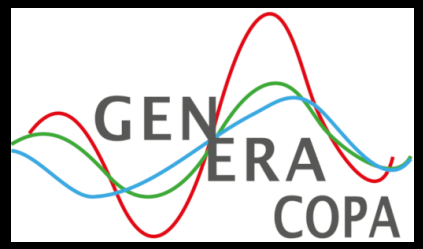
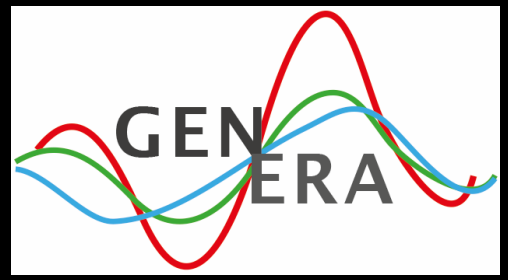


PUSHING
THE FRONTIERS
OF INNOVATIVE
RESEARCH







What works?

How to make our institute an inclusive environment where we all work at our best!

Tomas Brage

Professor of Physics

Lund University

We need to improve the gender balance and diversity among professors! What can we do?

Hmpf!

No really ....



“Leader”

But we do not see any significant progress after 3 years!

Employ more women and diverse people!

Same as we adviced the former leaders! Continue with that!

How did you measure that?



“EDIB responsible”

The problem of measuring success

- Long-term goals are ill-suited to the short cycles of universities

- What short-term goals could reliably lead to the long-term ones?

Suggestion:

➢Use quantitative methods – surveys, ethnographic studies of

➢Well-being, Belonging, Health, seeing a future, non-imposter syndrome …

➢If that is positive, people are more likely to stay!

➢Especially minorities!

Focus

-should always be considered

- Patience and trust
- Cultural change
- Resourced work
- Support for retention and career development
- Change of behaviours, not only attitudes.
- Diversity dimension.



Some recommended actions

Mitigate bias

From awareness training to observers to

Critical friends

Mentorship

From traditional to

bi-focal, transformative mentoring and sponsoring.

Mainstreaming education.

Capacity building

of safety personnel and leaders.

Use qualitative methods to find issues and monitor progress.

Conduct

exit interviews

and analyse

precarious positions.

Promote awareness among applicants and staff of their rights, opportunities and promotion pathways.

Explore

Gender and diversity dimensions

of research and innovation.

Some recommended actions

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Critical friends

From “awareness training” to “critical friends”

Problem: We have during many years worked with **Awareness training**, but

- This method is under critique as inefficient
- – or even counterproductive.
- (But – we should question the critique:
  - What pedagogics?
  - How do we measure success?
  - Will long-term goals work in our short-cycle academy?)

Solution: Observers against unconscious bias work!

➢And extend to go **beyond** only **cognitive bias**!



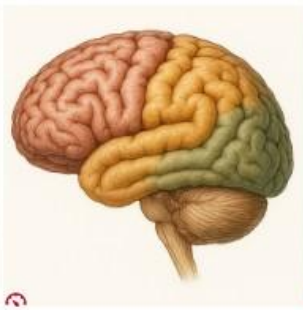
Picture of critical friend against harassment by gemini ai.

Using a wider view of bias as a starting point.

- training modules:



What is bias?



