
the name *Jennifer* (same last name)

# PSF Department / MPIA

	PhD Students	Post-Docs	Group Leaders
Male	52%	67%	78%
Female	48%	33%	22%

Foreign	71%	63%	12%
German	29%	37%	88%

Data from Frau Apfel

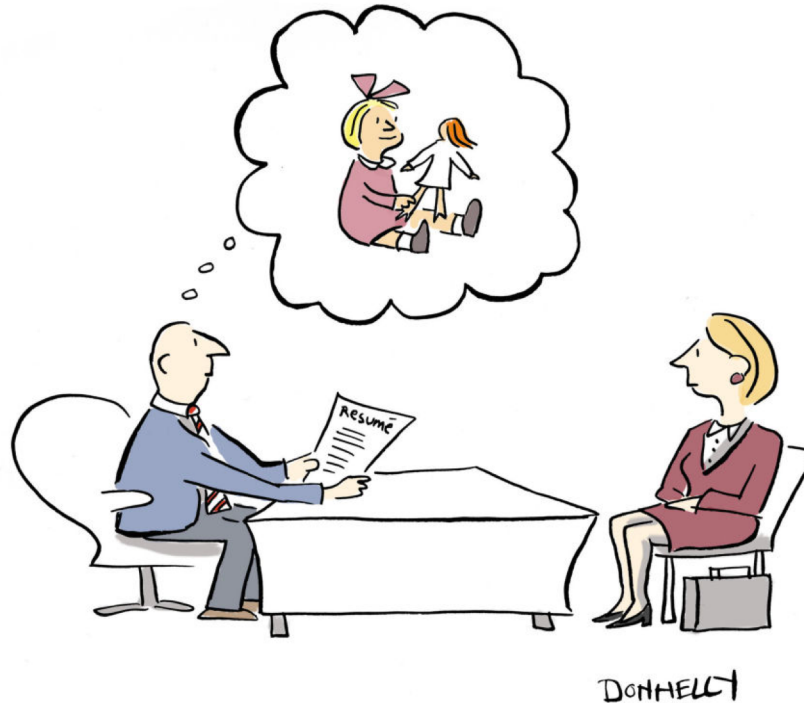
# Social Experiments Showing the Effect of Biases

Steinpreis, et al., 1999 (Gender)

Bertrand & Mullainathan 2004 (Nationality), 2003 (Mothers)

Correll et al. 2007 (Parental Trap)

The "Parental Trap":



# Social Experiments Showing the Effect of Biases

Steinpreis, et al., 1999 (Gender)

Bertrand & Mullainathan 2004 (Nationality), 2003 (Mothers)

Correll et al. 2007 (Parental Trap)

## Some Results about "Parental Trap":

- Mothers 43% less likely than non-mothers to be recommended for hire
- Mothers rated as: (a) **Less** competent, (b) **Less** promotable, (c) Less likely to be recommended for management, (d) Given lower recommendations for starting salaries.
- Fathers rated the opposite: **More** competent, **More** capable. Fathers were not penalized and in fact benefitted from parental status.

# Unconscious Bias: Recommendation Letters (Trix & Penska, 2003)

Systematic study of 312 letters

## RESULTS:

- Letters for women were shorter, less focused on candidate's record of accomplishment
- Twice as likely to have gendered terms ("intelligent young lady" or "insightful woman") – such descriptors NOT present for men
- Use of standout adjectives such as "excellent", "superb", "outstanding", and "unique" repeated more often in men's letters, yet the use of grindstone adjectives "hardworking", "conscientious", "dependable", "careful", "meticulous" more prevalent for women.

# Unconscious Bias: Recommendation Letters (Trix & Penska, 2003)

Systematic study of 312 letters

## RESULTS:

- Study suggests that recommendation letters associate women's success with effort whereas men's success is associated with ability.
- More doubt raiser comments: "She worked hard on the projects she accepted"
- Women's letters were significantly more likely to have references to one's personal life while men's were more focused on one's CV, publications, patents and colleagues



# Unconscious Bias: Summary

- Scientists tend to believe they are unbiased and rational.

