Female faculty: Why so few and why care?

Chemistry, Tulane University, New Orleans, USA, 2000

Since I left 2003, no new woman recruited (until 2018)

Gender issues in academia but related to diversity broadly

Nordita Gender, Diversity, and Inclusion Symposium
February 10, 2022 @ZOOM
PERNILLA WITTUNG-STAFSHEDE
Professor, Biology and Biological Engineering Department
Chalmers University of Technology, Sweden
We build our views from our experiences...

**My scientific background**

- **Professor Chalmers University**
  - PhD Chalmers 1996
  - Postdoctoral fellow Los Angeles 1997-98
  - Professor New Orleans 1999-2003
  - Professor Houston 2004-08
  - From 2015: Professor Chalmers University

Protein folding, misfolding and binding - towards cancer and neurodegeneration, but basic science research.
Why do I talk about this?

• When in America, did not think much about gender inequality. Happy to do well in a male dominated world, feeling special
• I was foreigner (had to fight harder); but at Rice, started to ‘see’ more. My dean did not promote me because of kids; activities in ADVANCE program via NSF
• When back in Sweden 2008, surprised… Sweden thought to be ahead (problem solved) but inequality still existed
• Made me write my first debate article*

So, ’family friendly’ but not ’career friendly’…

The more senior I get, the more I realize the problem. I am in a position to speak up - I must do it, for younger colleagues and for my kids

*http://www.stemwomen.net/is-the-gender-gap-solved-in-liberal-sweden/
**http://www.weforum.org/

2021 Global Gender Gap Top 10**:
USA position 30, Afghanistan last on list at position 156
So, when you talk about...

Gender issues...
Inequality...
Promotion of women...
Sexual harassments...
Family planning, childcare etc.

There are several common responses (or, truly, resistances)!

My approach:
Identify these responses and address them with scientific evidence

We have many personal stories; important to know there are real facts too
The most common responses

• There is no problem
  *Denial of anything wrong*

• It is a women’s problem
  *Nothing I can do - it is biology*

• Not me, done training and follow policies
  *Today, everything equal (I am fair!)*

• It is not my problem
  *I do not care, does not affect me*

• Too much already
  *Complain about details*

  **Today:**
  - Show that these responses are **wrong**
  - Some suggestions for actions
  - What we started at Chalmers

See Kamerlin and Wittung-Stafshede, Chem. Eur. J. 2020, 26, 8319 for many references
There is no problem

Well, there is!
Few female faculty in Sweden

First Swedish professor: (state university) Nanna Svartz KI 1937; (private university) Sonja Kovalevsky Stockholm College 1889

- The higher the rank, the fewer the women;
  17% of professors are females 32 persons (worst in Sweden)
- Average Sweden: 29% female professors

1% increase in women per year

When 25% females at top reached, progression often stops, universal trend in many professions
Not lack of female candidates

- University students have been fifty-fifty (or a bit more females) in Sweden since the 1970s
- Thus, men are somehow enriched in academia...

’Leaky pipeline’ and ’glass ceiling’
...same trend in all of Europe...

There is a problem!

- EU statistics: concentration women/men at highest academic position (professor) vs. countries

- Sweden is average in EU
  Around 8.5% of women in academia are professors, whereas 19% of men in academia are professors

PS. Women often more responsibilities at home and also 'academic household work'...

And there is pay gap against women...
In Sweden: 13% (10% at Chalmers)
It is a women’s problem
OK, let us be very clear

There are variations, but as much within as between the genders

- ambition
- intelligence quotient
- analytical ability
- cognitive performance
- problem solving
- verbal processing
- social variables

There is NO GENDER DIFFERENCE IN ABILITY

CONTRARY, GIRLS DO BETTER IN SCHOOL

So what is it?

Gender similarities and differences, Annual Review of Psychology, 2014, 65, 3737
Dispelling the Myths of Gender 'ambition gap', Boston Consulting Group, 2017
Popular term nowadays, many universities started such training. Sounds good, but does not work (more than for 10 min).

Illustrate concept with a cat and a cucumber:
Jumping to conclusions...

- We have built-in expectations
- Historical and cultural norms rule in society

Harvard implicit association test:

Science with men 72%
Science with women 10%

It is not a women’s problem!

e.g. *Blindspot: Hidden Biases of Good People* M Banaji and A Greenwald, 2016, Bantam
Not me... done training and follow policies

I am fair!
Again, skewed norms rule

Male associated words

Female associated words

- Words used in recommendation letters
  We would all hire the man...

