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Exploring Diversity

In academic settings

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Ideally by the end of this session ...

Agenda:

- ⇒ Raise awareness, some points of reflection around dimensions of diversity & which ones play out in our contexts
- ⇒ Share together some practical tips
- ⇒ Identify areas for future development

Exploring diversity through belonging... not belonging

You & your experiences

In mixed groups of 4-5

Thinking of you... and life inside or outside of academia



3 Mins

Introduce yourselves

Share your story of not belonging

Across the stories

What dimensions of difference are evident?

What were the common feelings/experiences?

Understanding what makes people tick & thrive - **three basic needs**

Self Determination Theory [Deci & Ryan 1984 & numerous other pubs] & intrinsic motivation

Autonomy



Need to have some agency and **control** over their own behaviours, lives

Competence



Need to develop **mastery** over tasks important to them; achievements, knowledge, skills

Relatedness ***



Need to have sense of **belonging** and connectedness with others

In group – out group

Identity, inclusion

Impacts of social exclusion – not belonging to the dominant group

'OTHER' - Result of others' judgements/behaviours towards us, our judgements/behaviours towards others

- Separation fuels intergroup discrimination, conflict [GreaterGood, Berkeley]
- Anticipated exclusion/loneliness -> **decline in cognitive performance, logic, reasoning** [Baumeister et al 2002]
- Social isolation -> **impairs executive functioning, sleep, and mental and physical well-being** [Cacioppo & Cacioppo 2014]
- Rejection and social isolation -> overlap of neural pathways with **physical pain** [Eisenberger 2012]

Diversity – multiple **dimensions** of identity

Vertical (inherent, social, cultural) ... Horizontal (individual, context)

- Cultural/ethnic origin
- Nationality
- Gender
- Height, weight, age
- Language, accent
- Sexual preference
- Handedness
- Physical (dis)abilities
- Neurodiversity
- Socio-economic class
- Family situation
- Religion, beliefs
- Politics
- Personality
- Communication style
- Drivers
- Values
- Strengths
- Disciplinary background
- Research topics
- Research methods
- Technical skills
- Professional priorities
- Dress, haircut, hair colour, skin colour
- Piercings, tattoos

Any others?

Diversity ... Complex intersections of identities

Context dependent ... relevance, prevalence, salience?



2 Min

What are some of your personal intersections of identity?

In what ways are they relevant, salient at work?

Why diversity matters

To computerscience, to our faculties

Like all technologies, digital technologies do not emerge from nowhere. They are shaped by implicit and explicit choices and thus incorporate a set of values, norms, economic interests, and assumptions about how the world around us is or should be. Many of these choices remain hidden in software programs implementing algorithms that remain invisible. In line with the renowned Vienna Circle and its contributions to modern thinking, we want to espouse critical rational reasoning and the interdisciplinarity needed to shape the future.

We must shape technologies in accordance with human values and needs, instead of allowing technologies to shape humans. Our task is not only to rein in the downsides of information and communication technologies, but to encourage human-centered innovation. We call for a **Digital Humanism** that describes, analyzes, and, most importantly, influences the complex interplay of technology and humankind, for a better society and life, fully respecting universal human rights.

Diversity is critically IMPORTANT to deliver better technology for society!

Diversity of human experience
Interdisciplinarity & collaboration
Diverse skills, knowledge, contributions etc

Diversity in organisations ...

“Studies show that well-managed diverse groups **outperform** homogeneous ones and are **more committed**, have **higher collective intelligence**, and are better at **making decisions** and **solving problems.**”

[Williams & Mihaylo, HBR 2019]

“We understand that
scientific **excellence** depends on **creativity**,
that creativity emerges from **diversity**,
and that the advantages of diversity are realized
through **inclusion**”

[Asai 2019]

Example: quantum computing

science and technology

Diversity May Be Key to Reducing Errors in Quantum Computing

OCTOBER 14, 2019 • ATLANTA, GA



The EDM technique, Tannu admits, is counterintuitive. Qubits can be ranked according to their error rate on specific types of problems, and the most logical course of action might be to use the set that's most accurate. But even the best qubits produce errors, and those errors are likely to be the same when the operation is done thousands of times.

Choosing qubits with different error rates – and therefore different types of error – guards against that by ensuring that the one correct answer will rise above the diversity of errors.



Qureshi compares the EDM technique to team-building techniques promoted by human resource consultants.

“If you form a team of experts with identical backgrounds, all of them may have the same blind spot,” he said, adding a human dimension. “If you want to make a team resilient to blind spots, collect a group of people who have different blind spots. As a whole, the team will be guarded against specific blind spots.”

Georgia Tech Senior Ph.D. Student Swamit Tannu and Professor Moinuddin Qureshi have developed a new technique to reduce errors in quantum computing. The technique, known as Ensemble of Diverse Mappings, depends on using different qubits to create diversity in errors.

Where are the diversity issues in computer science faculties?

Thinking of you, your faculty, group, project team... specific examples



5 Mins

Where is diversity working well?

Where does it need to be better?

In what ways?

Challenges around diversity?

Bias, difference

We are ALL biased

Take the Harvard Implicit Association Test!

Similarity/affinity bias:

homophily, people like me

Confirmation bias:

selective evidence that fits previous opinion/experience/stereotype

Salience bias:

most easily available information

Stereotype threat:

self-behaviour in line with expectations of our own perceived stereotype

Performance bias:

holding some groups to higher standards

Performance attribution:

attributing success to either skills or luck/hard work

Diversity as difference



Differences make it harder for people to connect and empathise with each other

[Berkeley, GreaterGood]

Examples of bias in hiring

'Bias in hiring has been extensively documented.