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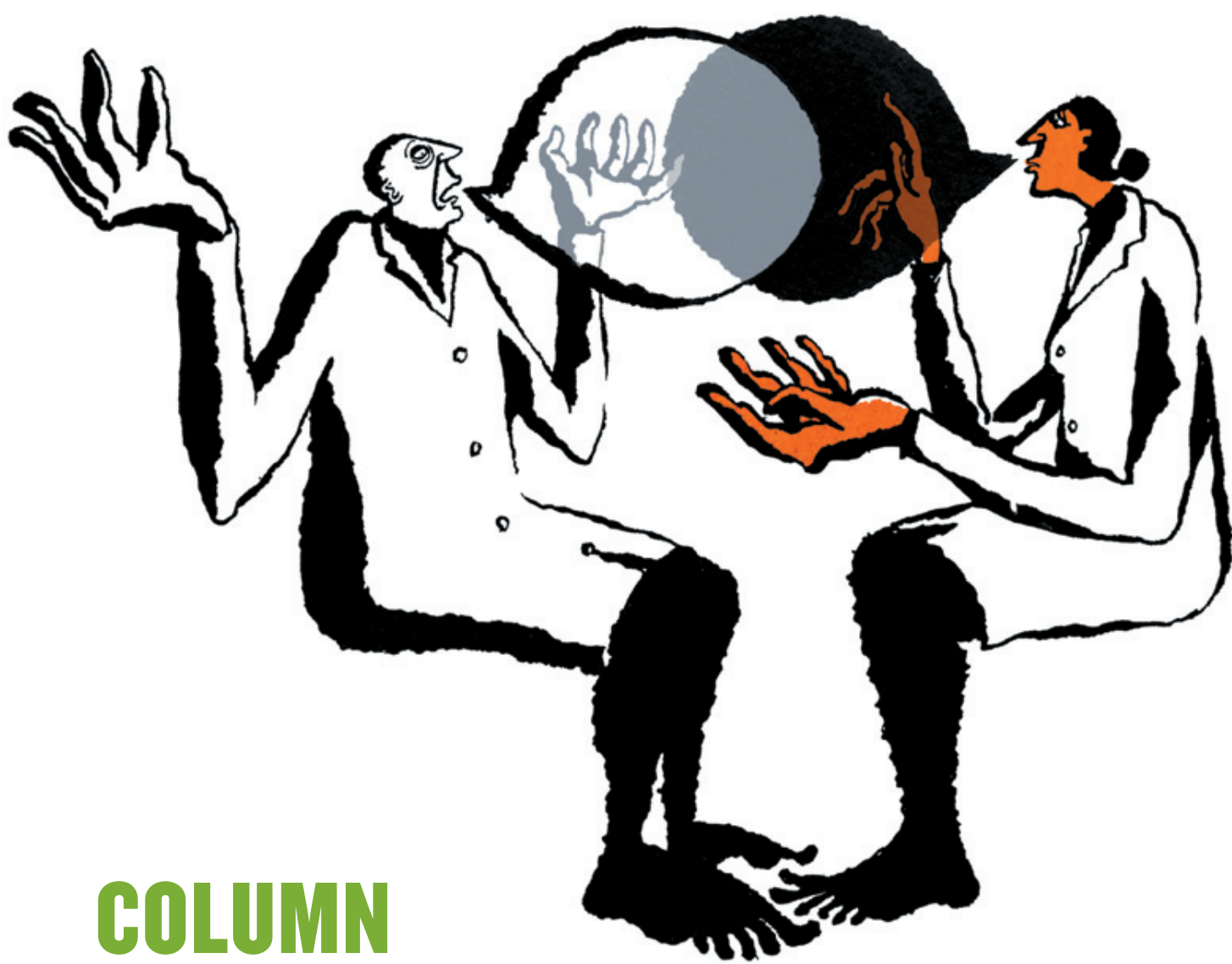
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# Unconscious Bias: Summary

- Scientists tend to believe they are unbiased and rational.
- We also believe that given the same set of data, we will reach the correct conclusions about such human things as recognition and respect
- Hard to experience/understand it if you are in the majority
- Unconscious bias is worse the more lopsided the initial playing field (Wednesday)
- Looking young hurts ability to take on leadership roles, fulfilling a given stereotype (woman, racial identity, age, parental status, etc) puts you at initial disadvantage **even if you might not perceive it**



**COLUMN**

# The ethical grey zone

Confronting hypothetical dilemmas can ease workplace problems, argue **Caitlin Casey** and **Kartik Sheth**.

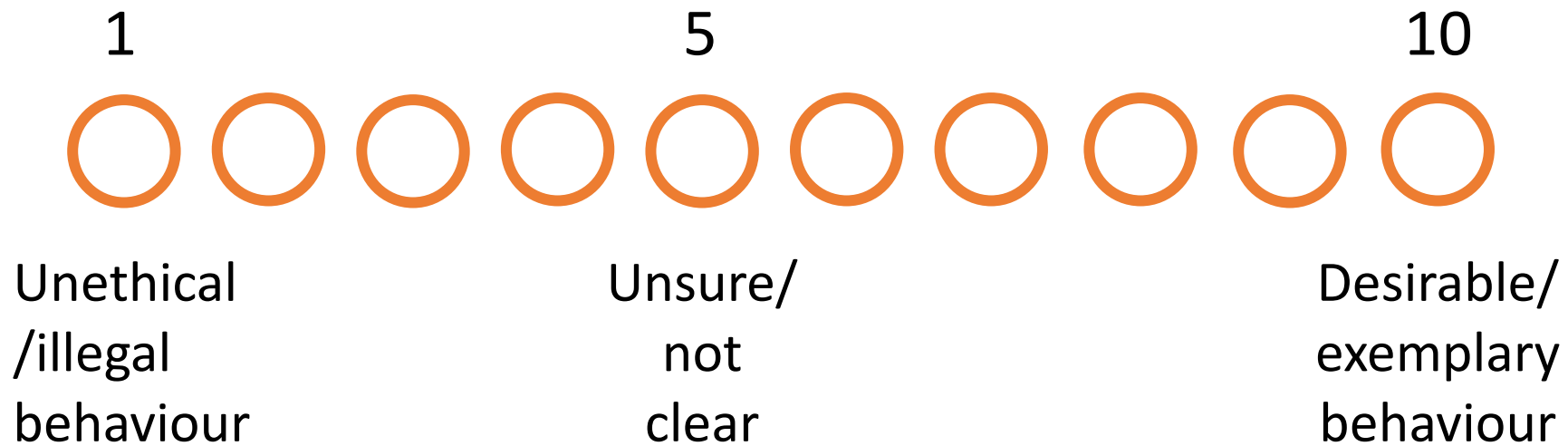
**Become  
aware of  
differences  
in perception  
("The Grey  
Zone")**

"Grey zone" → uncomfortable  
and/or morally ambiguous  
situations experienced in the  
astronomy workplace.