Cognitive bias



Systemic bias



Bias in Career Paths



Bias in Teaching and Learning



Bias, micro-aggressions and harassment



Bias and Academic Values

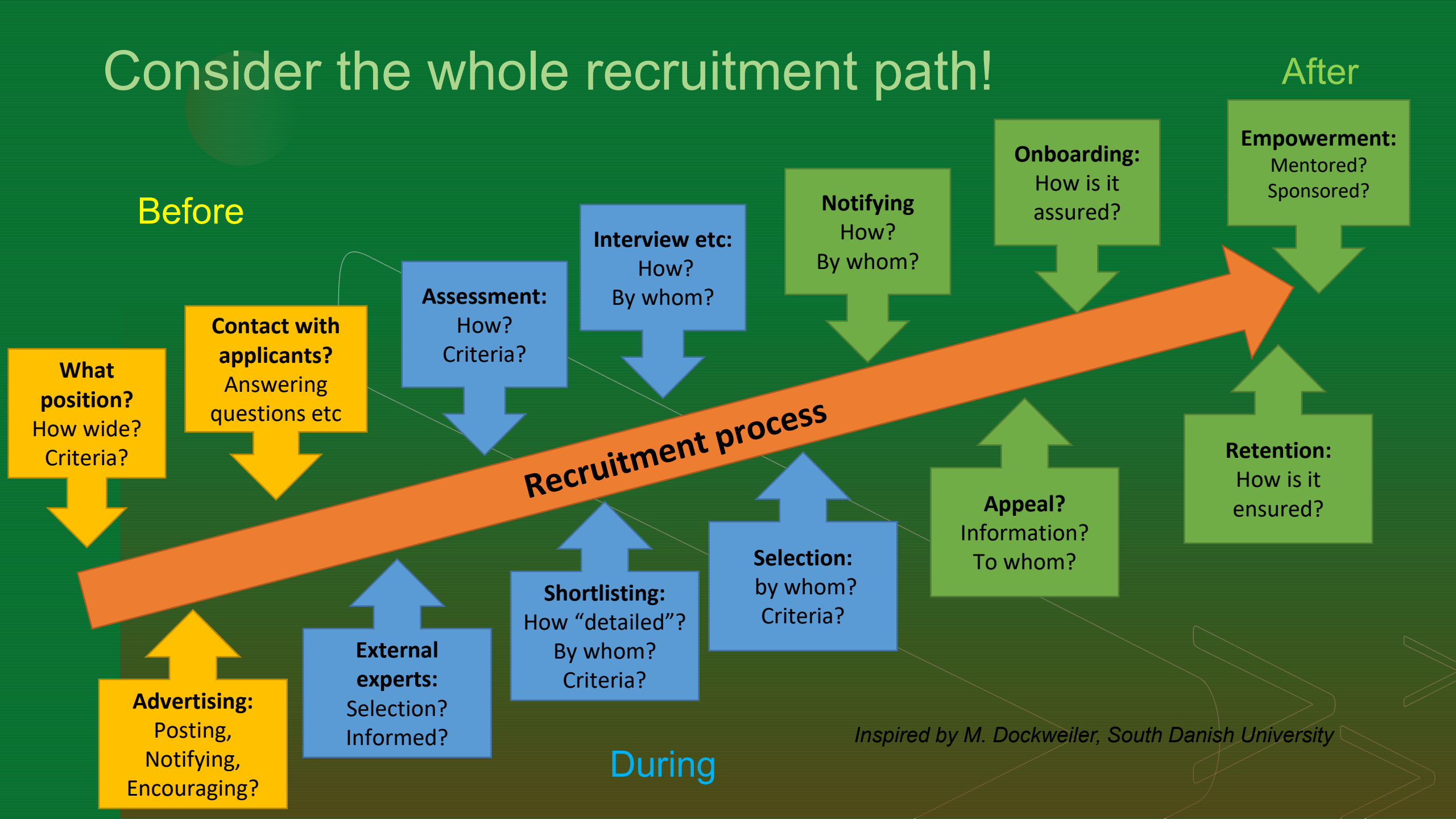


What works?



Experiences of Observers.

Consider the whole recruitment path!



