



NU FACT

Diversity and Outreach in Research

Mia West (she/her)
on behalf of IPPP EDI group.

@ IPPP_EDI - Durham
(@ microbin.west)

WG7: Inclusion, Diversity, Equity, Education and Outreach.

What's in this talk?

- What Is EDI?
- Why I think you should care about EDI Outreach.
- Barbie references (sorry if you haven't seen it...)
- I won't talk about university policy in this talk.

Tiny bit about me

... I co-run a weekly seminar series at IPPP, Durham.
... You can usually find these lovely people there.



Tiny bit about me:

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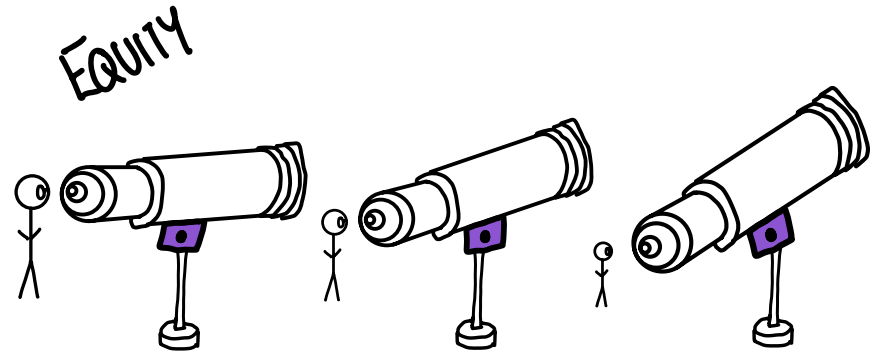
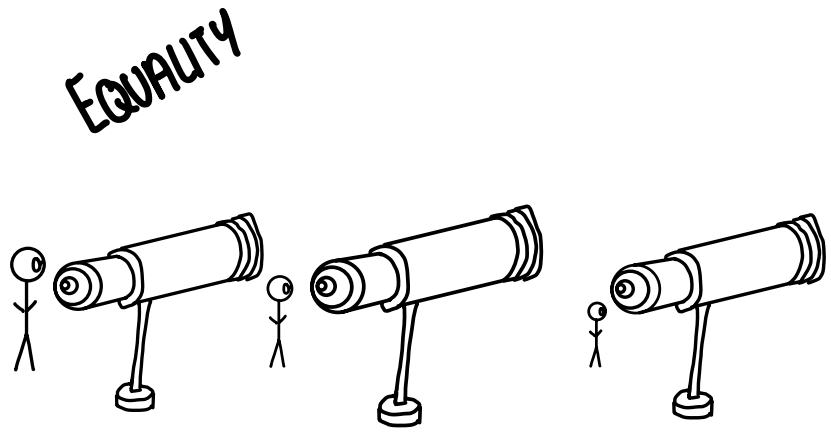
- ... PhD student in IPPP, Durham University.
- ... Usually work on the Higgs EFT. (imposter?!)
- ... White, neurotypical, straight woman who went to a good school.

Am I the *EDI* oracle?

1. If one exists, it's definitely not me.
2. I don't think one does exist.
3. Doesn't mean we shouldn't try!
↳ or even could

What is [EDI]?

Equity



What is EDI?

Diversity

Diversity of ... background

gender

culture

What is [EDI]?

Inclusivity 

ie Not just making sure we have diverse
physics departments, but places where
everyone is welcome.

Why Is EDI Important?

Moral Reasons

Every human being deserves to

- be respected
- be treated with dignity
- have their contributions valued.

'Physics-ish' Reasons

- A diverse workforce is provably more effective. [1]
 - Higher productivity [2]
 - Greater innovation [3]
- People who feel their contributions are not respected are less likely to contribute. [4]
- Expanding 'talent pool'.