# Session Plan (30 mins max)

1. Split into 2 groups (last names: A- K, L-Z)
2. Each group gets the same set of scenarios (25)
3. We will go through the scenarios one-by-one
4. For each scenario, you will make your own rank
5. Share your ranking and organize all the scenarios by rank
6. Discuss results. (Wednesday)

# Rankings





**Wednesday**

# Goals for the Workshop

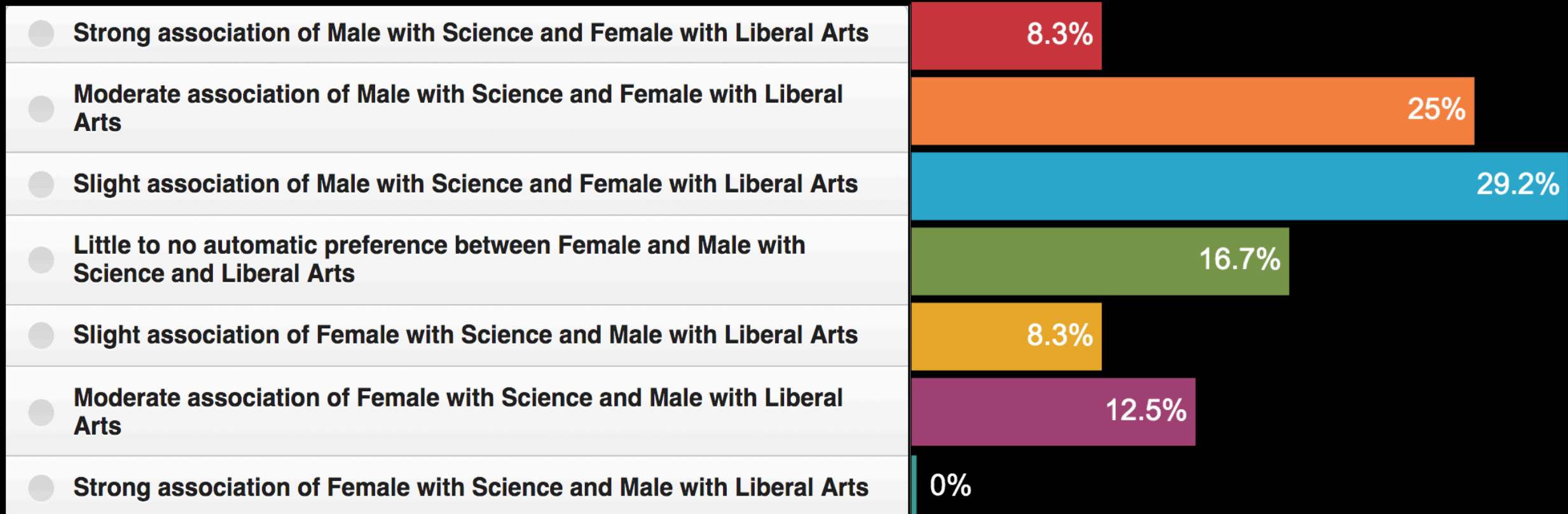
- Identify unconscious bias → Impact on Diversity (Monday, 30-45 mins)
- Become aware of differences in perception ("The Grey Zone") (Monday, 30-45mins)
- Results of activities. (Wednesday)
- Bullying and Sexual Harassment. (Wednesday)
- How to create positive change. How to seek help at MPIA? (Wednesday)