Inspired by M. Dockweiler, South Danish University

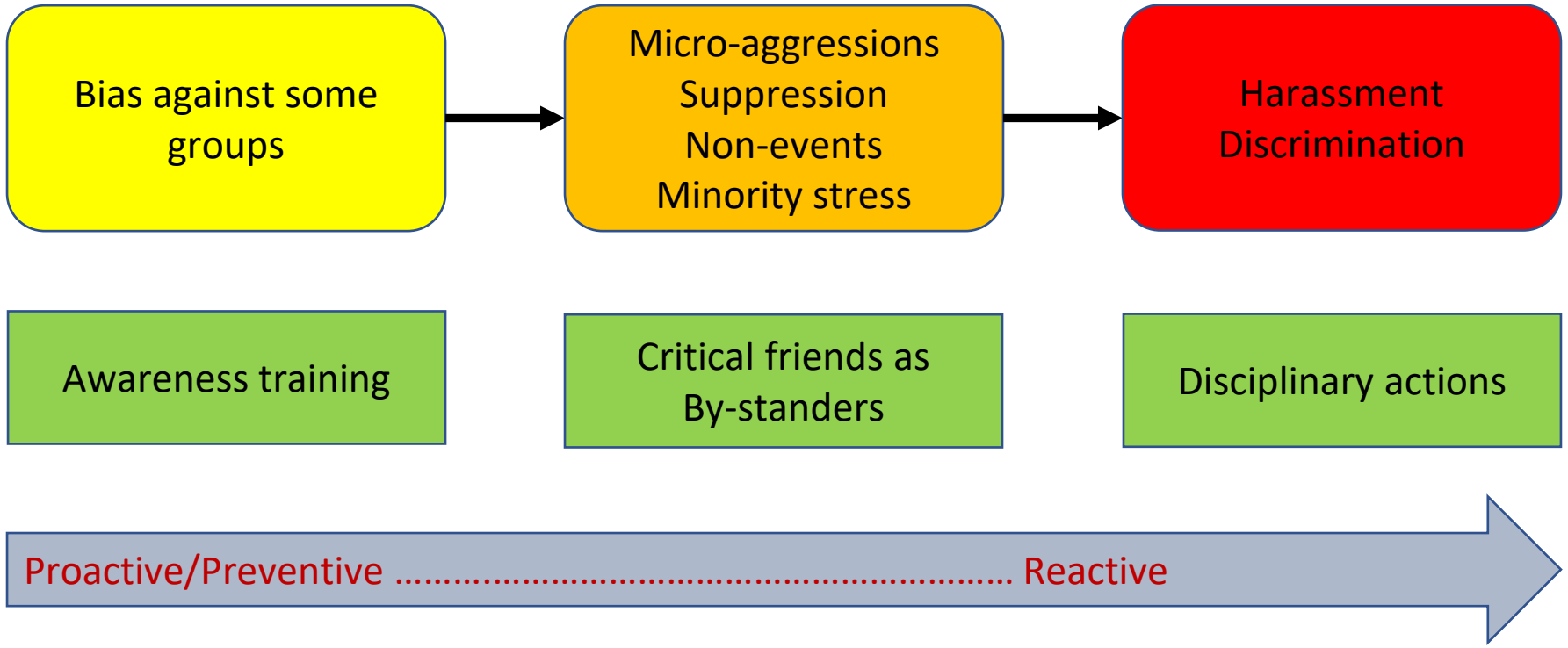
Systemic bias – process hi-jacking

Inspired by: Nielsen 2015 and 2020

Bias is not only psychology …

- **Decoupling**
  - One says: we only look at merits – the best person …
  - One does: non-transparent methods and push for “crown prince”
- **Symbolic boundary work**
  - Justifying through stereotypes, about e.g. risk taking and caring
    - Old sexism: : *“Women/minorities are not fit to or it’s dangerous for them to...”*
    - New sexism: *“Women/minorities do not want to...”*
- **Standardisation**
  - Pretending there are objective, often quantitative measures

Bias leads to microaggressions and harassment



The training

- 2-3 critical friends per faculty appointed by deans
- Six workshops during 2026.
- Homework in groups, from different faculties, focusing on specific issues.
- Sustainability by creating a network of critical friends.
  - Train-the-trainer approach.
- Critical friends can be observers, consultants, by-standers, trainers…
- Exchange of critical friends as observers from the network.