[1] C. Bonifazi et al. "Diversity Equity and Inclusion in Particle Physics", Snowmass 2021, arXiv:2209.12377

[2] www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-wins-how-inclusion-matters#

[3] B. Hofstra et al. "The Diversity-Innovation Paradox in Science", PNAS Vol. 117 No.17 (2020)

[4] D. van Knippenberg, S. Halsam & M. Platow (2007); D. Van Knippenberg, W. van Ginkel (2010); D. Van Knippenberg, W. van Ginkel & A. Horman (2013)

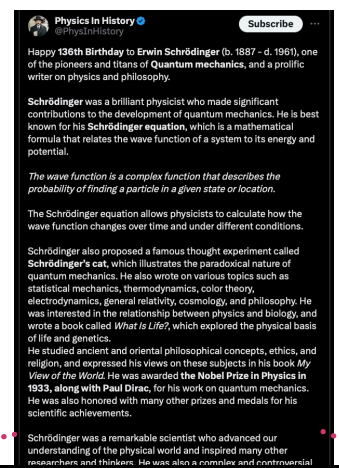
There is a LOT that needs to be fixed!

In the Independent... (2016)



(2023)

A 'happy birthday' tweet for Erwin Schroedinger...

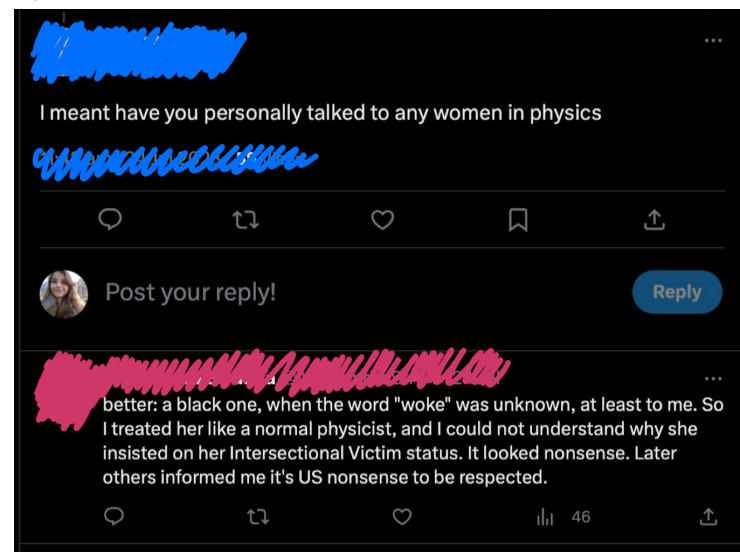


This is all praise

Schrödinger was a remarkable scientist who advanced our understanding of the physical world and inspired many other researchers and thinkers. He was also a complex and controversial person who had unconventional views on politics, morality, and spirituality. He died in 1961 in Vienna, his birthplace.

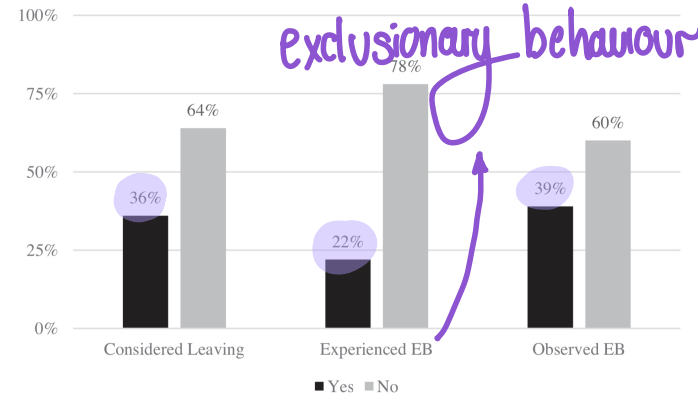
right...

Physicists on twitter... (2023)



staff & students

LGBT + Physicists in the US: [1]



exclusionary behaviour

(2022)

[1] R. Barthelemy et al. 'Workplace climate for LGBT+ physicists: A view from students & professional physicists', Phys. Rev. Educ. Res 18, 010147 (2020)

So why is this happening in Florida?!



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POLITICS

Florida Gov. Ron DeSantis signs a bill banning DEI initiatives in public colleges

May 15, 2023 · 5:46 PM ET

By Jaclyn Diaz



Florida Gov. Ron DeSantis, pictured here on April 21, 2023, signed a slate of bills Monday, one of which bans DEI initiatives in his state's universities.

Alex Brandon/AP



How NOT to [DI]?

- We have 1 woman in our department, therefore we're all good!
 - ↳ Don't assume there's no problem just because one woman is succeeding.
(or other minority in particle physics)
- Oh -- insert name of the person who does everything here -- will run EDI because they're the expert.
 - ↳ How many times is this person also in a minority in particle physics?
- Not being open to feedback from minorities.