# Results of the Poll (anonymous)

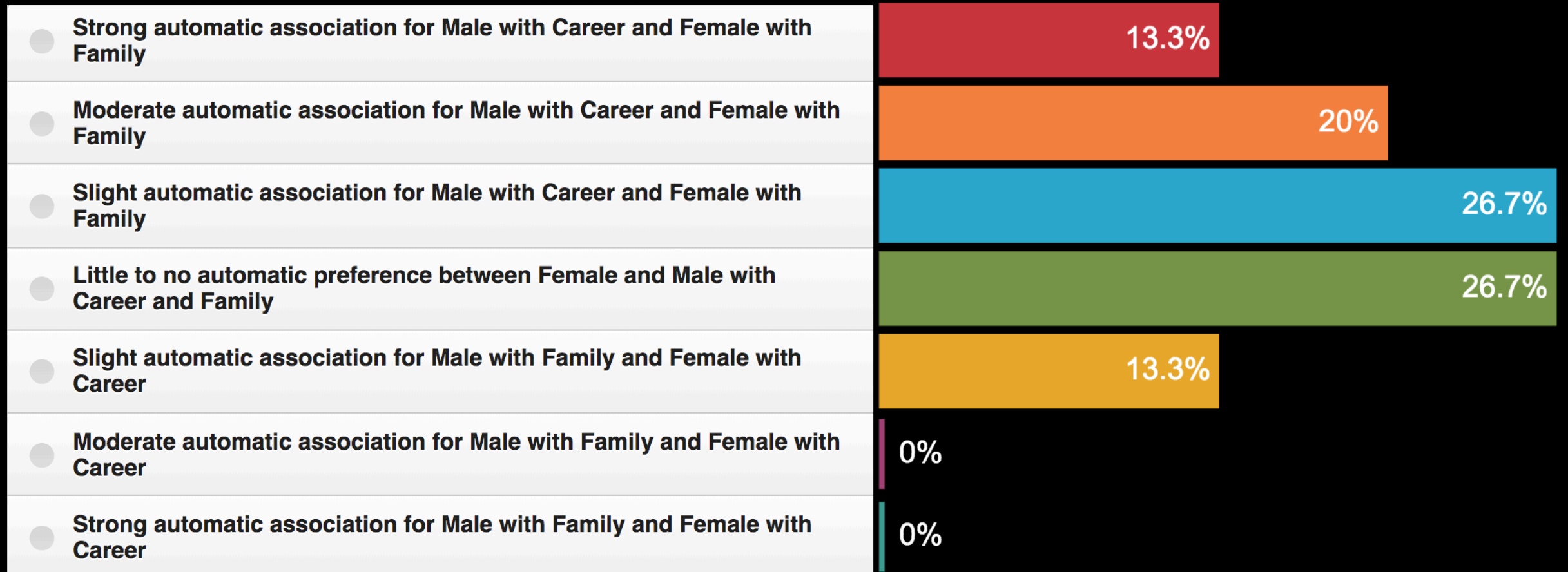
**80% Participation**

- Gender-Science
- Gender-Career

## Gender-Science IAT (24 participants)



## Gender-Career IAT (15 participants)





All the  
scenarios are  
based on *real*  
situations

## COLUMN

# The ethical grey zone

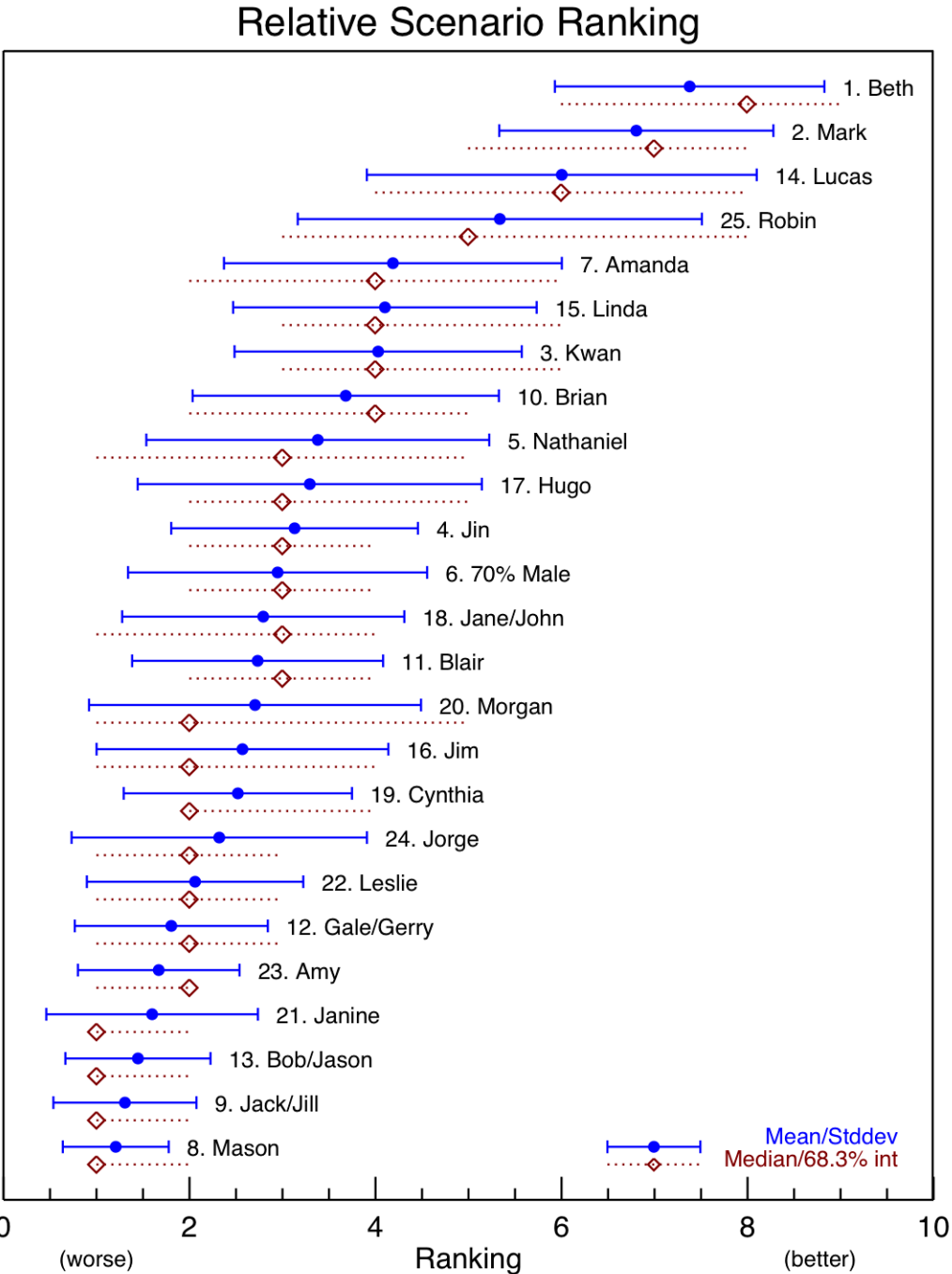
Confronting hypothetical dilemmas can ease workplace problems, argue **Caitlin Casey** and **Kartik Sheth**.

# The "Gray Zone" of Academic Ethics: Results and Reactions

Author: Guest • Published: November 25, 2013 • [2 comments](#)

14. Lucas is a new foreign student in the department and the chair has gone out of her way to pair him with a mentor from his own country. She has also organized a special welcome for Lucas where various traditions of the country were recognized and celebrated.