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Summary

- Awareness training need to be combined with other activities.
- Critical friends are identified by deans, urged by the VC.
  - Instead of powerful (and busy) observers.
- Critical friends active locally, where they are needed.
- Sustainability via network and train-the-trainer focus.



Bi-focal and transformative mentorship



Challenges for mentor-programs

- In general quite diffuse in supporting women in overcoming barriers.
- Mentorship and sponsorship
- Official and inofficial mentoring.
- Sustainability?
- Cultural change?
- What about the men – the one that will dominate “the power”?
- And might belong to challenged groups? How about other genders?
- Is one-to-one a good idea, considering safe spaces?



Telemachus and Mentor - But Athena was the real “mentor”

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Three levels of mentoring

Similar to teaching

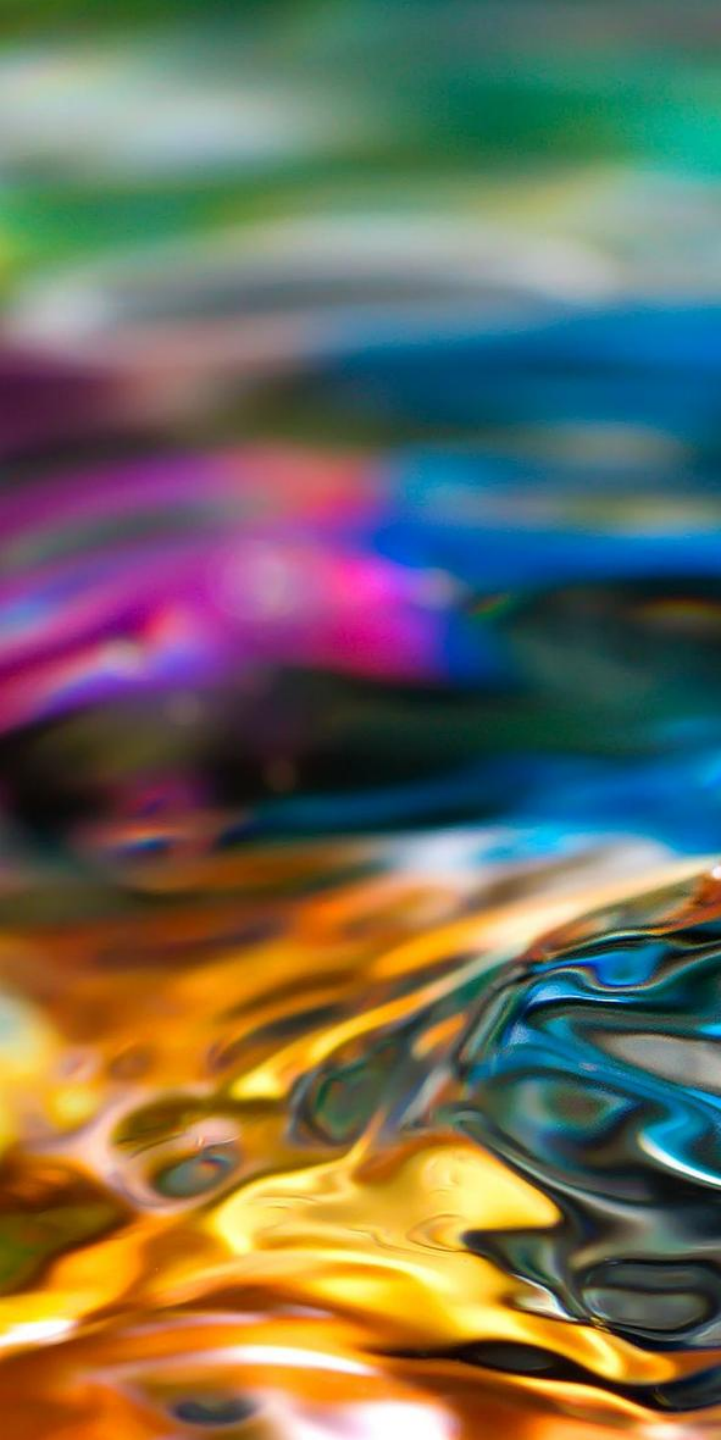
Instrumental	Developmental	Transformative
Knowledge transfer Institutional need “Sage on the stage”	Guiding/Supporting Mentee centred “Guide on the side”	Gender integrated Institutional change “Partners for change”



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What did we do in Lund?