How to [EDI]??

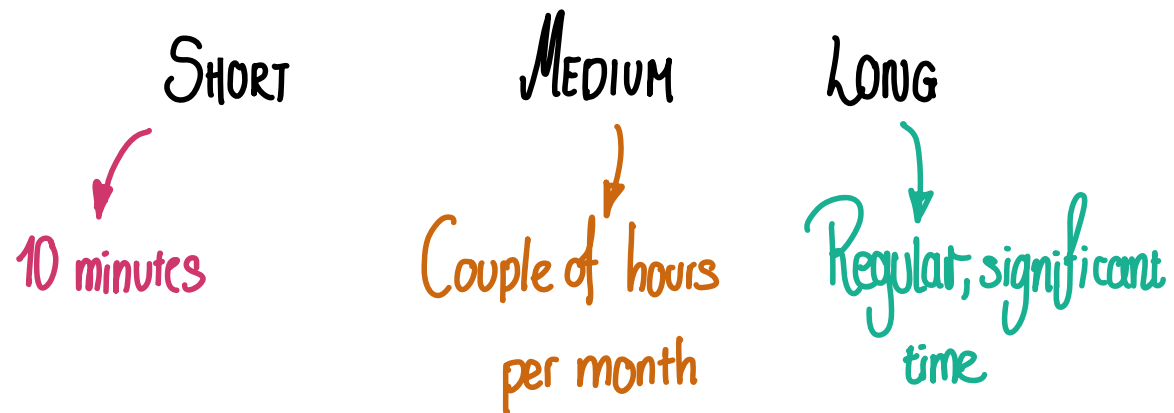
There's only so much time in the day...

MON	TUES	WEDS	...
Research	Meeting	Teaching	Much more.
Teaching	Grant Deadline	Admin	
BREAK	BREAK	BREAK	
Admin	Research	Talk	
	Refereeing	Meeting	

Outreach?

EDI?

We've split EDI Outreach tasks into 3 categories... *very roughly!*



- DISCLAIMER!!
- Don't do anything which puts your safety or career at risk!
 - These lists are by no means complete.

SHORT

19

- Include a code of conduct in your conference.
- Do your department's bathrooms have period products?
- Be aware of unconscious bias.
 - ↳ eg in making hiring decisions
- Learn about, use & promote inclusive language. ↳ especially in job adverts [1]
- Recognise EDI work in hiring.
- Put your preferred pronouns on your door, email signatures & slides.
- Call out inappropriate behaviour.

[1] N. Ackerman et al., 'LGBT+ Inclusivity in Physics and Astronomy: A Best Practices Guide', arXiv: 1804.08406