Ranking Distribution	Caitlin and Kartik's thoughts	Community Thoughts/Reactions																				
<div><p>Scenario #14</p><p>A department throws a welcome party for Lucas, a new international student.</p><table><caption>Ranking Distribution Data</caption><tr><th>Ranking</th><th>Number of participants</th></tr><tr><td>1</td><td>2</td></tr><tr><td>2</td><td>10</td></tr><tr><td>3</td><td>28</td></tr><tr><td>4</td><td>82</td></tr><tr><td>5</td><td>62</td></tr><tr><td>6</td><td>68</td></tr><tr><td>7</td><td>82</td></tr><tr><td>8</td><td>75</td></tr><tr><td>9</td><td>55</td></tr></table></div>	Ranking	Number of participants	1	2	2	10	3	28	4	82	5	62	6	68	7	82	8	75	9	55	<p>Some might perceive this as uncomfortable or demeaning to Lucas and his ability to adapt to a new culture, whereas others might see this as welcoming. Whether or not this is appropriate would depend on Lucas' level of comfort with the welcome celebration.</p>	<p>"Seems nice but it's -- in my opinion -- actually bad. Giving support and a nice welcome to a new employee should be common practice. But wouldn't it be much more helpful to give him/her a chance to get acquainted right away with the habits of the new culture?"</p> <p>"This depends entirely on how other incoming researchers/faculty/students are treated."</p> <p>"Making new people feel welcome is great, but singling out one's nationality while doing so seems a bit ham-handed."</p> <p>"Is very desirable, don't get me wrong, but seems a bit far fetched and could be construed as favoritism."</p> <p>"This would be great if they'd got the students permission and input first, I'd probably be up for that if I was moving country. However if someone did it without asking me, it would come across really patronising and feel like I'm being singled out."</p>
Ranking	Number of participants																					
1	2																					
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Jorge is working on a paper which he thinks is ready for submission. He sends the paper to the collaborators for comments but does not hear back for a few months even after repeated requests for comments. Eventually, he insists on submitting his paper with or without their comments and offers them the option to step off the paper if they would prefer. In response, his senior collaborators threaten to report him to the journal and threaten to tarnish his name to any future employers, claiming that he is unethical because he has submitted a paper without the approval of the co-authors.

- This is bullying
- Jorge gave ample time to provide comments or remove themselves from the paper
- How to improve? Have an agreement from the beginning about both parties' expectations



Morgan is interviewing for a faculty job at a University. During the more “casual periods” of the interview (dinner, coffee), Morgan is asked several times by different faculty members, “Do you have kids? Are you married? Are you in a relationship?”

- This is illegal in Germany
- It is inappropriate to ask prior any job offer
- Committees should judge candidates on their capabilities and professional skills, not their personal situation.
- Candidate may fear that the answers will impact the search committee’s decisions.
- Candidate is welcome to volunteer this information during an interview if it happens to come up
- How to improve? Have a prior agreement with the committee about the questions and stick to the plan

Mason gives a talk at a conference on some unpublished, new work. A senior scientist in the audience is skeptical of the work and tries convincing Mason it is a waste of time. Mason tries to engage this senior scientist in a dialogue about the work over email but doesn't hear back; later that month, the senior scientist posts a submitted paper on the arXiv based on Mason's idea but does not credit nor acknowledge Mason.

- This is plagiarism
- Mason might like to complain to the journal or the senior scientist's home institution, he/she might find it difficult if there isn't a clear body of evidence that the idea was first presented to the senior scientist during Mason's conference talk .
- This is less straightforward if the senior scientist had the idea prior to Mason's talk; in that case, it is not plagiarism, but it still qualifies as undesired behavior, especially since Mason made an effort to contact the senior scientist to engage in a dialogue.
- How to improve? The senior scientist could have acted in a more positive way, by not trying to dissuade Mason from working on the topic and responding to Mason's emails.

Blair, a student, feels very uncomfortable in the astronomy department because there are problems with senior faculty bullying, taunting, and harassing other students. Blair would tell the department chair how uncomfortable and hostile the environment has become, but decides not to because Blair fears that as a result, the chair (and the faculty responsible) would no longer take Blair seriously as a researcher.

- This constitutes a hostile work environment, not just for the students who are experiencing the bullying, but also for Blair.
- Blair could take the complaints to the department HR officer instead, and the HR officer should make it clear that students can come to him/her with complaints
- How to improve? It is the responsibility of the faculty and primarily, the faculty chair, that the workplace environment is healthy, and that the students feel comfortable discussing their problems openly or otherwise have clear resources for resolving problems.

# MPIA Code of Conduct



MPIA has a clear guideline for all employees to ensure a positive, supportive work environment.

The code of conduct outlines:

1. Appropriate/inappropriate behaviour at the MPIA
2. Who can help resolve conflicts/crises and how

<http://intranet.mpia.de/intranet/dignity-at-work>

# Sexual Harassment

- ...is **completely unacceptable** and **against German Law**
- It includes:
  - lustful remarks, comments or jokes about a person and their family
  - gestures and non-verbal comments with a sexual reference
  - unwanted solicitation of and/or pressure to engage in sexual acts
  - unwanted bodily contact
  - exploitation of dependency in the job or trainee position
  - display of sexist and pornographic images

# Sexual Harassment

- ...is **completely unacceptable** and **against German Law**

- It inc

**This is not an exhaustive list.**

**If you are uncomfortable,**

**speak to someone!**

- lus
- ges
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- display of sexist and pornographic images

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# Bullying

The code of conduct gives the following examples:

- slandering employees and their family members
- spreading rumors about employees or their families
- deliberately withholding information necessary for work or intentional misinformation
- threatening, humiliating or insulting
- treating with scorn or aggression
- unworthy treatment by managers and/or coworkers

# Bullying

The code of conduct gives the following examples:

- slanders
  - spreads rumors
  - deliberately humiliates or intimidates
  - threatens
  - treats in a hostile manner
  - unworthy treatment by managers and/or coworkers
- This is not an exhaustive list.**
- If you are uncomfortable,  
speak to someone!**



# Bullying

***Bullies are mostly unaware their behavior has such negative effect on others. Often they think it's humorous.***

**Examples of bullying in an academic workplace include:**

- Sending unjustified, rude emails.***  
***“you don’t know what you’re talking about!!  
how stupid can you be?”***
- Sending unwelcome, threatening emails.***  
***“do \_\_\_\_ or there will be consequences which  
you don’t want to know.”***
- Not acknowledging another’s concerns.***  
***“what? there’s no conflict of interest! don’t  
be silly”***
- Passive bullying by perpetually ignoring others’  
time-sensitive requests.***
- Yelling or irrational physical behavior.***  
***“IF YOU DON’T SHAPE UP, YOU’RE OUT!”***
- Stereotype-driven bullying.***  
***“Oh Jane, you’re being such a girl!”***