Mentoring for Change

The Lund model

PROGRAMME IDEA AND EXPERT SUPPORT

- Dr Jennifer De Vries, University of Melbourne

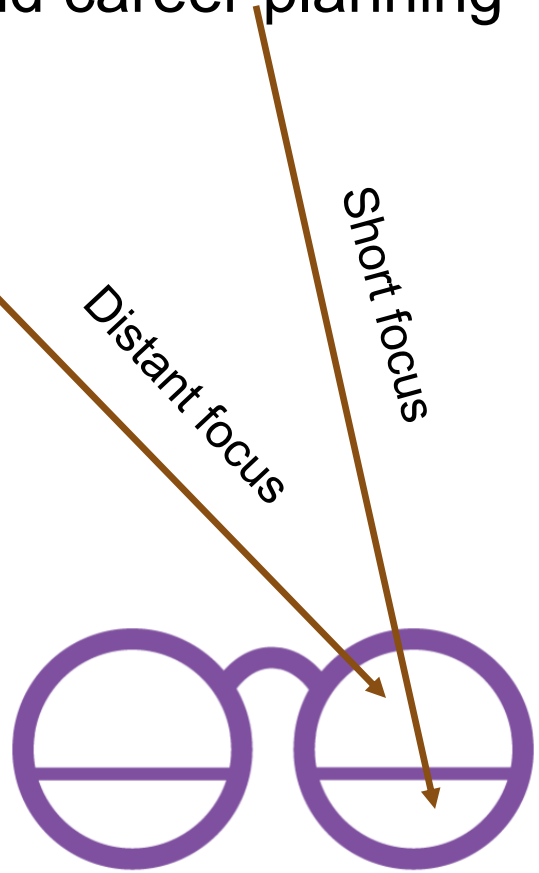
ADAPTATION, DESIGN AND IMPLEMENTATION

- Inger Lövkrona, Ragnhild Möller och Tomas Brage

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1st principle: Bifocal approach

- Individual development and career planning
- Organisational change
- From tricks of the trade
  .. to critical friends



Picture from The 'bifocal' approach, by JENNIFER DE VRIES

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More principles



2nd principle: group mentoring

- Safe space
- double networks – seniors and peers

3rd principle: for all genders

- Men will dominate power for the foreseeable future and are important allies
- There are other characteristics than gender that could make groups marginalised or targeted and fall behind in careers.

4th principle: professionalise mentorship

- Made program to a course and “payed” mentors

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More on bifocal mentorship

- The case of University of Napoli: Picard et Agodi 2020.
- The case of Lund: Lövkrona, Brage et Möller 2019.
- Based on: de Vries & van den Brink 2016

See European network of mentoring programs eument-net

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The training in Lund

SEMINARS

- Mentorship and sponsorship
- Academic culture and power structures
- Microaggressions and discrimination
- Inclusion in academia
- Meritocracy, bias and peer review
- Gender/diversity conscious leadership
- Research funding and grant applications
- Best practices

