Anti-Bias Interventions
Why they (need not) fail

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Anti-bias trainings are a billion dollar industry[2] & a popular response to address systemic bias issues & promote diversity, equity, & inclusion.

They are easier to implement than structural change, but **are anti-bias trainings actually effective?**

⚠ 6 Pitfalls of Anti-Bias Trainings[1]

⚠ Not always conducted with organizational buy-in

Mandatory trainings can spark backlash[3]; they work best when management & employees have genuine motivation to foster inclusion

⚠ Limited research evaluating training effectiveness

Trainings are rarely subjected to **peer-reviewed** research aimed at improving their effectiveness

⚠ Assuming the primary goal is to change BIASes

Changing associations can have **short term effects**[7] but are **difficult to change in adulthood**[8]
This focus ignores many other factors affecting bias

⚠ Not using a clear definition of implicit bias

Trainings need a nuanced understanding of **implicit bias** & how it unfolds as a reflection of **broader social contexts**[4-6]

⚠ Assuming awareness of implicit biases will eliminate them

Simply being aware of biases & stereotypes does not eliminate them or lead to behavioural change[9]

⚠ Focusing on educating individuals, ignoring the broader context

Where a person works, lives, learns affects biases[10] & can counteract awareness efforts

Research on Trainings

A **rigorous study**[9] of a 1-hour educational video on implicit bias & strategies for controlling biases led to:

⬆ **acknowledgement** that **gender bias** exists

⬆ intention to **support inclusion initiatives**

⬆ **support** for **women**

⚠ ... but **did not lead to behavioural change**.

To address these pitfalls, we need a clearer understanding of what implicit bias is, & how to target trainings to effectively mitigate bias within organizations[11]

BIASes[1]
Beliefs
Implicit Attitudes
&/or **Stereotypes**

Mental **constructs** that can lead people to act in ways that adversely affect targeted individuals or groups

Understanding Bias

Bias is not a static trait nor always unconscious[5]; bias **unfolds as a process** in the moment

Bias often results from a motivated process[12], but is not inevitable. Stereotypes & attitudes that come to mind can be deliberately controlled[13-14]