# Student/Postdoc Representatives

- can guide you to the best person to help
- they DO NOT act as mediators, counsellors or resolve crisis situations



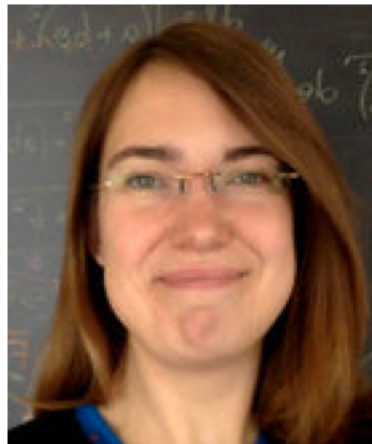
Diana Kossakowski



Vincent Carpenter



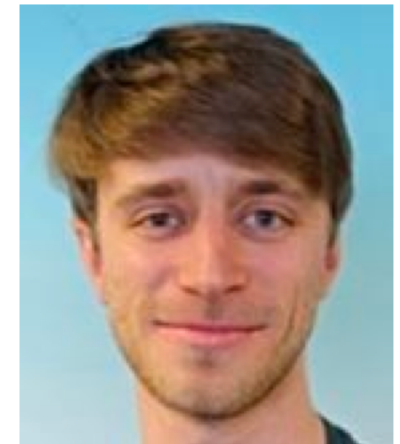
Felix Bosco



Gesa Bertrang



Allison Merritt



Jan Rybizki

# Science Ombudsperson

- is there to address cases of **scientific** misconduct
- is NOT answerable to anyone else (in particular not to the Institute's directors)
- can help to identify and pursue appropriate actions



Coryn Bailer-Jones



# Conflict Coaches

- are in the role: 01.01.2017-31.12.2019
- follow up on information and complaints when requested
- advise and assist the parties concerned
- work out possible ways to resolve the problem



Knud Jahnke



Silvia Scheithauer



Peter Bizenberger

# Equal Opportunity Officers

- are obliged, by law, to protect employees facing discrimination based on gender
- are required, by law, to protect employees facing sexual harassment and resolve reported cases of sexual harassment
- can assist in cases of bullying/harassment
- \*\*You and/or the EOOs can also seek advice or additional help from the Central MPG Equal Opportunities Officer – who must also keep information confidential



Melanie  
Kaasinen



Rebecca McElroy


# Human Resources Department

- may become involved in a serious case, once action is required, but
- is not the first point of contact in a crisis situation (although Frau Apfel can certainly provide support and suggest who to go to)

**How to create positive  
change?**

# What are we doing to improve this situation?

1. Recognize
2. Listen
3. Talk
4. Amplify the message



**On all levels**


**Intent ≠ Impact**

**Say or do something. Talk to the victims in a supportive way, and seek conflict resolution with the perpetrator but also be aware of victim's wishes. The worst thing you can do is nothing.**



# Increase the # people from underrepresented groups in committees

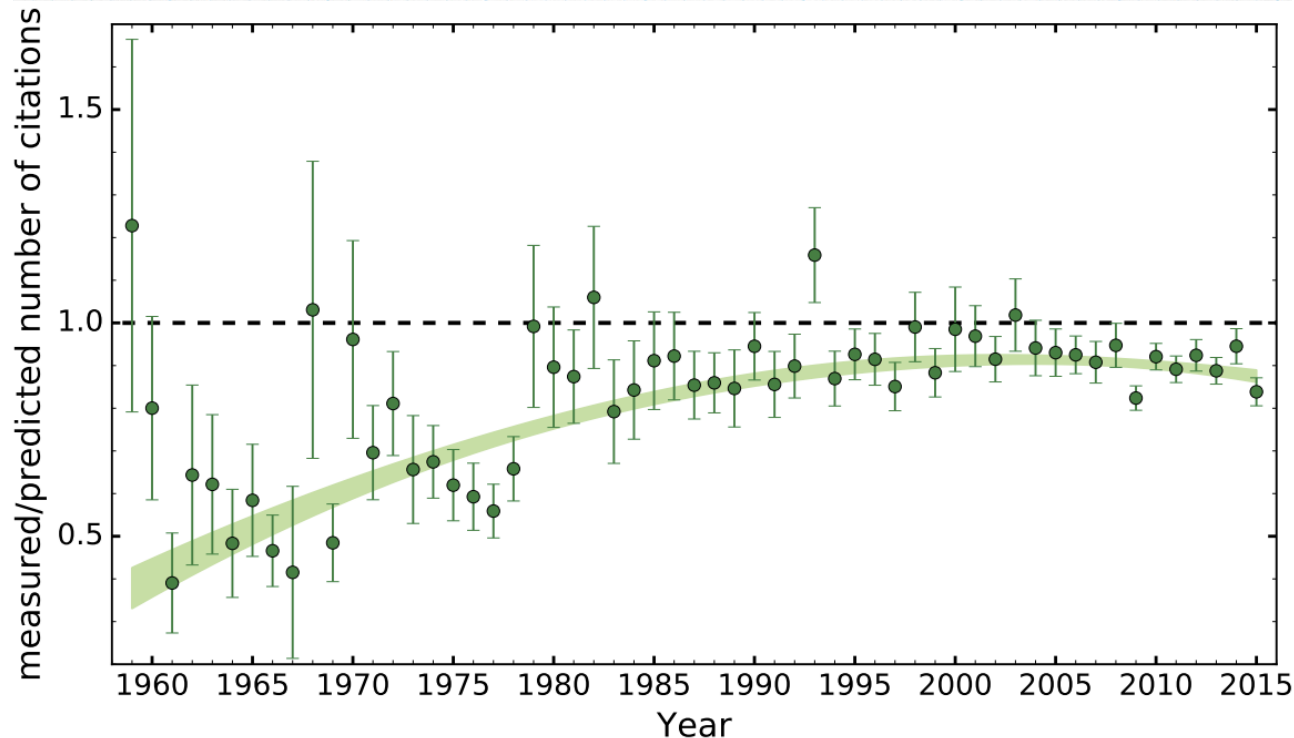
Studies show that the proportion of women in committees influences how female candidates were rated & whether they were recommended for hire.