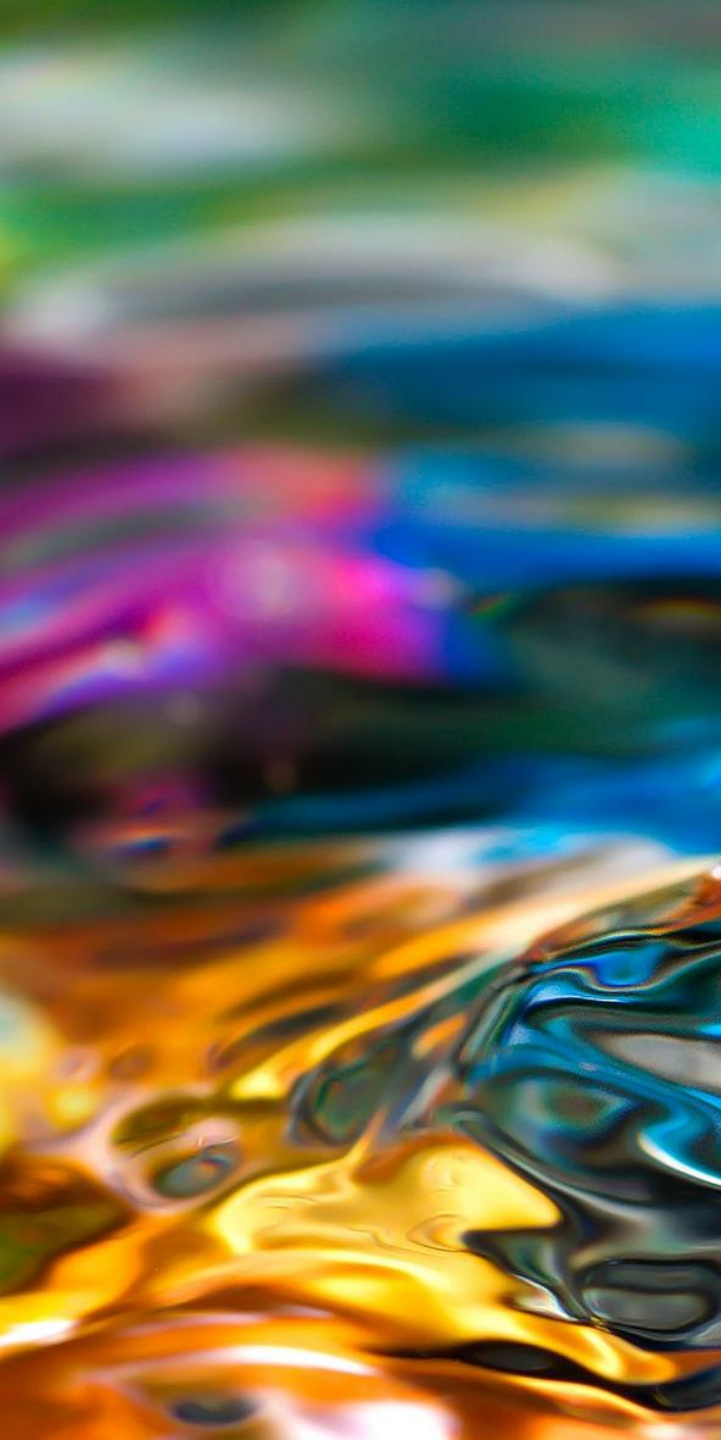
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Some thoughts and advice

- Different mentoring models are not wrong – just different paths and intent.
- It is important to understand the goal of the programme.
- Both mentees and mentors need to participate in training to reach transformative stage. Both can grow!
- In all program you can include aspects of advanced programs, e.g.
  - Bifocal and transformative – how can the system be changed?
  - Creating networks of mentees through meetings.
  - Focusing on sponsorship, not only mentorship.

In a competitive world, mentors who have measured tangible successes in their mentoring path are more satisfied and eager to share their strategies ... all this is much simpler within an instrumental path where one pursues objectives of "performance enhancement" in a culture of performance. I. Masuolli (INFN)

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Extend bi-focal approach?

A sideline:
Can we extend the bifocal idea to other areas?

- Recruitment and outreach?
- Leadership programs (see AKKA in Lund)?