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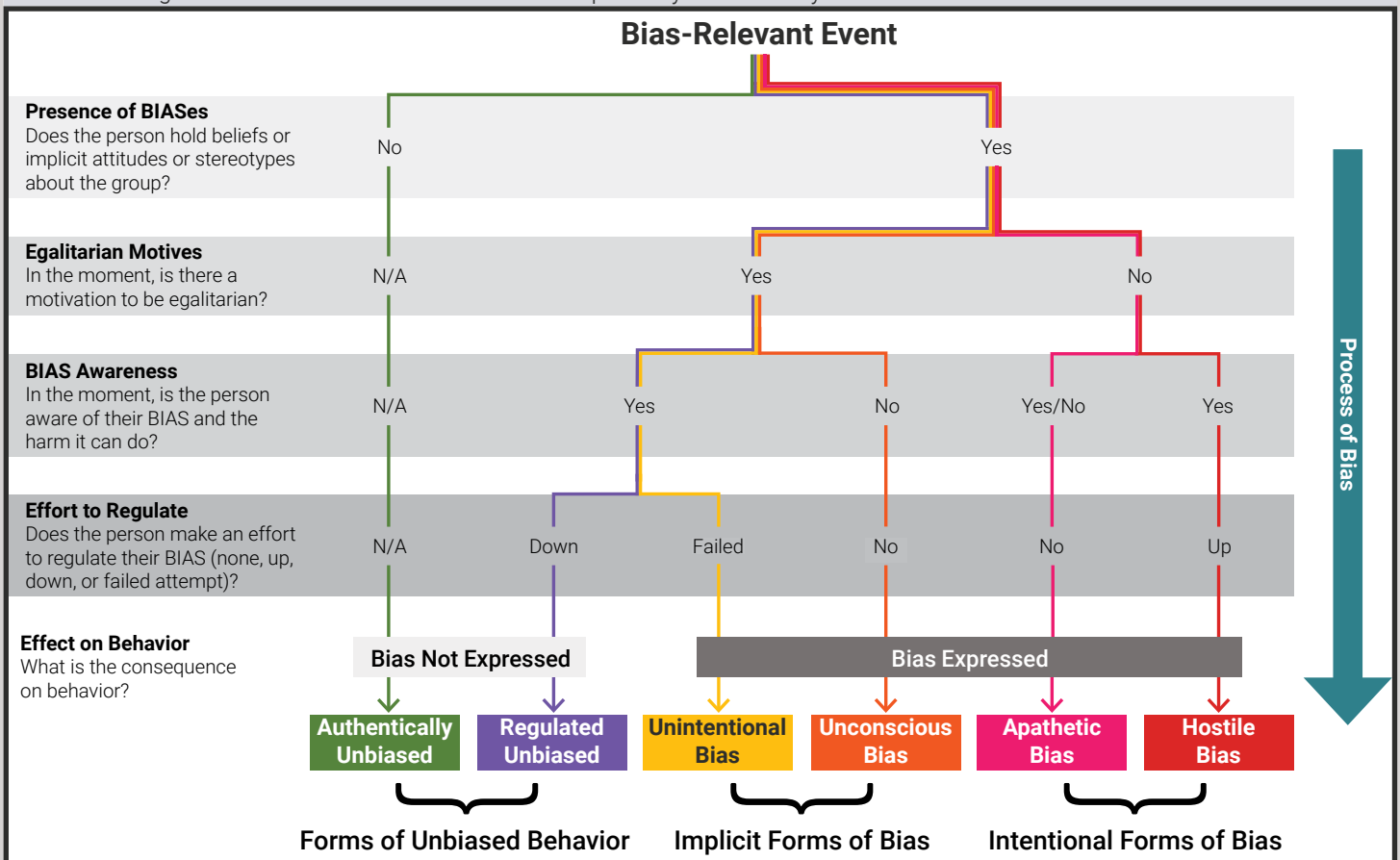
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This typology shows how in-the-moment awareness, motivation, & efforts to regulate behaviour shape the translation of individuals' BIASes into behaviour within a given context

Bias Typology[1]

Expressions of BIASes in behaviour depend on 3 things:

Motivation
Internal motivation to be egalitarian

Awareness
Recognizing that we all have BIASes which can shape behaviour[23]

Regulation
Ability & effort to control how BIASes inform behaviour in a situation

The following flow chart demonstrates the different pathways to a variety of biases & behaviours:

Bias-Relevant Event

Process of Bias

Presence of BIASes Does the person hold beliefs or implicit attitudes or stereotypes about the group?	No	Yes
Egalitarian Motives In the moment, is there a motivation to be egalitarian?	N/A	Yes ... No
BIAS Awareness In the moment, is the person aware of their BIAS and the harm it can do?	N/A	Yes ... No ... Yes/No ... Yes
Effort to Regulate Does the person make an effort to regulate their BIAS (none, up, down, or failed attempt)?	N/A	Down ... Failed ... No ... No ... Up
Effect on Behavior What is the consequence on behavior?	Bias Not Expressed	Bias Expressed

Authentically Unbiased | **Regulated Unbiased** | **Unintentional Bias** | **Unconscious Bias** | **Apathetic Bias** | **Hostile Bias**

Forms of Unbiased Behavior | Implicit Forms of Bias | Intentional Forms of Bias

Authentically Unbiased
Occurs when bias is not present or is irrelevant in a context. Impractical goal of anti-bias trainings

Regulated Unbiased
Occurs when the expression of BIASes is successfully inhibited.[13,15] Realistic goal of anti-bias trainings

Unintentional Bias
Occurs when a person who is aware of, & motivated to control their BIASes, fails to effectively regulate their biased behaviour, leading to discrimination or judgment