Proportion Women in Pool	12.5%	25%	37.5%	50%	100%
<i>Evaluator Ratings*</i>					
Qualified	4.3	4.7	6.8	7.1	6.5
Recommended for Hire	3.7	3.6	6.2	6.1	5.7

# The criteria to hire people (on all levels) should be fair

Jane and John are new faculty members in a male-dominated department. Jane is told that she must serve on more faculty committees than John because they need a woman.



Caplan, Tacchella & Birrer (2017, Nature Astronomy)

- If we need more women as speakers and in more committees (TACS, hire, SOC), they will have less time to work on papers
- Studies show that women have less papers and less citations.
- Selection criteria should include different aspects and NOT ONLY publications and citations

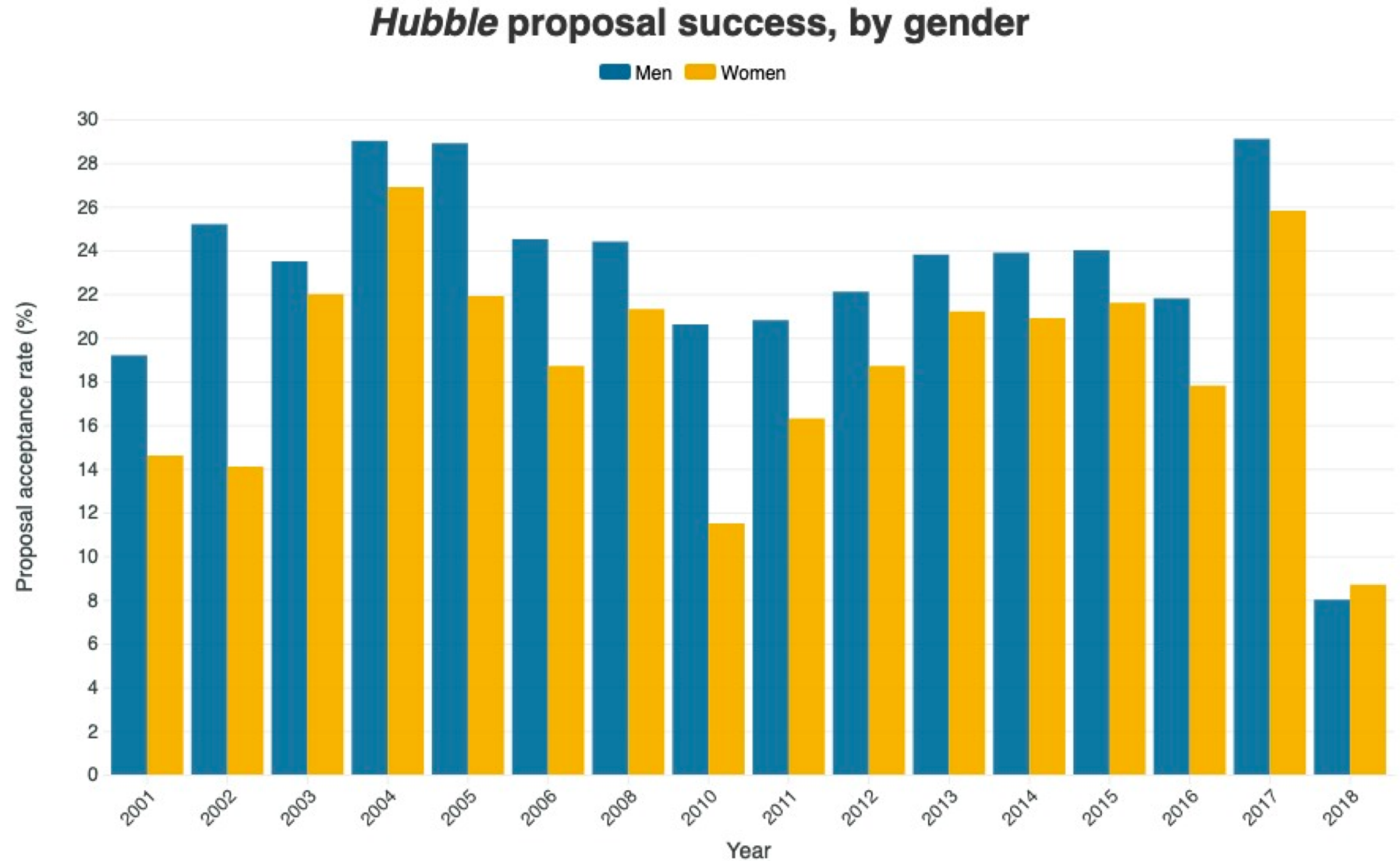
# Increase the # people from underrepresented groups in the pool of applicants



- Invite minorities to apply
- Make sure to show interest on their research. Don't make feel the candidate that this is just to fill some numbers
- As a committee member: open to hire unexpected candidates

# Dual-anonymous peer-review process

When dual-anonymous review was implemented, women fared slightly better than men



# Have my recommendation letters been biased for female/minority students?

A tool to analyze the language in a letter of recommendation, searching for gender-based biases

