



## **Building a diverse research team**

# Objectives



Understand the elements of successful teams



Understand the role of psychological safety



Understand how bias affects our decisions



Overcoming bias in recruitment

# Cognitive Diversity



*“Cognitive diversity is the inclusion of people who have different styles of problem-solving and can offer unique perspectives because they think differently. Unlike demographic diversity, which focuses on achieving a mixture of statistical characteristics such as gender or age, cognitive diversity focuses on achieving a mixture of how people carry out intellectual activities, such as making associations or drawing conclusions.”*

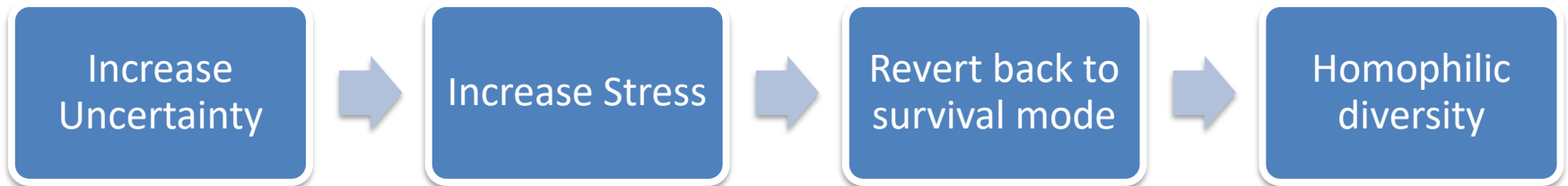
# What is the problem?



**When people don't get along, the problem isn't incompatibility, it is usually inflexibility AND the lack of self-awareness...the lack of cultural intelligence.**



# What is the problem?

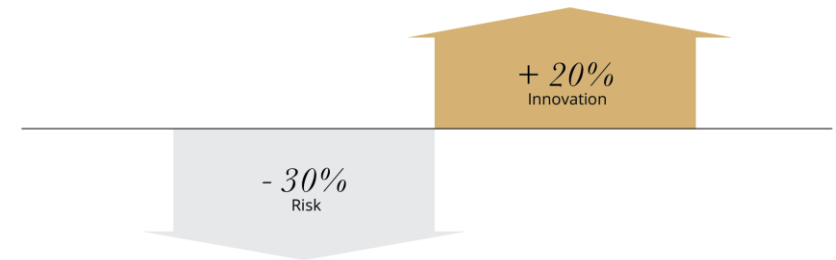


# Cognitive Diversity



- Teams with a high deviation from the “standard” perspective (in other words, cognitive diversity) are more likely to solve a problem than non-diverse teams, according to an experiment run by the Harvard Business Review.
- Gartner predicts that through 2022, 75% of organizations that boast of a diverse and inclusive culture among frontline decision-makers will exceed their financial targets.
- In 2019, IBM announced its effort to embrace neurodiversity by hiring high-functioning individuals with autism spectrum disorder (ASD). The company stated that "Neurodiverse people approach problems differently and have to think harder to get around what the rest of us accept."

FIGURE 1 | The value of diversity of thinking



Source: Juliet Bourke, *Which Two Heads Are Better Than One? How Diverse Teams Create Breakthrough Ideas and Make Smarter Decisions* (Australian Institute of Company Directors, 2016).

# Cultural Intelligence



*“An outsider’s seemingly natural ability to interpret someone’s unfamiliar and ambiguous gestures the way that person’s compatriots would.”*

Source: Cultural Intelligence by P. Christopher Earley and Elaine Mosakowski

# Cultural Intelligence



Culture is a *group habit* driven by values and needs.

***Cultural Intelligence (ICQ) =***  
The ability to turn differences into synergy instead of painful liabilities.



# Cultural Intelligence



## Faculty of Medicine Culture:

<b>What they need</b>	<b>Standards, structure</b>
<b>What they want</b>	<b>Being correct, logic</b>
<b>What they are scared of</b>	<b>Being wrong</b>
<b>How they behave under stress</b>	<b>Withdrawn, stubborn</b>
<b>What do they do in a conflict</b>	<b>Avoid</b>
<b>They judge you based on</b>	<b>Precision, accuracy, quality</b>

# Psychological Safety



*“Psychological safety is the belief that one will not be punished or humiliated for speaking up with ideas, questions, concerns, or mistakes. It is a dynamic, emergent property of interaction and can be destroyed in an instant with an ill-timed sigh.”*

Source: The Two Traits of the Best Problem-Solving Teams by Alison Reynolds and David Lewis

# Psychological Safety



It is essential to unleashing talent and creating value



85% felt unable to raise a concern with their boss



lead to widespread frustration, anxiety, depression and even physical harm

## The Most Successful Teams are Cognitively Diverse and Psychologically Safe

They also share positive behaviors and emotions.