Unconscious Bias
Occurs when people are unaware or fail to realize the effects of their BIASes on their behaviour in a given situation, resulting in discriminatory behaviour or judgment

Apathetic Bias
Occurs when people who are aware of their BIASes are unmotivated to control them, resulting in discriminatory behaviour or judgement

Hostile Bias
Occurs when BIASes of one's action are intentionally upregulated. It is explicit & deliberate - the person feels justified in holding & acting on their beliefs

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How This Framework Can Inform Trainings & Interventions

It is important to consider systemic biases when conducting anti-bias work instead of focusing on individuals. BIASes & their expressions are all equally harmful, whether implicit or ambiguous.[16] Organizations should start by **identifying** which type of **bias** or **cultural norm** is of concern, & create a plan, keeping the following strategies in mind:

What to do when...

Bias-relevant event

In the moment...

Do those involved hold beliefs or implicit attitudes or stereotypes about the group?

Yes

Research supported strategies

- **Remove names/gender indication**s of applicants while hiring[18,28]
- Expose staff to examples of people who contradict group stereotypes[17]
- A **sustained commitment** to recruit & retain underrepresented role models can reduced BIASes[29]

Motivation

Is the person motivated to be egalitarian?

Yes
- **Frame hiring/promotion criteria** to emphasize **quality of ideas** not leadership record[30]
- Recognize that merit-based practices can still be biased[19]

No
- Promote **benefits of diversity**[31,32] & **value** of **multiculturalism**[33]
- Increase **intrinsic motivation** by encouraging **growth mindsets**[34]

Awareness

Is the person aware of their BIAS and the harm it can do?

Yes
- Awareness by itself does not change a culture
- Teach people to **identify when** their **BIASes are activated** & expressed
- Note: people can make biased & discriminatory decisions even if they are aware their supervisor is prejudiced[26]

No
- Teach people **what bias is** & to **identify bias when it occurs** (e.g., through videos[20] or interactive games[35,36])
- **Communicate & model inclusive norms** in the organization

Regulation

Does the person make an effort to regulate their BIAS?

Failed Regulation
- Present **bias as habit to be broken**[21] e.g., replace stereotypic thoughts with neutral ones
- Skill training & interventions should be **long-term**[37]

No Regulation
- Reflecting on **core values** can make a person more open to finding common ground with others[24,25,27]

Up Regulation
- **Reduce threats** that trigger negative reactions motivated BIASes
- **Shift organizational norms** towards inclusivity

Changing norms can also be done through policies & practices, & does not need buy-in from everyone in an organization.[23] Organizations should track, communicate & assess changes in culture over time.[22] Most effective interventions create partnerships across identity lines, with a critical mass of people in an organization working together toward the shared goal of creating an inclusive culture that fosters well being.

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About Project RISE

How can we educate adults about implicit bias in a way that fosters mutual respect and creates a more inclusive culture in the workplace? Project RISE (Realizing Identity-Safe Environments) will harness our understanding of implicit bias, intergroup contact, and social identity threat to create a more "identity safe" workplace culture. Interventions designed to create identity-safe contexts have been shown to narrow the gender gap in academic performance. Project RISE aims to create positive cultural change for women and men in science and engineering by: (1) educating participants about implicit bias, (2) fostering supportive and respectful interactions between men and women in the organization, and (3) providing them with a clear understanding for how to combat bias. Learn more at: successinstem.ca/projects/rise

About Engendering Success in STEM (ESS)

Engendering Success in STEM (ESS) is a research partnership focused on evidence-based solutions to foster positive working environments for people in STEM (Science, Technology, Engineering, and Math). We bring together social scientists, STEM experts, and stakeholders in STEM industry and education to use an evidence-based approach to break down barriers people face on their pathway to success. Canada's Social Sciences and Humanities Research Council reviewed and funded this project.

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