<http://slowe.github.io/genderbias/>

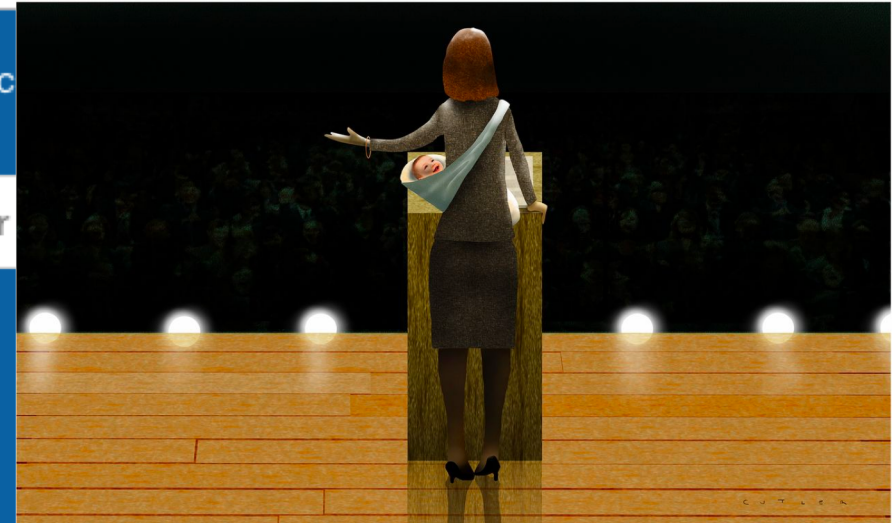
## Gender-bias calculator

This calculator is derived from [the version made by Thomas Forth](#) which was, in turn, inspired by this [AWIS blog](#) post on gender biases in recommendation letters. The blog post and [the scientific paper](#) it is based on also explain why this gender bias is important. Thanks to [Dr. Karen James](#) for the inspiration. Privacy note: no content you test here will leave your browser as all the calculation is done in this page.

Try an example!

Write or paste your recommendation letter here. Words that are more often associated with women will be added to the female list. Words that are more often associated with men will be added to the male list.

# Tackle the childcare–conference conundrum



NEW RESEARCH IN

Physical Sciences

Social Sciences

## Opinion: How to tackle the childcare–conference conundrum



Rebecca M. Calisi and a Working Group of Mothers in Science

PNAS March 20, 2018 115 (12) 2845–2849; first published March 5, 2018 <https://doi.org/10.1073/pnas.1803153115>

Offer day care for  
ALL participants

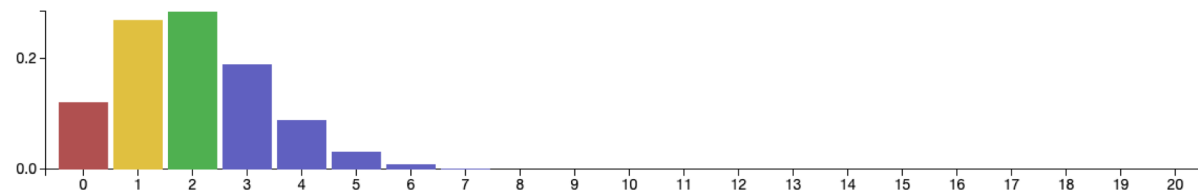
# How many female speakers would you expect at a conference, given the number of speakers and the fraction of women in your field?

## Conference Diversity Distribution Calculator

<http://aanandprasad.com/diversity-calculator/>

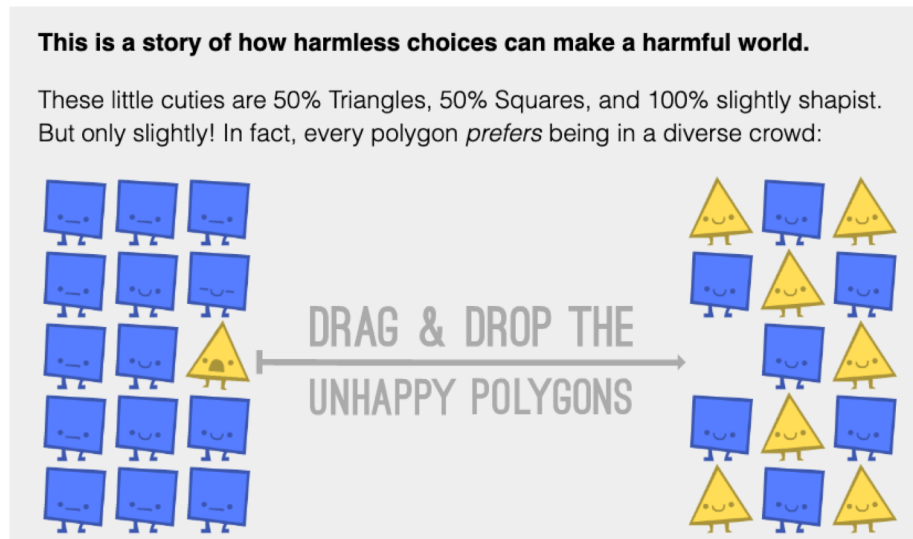
### Conference Diversity Distribution Calculator

How many  would you expect in a random selection of  people, assuming they constitute  % of available speakers?



# Online tools: interactive illustration of how subtle biases can create a segregated society

<https://ncase.me/polygons/>





# More recommendations by AAS



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**SHARE**

Share

## **Inclusive Astronomy Nashville Recommendations**

Wednesday, February 8, 2017 - 08:23

What's said here, stays here;  
what's learned here, leaves here

**Thank you for your time  
and participation!**