MEDIUM

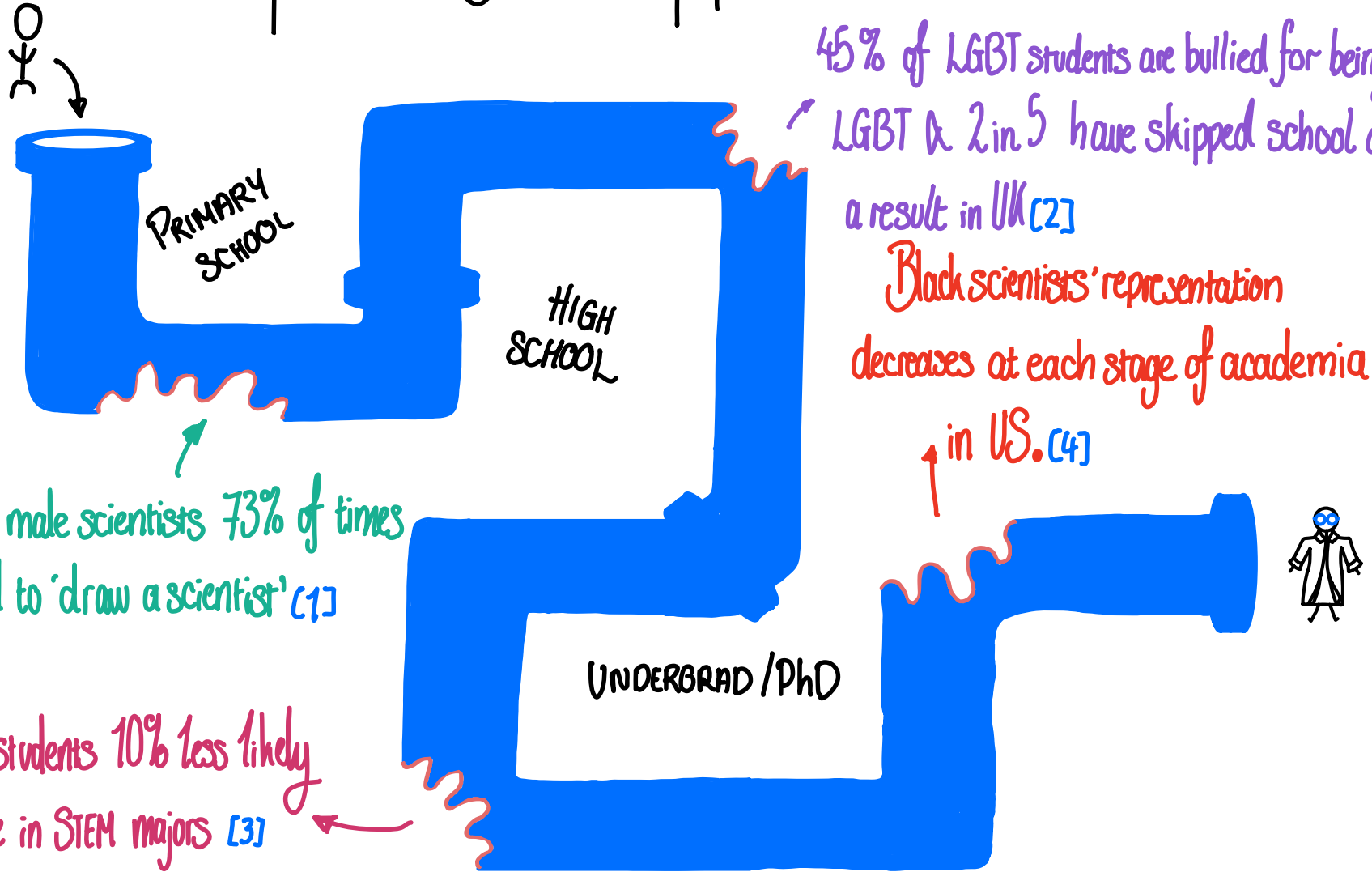
- Attending EDI events. → You're already doing this! 😊
- Read a book → I have some recommendations at the end.
- Outreach ← more on this!
- Support your student's mental health
 - Do they feel comfortable in the workplace?
 - Are they aware of their successes?
 - Are they taking breaks?

LONG

- Running EDI & outreach initiatives.
for example WG7 conveners
Ellen Bechtol, Francesca Dordei & Nagisa Hirashima.
- Joining an EDI committee.
- Pushing for a change within a university department.
eg finances for EDI,
changes in hiring policy

How can Outreach Help?

Note many more examples exist! 22



[1] D. Miller, et. al. 'The Development of Children's Gender-Science Stereotypes', Child Development, Vol 89 issue 6 (2018)

[2] J. Bradlow, et. al. 'The School Report', Stonewall, www.stonewall.org.uk/school-report-2017

[3] J. Mallow et. al. 'Factors Influencing Retention of Transgender & Gender Nonconforming Students in Undergraduate STEM majors', CBE - Life Sci. Edu. 21:1(2022)

[4] E. Gibney, 'How UK Science Is Failing on diversity', Nature Vol. 612 (2022)