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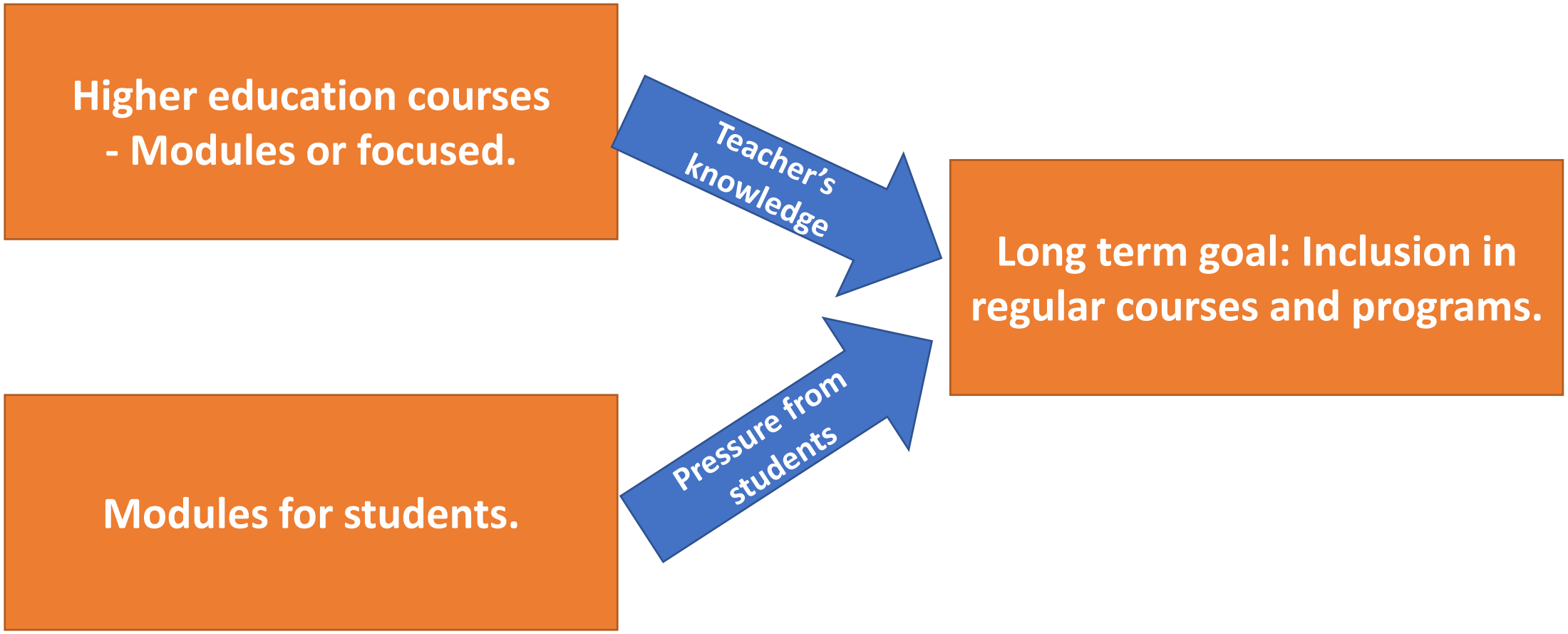

Mainstreaming of education



Goal: Integrate Gender Equality in normal science courses ⟹ Resistance!

- *It is not possible – my subject has no gender (equality) perspective*.
  - Answer: There is literature and good examples for all subjects!
- *There is no place in the programmes*.
  - Answer: we used to be able to prepare our students in 4 years…
- *We don't have the competence to teach this.*
  - Answer: include in compulsory academic teaching courses and create focused courses.
- *We don't have time*.
  - Answer: leadership needs to appoint time. Quality assurance!
- *Ignore it and it will go away…*
  - Answer: leadership, quality assurance, resources, students.

Stepping stones …





Quality assurance of GU

1. **Academic teaching courses**:
   - Modules (discrimination and perspectives) in compulsory introductory course.
   - Scientific Literacy course.
   - Gender in Science and Technology (with students).
2. **Separate modules and courses for students**
   - Compulsory workshop for all first year students (pilots on Physics).
   - Gender in Science and Technology (7.5 ECTS).
   - Physics and Gender, online-course stared 2023 (with SU, 7.5 ECTS).
3. **Workgroup to govern the “Gullviva”-project**
   - Implementation over all faculty (except for Maths).
   - Running workshops for faculty as preparation.