COGNITIVE DIVERSITY	High	<b>OPPOSITIONAL</b> Cautious Controlling Flexible Hierarchical Reasoned Resistant	<b>GENERATIVE</b> Curious Encouraging Experimental Forceful Inquiring Nurturing
	Low	<b>DEFENSIVE</b> Cautious Conforming Controlling Directive Hierarchical Resistant	<b>UNIFORM</b> Appreciative Considered Controlling Competitive Flexible Hierarchical
		Low	High
		PSYCHOLOGICAL SAFETY	

SOURCE ALISON REYNOLDS AND DAVID LEWIS, USING THE QI INDEX

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# Psychological Safety



Admit you are wrong



Ask for the team's input



Respond positively to questions and doubts



See mistake as a learning opportunity



# What is bias?



Prejudice in favor of or against one thing, person, or group compared with another



We make allowances for people within our group but not those outside it

# What is unconscious bias?



Bias that happens automatically, without conscious thought, and out of our control



Influenced by background, personal experiences and cultural environment

# Why we need to talk about it?



Decrease **Equity**

Lack of **Diversity**

Reduce **Inclusion**

Less innovation

Decrease the overall productivity and efficiency of a lab

# Benefits of EDI



Support recruitment challenges and skills shortages

Improve employee satisfaction and retention

Leads to more rigorous work

Better dissemination of results

Foster innovation and problem-solving skills

Promote organizational values more fully



# Importance of EDI



**EDI are a major priority for GOC, OHRI and our Faculty**



EDI initiatives play a critical role in allocation of grants / funds



CRC Programs (mandated targets)  
New Frontiers, NSERC, CIHR

# Different types of bias



Conformity bias



Beauty bias



Affinity bias



Horns effect



Halo effect



Gender bias

# Stats, facts & figures



Papers written by diverse groups received more citations and were published in journals with higher impact factors



“Who is a scientist?”

K-2 grade = 58% male / 3-5 grade = 73% / 6-8 grade = 75%



Subtle variations in feminine appearance erroneously convey a woman's likelihood of being a scientist

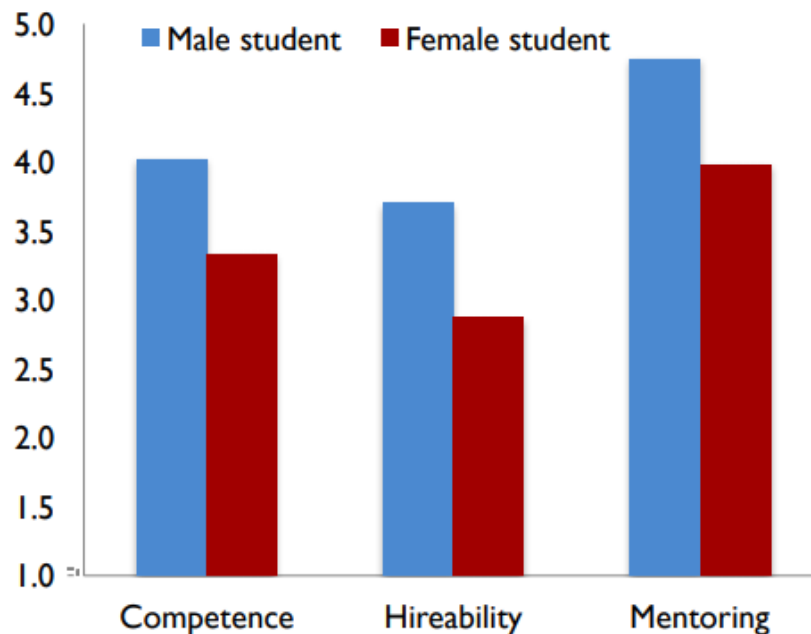


Resumes with African, Asian, and Hispanic names are less likely to get call backs for interviews

# Evaluations in Academic Science



A nationwide sample of biology, chemistry, and physics professors (n=127) evaluated application materials of an undergraduate science student (female or male) for a lab manager position.