In one study, "**Jamal**" needed eight more years of experience than "**Greg**" to be seen as equally qualified.

Another found that **men from elite backgrounds** were called back for interviews more than 12 times as often as identical candidates from non-elite backgrounds.

Other studies have found that

women, LGBT+ candidates, people with disabilities, women in headscarves, and older people

are less likely to be hired than their peers.'

[Williams & Mihaylo, 2019]

'BIG I' Inclusion

Biases that play in the **large** – impact decisions that can create **diversity** eg of workplaces

Hiring
Evaluations
Reviews
etc

PNAS

Proceedings of the
National Academy of Sciences
of the United States of America

Keyword,

Evidence for the reproduction of social class in brief speech

Michael W. Kraus, Brittany Torrez, Jun Won Park, and Fariba Ghayebi

PNAS first published October 21, 2019 <https://doi.org/10.1073/pnas.1900500116>

Example: class bias

“We find that Americans can perceive the social class of targets based on **exposure to brief speech patterns**, that word pronunciation facilitates this perceptual process, and that these **cues bias hiring decisions** in favor of those **higher versus lower in social class.**”

'Everyday inclusion – Micro-inequalities / Micro-aggressions

Subtle messages in everyday practices – impact **inclusion**, feelings of belonging, self-worth

“The very small behavioral cues
that signal
whether our contributions are valued,
whether I want to talk to you,
whether you’re being included or not,
etc –
unconsciously driven yet influence our
behavior”

[re:Work Google’s Unconscious Bias @ Work]

Negative cues, subtle disrespectful actions:

Interruptions

Sniggers, slights

Silent judgements, eye rolling

Ignoring someone

Mispronouncing someone’s name
...repeatedly

Excluding someone from a
gathering/meeting

Failing to give credit where due

Not introducing someone

[Consciously overcoming unconscious bias, Media Partners]

Constructively engaging with difference

Ways forward – diversity & inclusion

Not enough just to have diversity

...

Have to enable, empower, embrace value of diversity through inclusive practices

Creating safety & belonging

Beware of orientation to inclusion –

To what extent is the 'other' expected to change to fit with the dominant
vs mutual respect & change?

ABC ... Towards Diversity & Inclusion

[Note: Mixed evidence about value of Implicit bias training]

Awareness



Cognitive inclusion

Self awareness

Empathy, perspective taking

Behaviour



Habits of inclusion

Recognising, valuing difference

Forming new habits

Micro-affirmations

Culture



Culture of inclusion

Supportive structures, policies, processes, reward systems

Cognitive re-frame...

Diversity/differences as

places of encounter
and possibilities

rather than exclusion

Engaging with difference

A prosocial skill that can be developed with intentionality & practice

- Identify, foreground what is also **common** ... eg shared dimensions of identity, goals etc
- Recognise & communicate the importance of divergent <dimensions of difference> as **strengths**
- Develop **skills** to develop differences as positive advantages
- Hold ourselves & others **accountable**
 - Make it the **norm** to talk about bias, for anyone/everyone to call out perceived bias

Example strategies for inclusion - people

To mitigate against /minimize bias, to increase feelings of belonging, to value diversity

- **Get to know people** in your teams/project/groups as people
 - Respectful enquiry, listen to understand
 - What are their strengths, what can they contribute
 - Identify, negotiate, how to best use individual's uniqueness – teams, roles, tasks, creative solutions
- **Recognise** who/how the team might **trigger** some of your unconscious biases
 - Try to put yourself in their shoes
 - Challenge stereotypes with counter stereotype information
 - Assume good intentions
 - Look for alternative explanations eg contextual/situational explanations rather than dispositional/stereotype ones - “what might be three different reasons for this...”

Example strategies for inclusion - micro-affirmations

LIVE - 'everyday gestures of respect that make people feel included & valued'

LISTENING

- Listening
- Making eye contact
- Paying attention to what others have to say
- Not interrupting

INCLUDING

- Inviting to participate
- Inviting to socialize
- Keeping in the loop

VALUING

- Giving credit where it's due
- Encouraging strengths
- Acknowledging contributions, accomplishments

ENGAGING

- Saying hello and goodbye
- Giving equal time to all
- Asking for input

Example: Strategies for inclusion - processes

To mitigate against /minimize bias, to increase feelings of belonging, to value diversity

Recruitment:

- Objective & prioritized criteria and common rubric
- Diversity of applicant pool & committee members (What dimensions? How many)
- Structured interviews with skill-based questions

Meetings:

- Schedule meetings inclusively
- Who talks first matters
- Call out interruptions
- Ensure credit is appropriately given
- Rotate 'housework'

Example resources

- Harvard: Implicit Association Test: <https://implicit.harvard.edu/implicit/takeatest.html>
- Facebook: Managing Unconscious Bias: <https://managingbias.fb.com>
- Google re:Work: Unbiasing: <https://rework.withgoogle.com/subjects/unbiasing/>
- Consciously overcoming unconscious bias: https://www.media-partners.com/respectful_workplace/consciously_overcoming_unconscious_bias.htm
- Sexism in the Academy (Vettese, 2019): <https://nplusonemag.com/issue-34/essays/sexism-in-the-academy/>

- Example research re why unconscious bias training programs don't work:
- <https://hbr.org/2016/07/why-diversity-programs-fail>
- <https://hbr.org/video/5108682441001/why-the-most-common-diversity-programs-dont-work>