Modules for students – Masters.

Pilot in Medical Physics

- Update of earlier course.
- EnGendered research and curriculum
- Work with GRI in their Research/teaching

Interactive session with final “GRI-paper” on their own research or teaching.



Evaluation from students

- Graded 3.9 of 5.



Evaluation –good comments

- Exciting!
- It was interesting and lifted a very important topic. I found it hard to write the text….
- Took a lot with me from it and it was nice to have this regular lecturer in it as it shows that it is something the faculty are aware that they are not doing perfectly and are working on it.
- It is always good to reminded of even preconceived notions and applications in physics that made it even more relevant.
- Well done, I felt that it was clearly explained why equality and diversity are important for everyone. And the lectures felt engaging.
- Very good and interesting lecture…



Evaluation –bad comments

- Not so good discussion … over Zoom.
- Don’t remember it – so I gave it a 3.
- Don’t remember what we did.

- To much b-s!

Gender and diversity dimensions in research and innovation ... when it is not obvious



GeDiMIRT

GeDiMIRT – Gender Dimensions in Physics and other Math-Intensive Research and TEaching

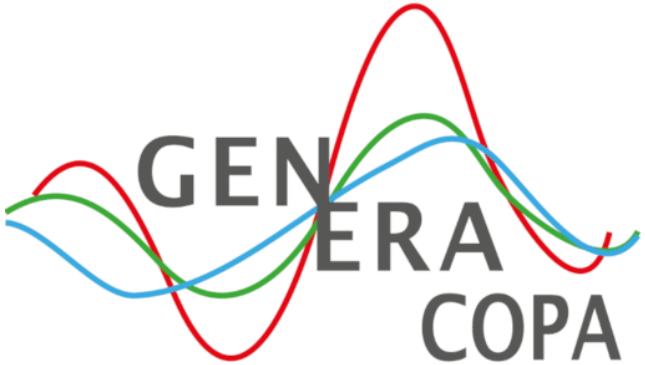
GENERA conference in Lund June 22-23, 2022.

Talks in Youtube channel

https://www.youtube.com/playlist?list=PLXGHXpAti7oG5QJHfT9qt-rPGrcPAT0ji



Erasmus+ project



Focusing on researchers and teachers in math-intensive fields.

1. Developing workshops – examples:
   - Inclusive teaching.
   - Gender dimensions in math-intensive fields.
   - Gender/diversity in knowledge production.
   - Bias and how to mitigate it.
   - Culture change in math-intensive fields.
   - Mental health.
2. Mentorship training.

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USE QUALITATIVE METHODS!

Two examples from Lund

1. **Undergraduate students** – what are **attractive and "toxic" environments** in Physics?
   - Ethnographic study of a Master student from Culture Science.
   - Inititative from students, support from Physics and Culture Science.
   - Discovered many "hidden" groups
     - Neurodiversity – overrepresented, but we are not prepared enough.
     - LGBQTI+ - visible, but where are the staff? Microaggressions (misuse of pronouns, not prepared for discussions)
     - Non-Swedes – marginalised by the language.
     - …

2. **CODEP – the Culture Of the Doctoral Education in Physics.**
   Performed by Gender Science post-doc.
   - Initiative from PhD-students, supported by Department.
   - A combination of survey and interviews to study marginalised groups.
   - Belonging, support, mentoring/sponsoring …

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Thank you for your attention!

Conclusion:
There are a lots of studies and research, and you have experts “close-by” – use them!
… to be successful and avoid fatigue!
Inform and remember that change requires patience, resources, time and commitment.
Create allies and collaborations, to find good examples.
And remember that well managed diversity leads to safer environment AND better research!