- Female teachers rated lower by students for same output in all fields
  Female teachers often valued for looks, sexuality etc.

Important, this data often used in promotion cases...

Women among awardees
Women among professors

- Women less likely to win major awards
  Some awards never given to a woman

Bias against women all over

- Women needed double *nb.* of publications to get same competence score for Swedish research council grants  
  Wennerås & Wold, Nature 1997
- Many *(prestigious)* granting agencies have lower success rates for women

**ERG AdG success rates**
25% of applicants, 20% of grantees

**NIH success rates**

Better today? Still positive bias for men  
Holst and Hägg, F1000 Research 2018  
Johnson and Kirk PASP, 2020

Often funding agencies make it ‘too easy’  
They aim for % female applicants = % females granted
Bias against women all over

- Harder to get published if senior author is woman; such papers get less citations…
  - The gender gap in science: How long until women are equally represented? PloS Biology, April 19, 2018

- John/Jennifer despite same CV
  John more likely to get job and offered higher salary
  (Moss-Racusin et al. Handelsman, PNAS 2012)

Both men and women show bias...

Negative spiral Women disfavored in every step, they get less merits and, eventually, leave academia

No, we are not faire (yet)
It is not my problem
Homophily is not most successful

- Homophily means ‘men choose men’ Because women are in minority, they are tough against other women to survive
- Complicit masculinity flourish, meaning men quietly support the culture
- But we need women’s different perspectives to solve the world’s problems The population IS diverse

Diverse teams publish higher impact papers and do better science! (that’s what we want)

*Strength in diversity*

Richard B. Freeman and Wei Huang reflect on a link between a team’s ethnic mix and highly cited papers.


More diversity, better science

• Diversity and gender balance give higher scientific success and improve work environment/climate for all

Females and minorities contribute to papers with highest scientific novelty

Critical mass of 15-30% females needed to get effects

Gender equality is not about ‘being kind’ it is about success!

Goshi. By whom and when is women’s expertise recognized? Adm Sci Q 2014 25(2):202–239
People say we nowadays have to be too politically correct, one cannot give critique anymore to women as everything will be taken as a gender issue...

Too much already...

I expected no gender problems in Swedish academia when I returned to a full professor position in Sweden after 10 years as faculty in the United States. I was mistaken.

- Professor Perilla Wittung-Stafshede

...this is picking on details, miss the big picture...
Everyday micro-aggressions...

- Tiny, thoughtless, offensive things that people say to women on a daily basis

They build up and eventually we believe in them...

Maybe not OK anymore, but still happens...
“A male professor came up to me when he found out that I was very interested in equality issues, he told me that this ‘equality nonsense’ is a waste of time and will never have an impact in academia.”

“I was told by a male professor that there are so few women on Chalmers because women and men have different brains and that women don’t want to come here because of biological differences.”

“From a professor to another professor at my department (I am a PhD student): Burn out is not a real thing. Females are weaker and that is why they get burned out”

“Question aimed at me from the head of the division at a division meeting: Since you are the only woman here, what do you think about gender equality at our department?”

‘Chilly climate’

This affects women’s confidence... (and work environment)
Gender ‘confidence gap’

• Studies show women under-estimate their confidence men over-estimate confidence
• Women attribute success to others men attribute success to self
• Easier to see confidence than competence…
• Over-confidence in men give higher status and more benefits

Fuels deleterious cycle of gender imbalance

No, not ‘too much’ yet

e.g., Psychological Bull. 1999, 125, 470; Sheryl Sandberg's Lean In, 2013

Men apply more (women less) compared to representation in their fields to e.g., ERC Stadmark et al, Adv Geosci. 2020
Possible solutions

No, women should NOT become men.

Does everyone really want change?
Many men will lose power, things will not be ‘as is’ – scary to some?!

Me? Sexist?
But I LOVE women!
The gender harassment ‘iceberg’

Over the waterline: Sexual harassment Illegal... Got attention after #metoo!

Below the surface: Micro-aggressions, comments, biases, stereotypes...
Legal...