1. **Both** male and female faculty participants rated the female student as:

- Less competent
- Less hireable
- Offered lower salary (\$3.7K)
- Less mentoring

2. Even though the female was rated more likeable

# Letters of recommendation



Analysis of 312 recommendation letters for 103 positions at a medical school revealed different tendencies...

## Letters for men:

Longer;  
More references to CV,  
Publications, Patients,  
Colleagues

## Letters for women:

Shorter;  
More “doubt raisers” (hedges,  
faint praise, and irrelevancies);  
More references to personal life

“It’s amazing how much she’s  
accomplished.”

# Grant Renewal



**Summary statements for 51 research grant renewals**



“Leader” and “pioneer”

“Highly innovative”

“Highly significant research”



“Expertise”

“Working in excellent environments”

# Overcoming Bias in Hiring



Check the job posting



Recruit widely –  
Outside of  
network



Standardized the  
evaluation process



Identify important  
characteristics for  
job



Stick to a script  
during an interview



Evaluate your  
decision metric



Analyze and  
reassess



Other tips

# Check the job posting



Look at the language  
in the job posting



Avoid biased language  
to encourage more  
diverse applicant pool

“Dominant”  
“Competitive”  
“Leader”

“Up and  
Coming”  
“Fresh”

Spokesperson  
vs.  
Spokesman



# Recruit widely



Get out of the comfort zone - Two key factors in implicit bias (familiarity & closeness)



Diversity in applicant pool: Recruitment search protocol (Future Research Leaders Conference)



Reducing implicit bias – Implicit bias education



Avoid message: “Only Ivy Leaguers need apply (plus maybe Cal Tech, MIT, and Stanford...)”

# Standardize the evaluation process



Bias can lead us to view same resumes differently



Avoid global judgement



Develop a standard evaluation form with scoring metrics, and use it for every candidate

# Identify important characteristics for job



Biases can lead us to rationalize why we prefer a candidate over another - Favor publication over potential scientific impact



Identify behaviors that are relevant to the position before candidate interviews



How much does likeability matter in the job? “Fit” -> Tend to hire people we like the most. If important, give a rating

# Stick to a script



- Interaction: We automatically search for a common ground
- Could make people feel like an outsider and increases stress
  - Women feel more stress when being evaluated by all male panels



Stick to the script and ask everyone the same questions

# Evaluate your decision metric



## Check of subtle biases within the metric

Make sure you are not giving points for: Elite institutions; Experience at specific institutions; Fame of mentor



Have diverse group of non-search committee member evaluate the metrics

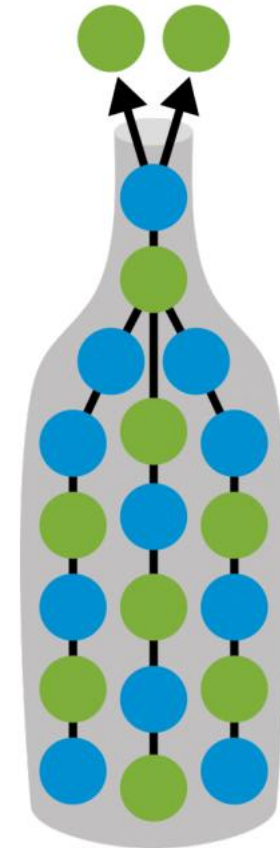
# Analyze and reassess



Evaluate your outcome and efforts, disparities will emerge over time



Identify the bottleneck: diversity of applicant pool; shortlist pool; post-interview; hiring process



# Other tips



Allow for anonymous voting (more applicable for bigger committees)



Have a committee member be an advocate for each candidate (or play devil's advocate)



Be able to articulate reasons for every decision (move forward vs. drop)

# Self Reflection



What have you done over the last 30 days to promote EDI within your team?



What have you done to encourage cognitive diversity and create a psychological safe environment?



What unconscious bias are you more prone to?



Do your team members represent our community?



What concrete actions will you take following this presentation?



# Resources



Cognitive Diversity training and assessment



Psychological Safety training and assessment



Cultural Intelligence training



Implicit Association Test (Unconscious Bias)

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



Books



Human Resources and Faculty Affairs teams

# Books