Outreach & EDI

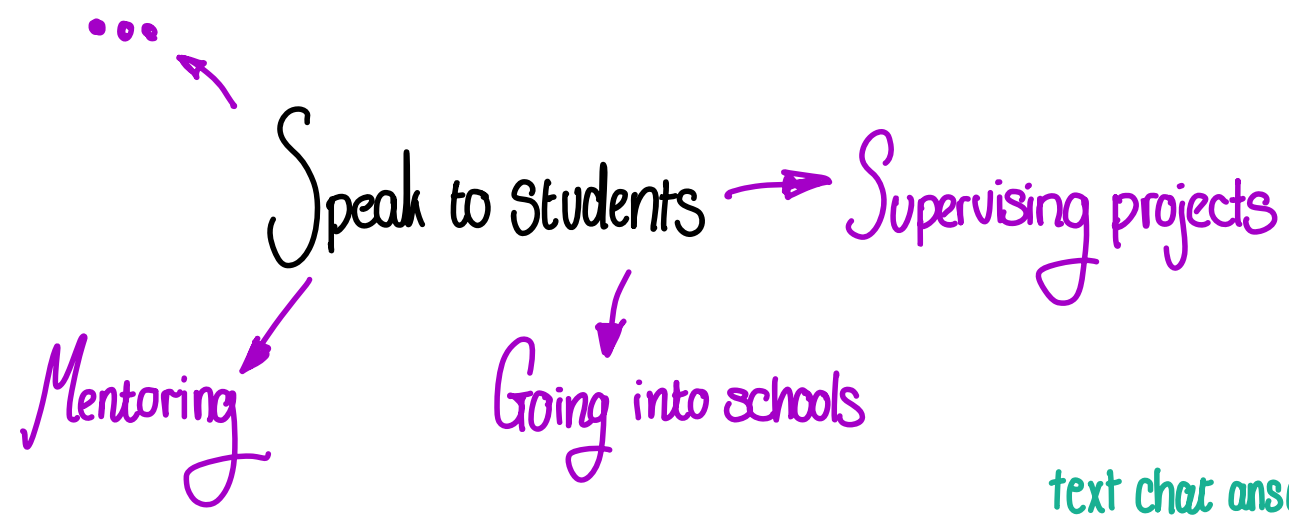
1// Show physicists as *diverse*

regular humans



2// Encourage interest in physics.

How To Outreach?!



text chat answering science questions from students ↓

UK / USA / Ireland / Spain / Germany / Kenya : I'm a Scientist - Get me out of here!

UK :
Nuffield research project
STFC / CERN Work experience

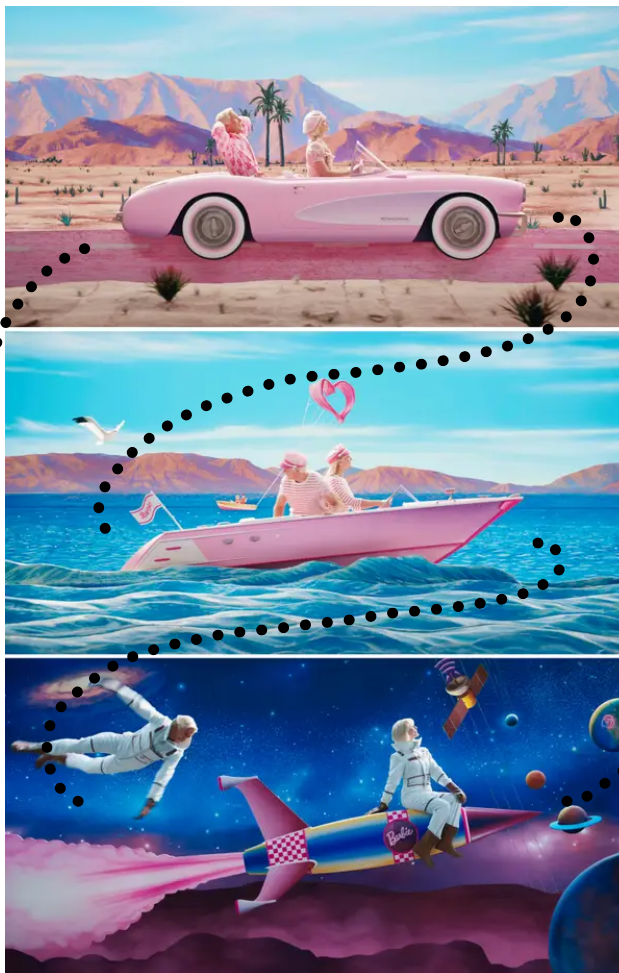
CERN :
→ Summer research projects

GERMANY :
→ Netzwerk Teilchenwelt Masterclasses
- research for a day
→ DESY internships