‘Melt all the ice’

Policies, laws, vice-chancellors cannot melt the ice... we all together must change the academic culture (i.e., heat the water)
No magic bullet but many things

- Gender equality at top of strategic agenda
- Strong and active leadership in each department
- Tailored work, every department differs
- Collect data, act on it, be open with facts
- Educate everyone, become aware of bias

Combination of female recruitment/support and long-term actions for cultural/structural changes

Key to success is to get majority (i.e., also men) onboard, both formal and informal leaders
In practice, what to focus on?

- Efforts directed towards individuals, culture, or organisation
- Targeted or general strategies such as:
  - Recruitment and hiring procedures
  - Processes of promotion and tenure
  - Accountability structures
  - Training/education of institutional leaders
  - Faculty education and development
  - Assess departmental climate/culture
  - Mentoring and network activities
  - Give visibility to women and gender issues
  - Support dual careers
  - Flexible work arrangements
  - Special grants to individuals
  - Targeted recruitments

There have been many efforts out there:
ADVANCE (NSF USA), Athena Swan (UK), SAGE (EU Horizon 2020), SAGE (Australian academies)
...but issue is far from resolved...

Excellent resource with research-based advice and strategic interventions (StratEGIC)
https://www.colorado.edu/eer/research-areas/women-science,strategic-toolkit
Real efforts on the way at Chalmers?

- Late 2017, the Chalmers Foundation called for proposals to take Chalmers ‘into the future’...
- This was just after Metoo started; I had brought up ideas for some time but without success...
- A seminar by Paul Walton together with local Metoo stories opened the eyes of the President...
- So, perfect timing: I proposed Genie, it got support by many others, and was selected for funding!

Chalmers, a technical university:
- 13 departments
- 650 base-funded faculty
- 9000 undergraduate students
- 850 PhD students
- Over 3000 employees
Gender Initiative for Excellence, Genie

...to increase success and excellence at Chalmers!

What makes Genie stand out:

1. Money - 300 MSEK (30 million Euros)
   largest gender initiative ever in academia
2. Long term (10 years, 2019-2028)
3. Spans the whole university
4. Lead by faculty (me and Mary Sheeran)

• Goals
  Gender equal culture and systems;
  increased female faculty (40% female professors 2028; same opportunities for success, inclusiveness)

• How? (KEY)
  Many concrete efforts on many different levels, not ‘one solution fits all’

Genie aims to catalyze action - help (but not force) the departments
**Big picture Genie concept 2019-2021**

**GENIE**

**Leadership group**
- **Steering group**
- **Advisory board**

**Central actions**
- Various funding initiatives; support to departments for female recruitments; education, awareness etc.

**Locally in departments**
- Help with tailored actions (around recruitment, culture, leadership, processes etc.), money, feedback, guidance

**So far: Published 2018, 2019, 2020 data (positions, sick leave, salary vs gender)**
- New questions in employee survey 2019, 2020, 2021 to try to measure culture
- Assess academic household work, promotion time vs gender etc.
- Collect good examples around campus and spread

**So far: Guidelines for recruitment of top female faculty (2, +2 ongoing), female visitors (11); internal transfer to base-funded faculty positions (4); assistant professors (6); postdocs (15) and PhD students (3)**
- Open call for internal projects (gender + research/teaching; 30 funded)
- Seminars, informal meetings, mentoring, networks
- Support to bottom-up ideas
- National and international outreach

**Where are we now? Honest reflection**

**Measure and analyze**
- Gender-divided data from CTH databases, employee survey data, follow PhD student, key measures etc.
Challenges

- Not easy to get leaders and faculty to prioritize
- Hindered by bigger university problems
- Want action but often hampered by bureaucracy
- Numbers not changed yet (except Assist Prof level)

Successes

- Built trust for Genie
- Academic agenda in focus
- Improved awareness
- Increased engagement
- Hired great women to faculty
- Visibility of initiative is positive for Chalmers reputation

Reading suggestion with details:

What we all can do – now!

- Push on your leaders to act (in department, university, national agencies and scientific societies)
- Speak up when things are wrong (be the awkward one)
- Get engaged in gender topics (collect data, organize seminars/education etc.)
- Highlight, support (like men are supported) and encourage women (nominate for prizes, start networks, mentorships etc.)

Real change will take time
All small actions are important
The more onboard, the easier it gets

Thank You!
Feel free to contact me
pernilla.wittung@chalmers.se
www.chalmers.se/genie