Summary

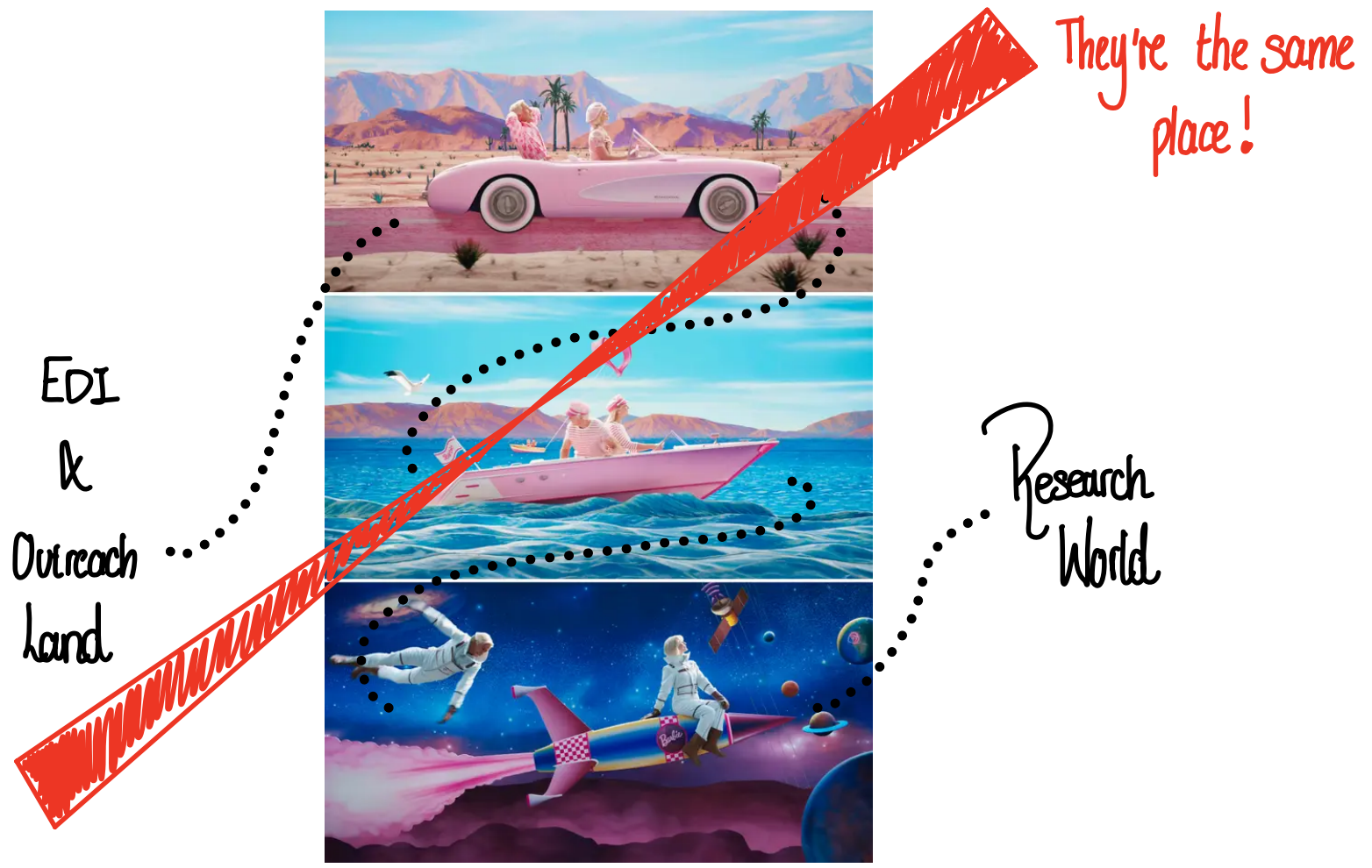
1 EDI, Outreach & Research are deeply connected.

EDI
&
Outreach
land



Research
World

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EDI
&
Outreach
land

They're the same
place!

Research
World

2: We're all responsible for the culture in our workplace.

Therefore we can make it better.

More Resources

Books and References

1: for PhD students & PhD supervisors:

'Managing Your Mental Health During Your PhD'
Dr Zoë Ayres ISBN 978-3-031-14193-5

2: for a comprehensive guide to LGBT+ inclusion:

'LGBT Inclusivity in Physics and Astronomy: A Best Practices Guide'
N. Adelman, et. al. arXiv: 1804.08406

3: spherical cows & recognising physics talent

'Physics in a diverse world or a Spherical Cow Model of Physics Talent'
H. Georgi arXiv: 2203.09485