Implicit Bias:
What it is and How to Overcome it

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Director of Strategic Partnerships
UO Graduate Internship Program
Bias Exists. . .
Bias

Attitudes and beliefs we have about a person, group or idea on a

Conscious level → Explicit

Subconscious level → Implicit
Implicit and Explicit biases are not necessarily consistent.
Why Does it Exist?

11 million bits/sec
99.99996% is unconsciously processed

Where can bias form...
Change Your Biases
Change Your Biases

Actively think of examples against the bias.
How Bias Affects You?

- Weaker letters of recommendation
  - Women receive fewer standout/ability words and more grindstone words

- Pay Gap
  - 82%

- Gender equality at the CEO level will take 250 years to achieve

- High performing women are 44 times more likely to receive negative personality criticism (abrasive, strident, irrational) than high performing men
Even a tiny bit of bias can have big consequences.
With 1% variance in performance scores...

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<th>Female</th>
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(highest) (lowest)
…only 35% of level 8 employees would be blue.
Diversity is a competitive advantage.

Companies with higher proportions of women board directors outperform others by 53%.

Diverse teams outperform homogeneous ones, especially when solving complex problems.

http://www.catalyst.org/media/companies-more-women-board-directors-experience-higher-financial-performance-according-latest
http://www.catalyst.org/system/files/The_Bottom_Line_Corporate_Performance_and_Womens_Representation_on_Boards.pdf
How is Implicit Bias Tested?

Woman  Science  Liberal Arts  Man
How is Implicit Bias Tested?

- Woman
  - Mother
  - Sally
  - Sophia
  - Aunt

- Science
  - Calculus
  - Computer
  - Experiment
  - Quantum

- Liberal Arts
  - Symphony
  - Theater
  - Poetry
  - Musician

- Man
  - Father
  - John
  - William
  - Uncle
Father
Woman

Mother

Man
John
Woman

Left

Right

Man

Wife
Left
Science

Right
Liberal Arts

Painting
Left
Science

Right
Liberal Arts

Biology
Left

Science

Right

Liberal Arts

Physics
Liberal
Arts

Science

Geology

Left

Right

Liberal
Arts
Left

Science

Right

Liberal Arts

History
Science or Woman

Liberal Arts or Man
Daughter

Left
Science or Woman

Right
Liberal Arts or Man
Astrophysics

Left
Science or Woman

Right
Liberal Arts or Man
Poetry

Left

Science or Woman

Right

Liberal Arts or Man
Left

Science or Woman

Right

Liberal Arts or Man

Engineering
Grandfather

Left
Science or Woman

Right
Liberal Arts or Man
Philosophy

Left
Science or Woman

Right
Liberal Arts or Man
Steven

Left
Science or Woman

Right
Liberal Arts or Man
Aunt

Left

Science or Woman

Right

Liberal Arts or Man
Telescope

Left
Science or Woman

Right
Liberal Arts or Man
Nephew

Left
Science
or
Woman

Right
Liberal
Arts
or
Man
Grandmother

Left
Science or Woman

Right
Liberal Arts or Man
English

Left

Science or Woman

Right

Liberal Arts or Man
Science or Man

Left

Liberal Arts or Woman

Right
Science or Man

Liberal Arts or Woman

English
Jane

Left
Science or Man

Right
Liberal Arts or Woman
Physics

Left
Science or Man

Right
Liberal Arts or Woman
Mark

Left
Science or Man

Right
Liberal Arts or Woman
Humanities

Left
Science or Man

Right
Liberal Arts or Woman
Boy

Left
Science or Man

Right
Liberal Arts or Woman
Chemistry

Left
Science or Man

Right
Liberal Arts or Woman
Girl

Left
Science or Man

Right
Liberal Arts or Woman
Left

Science or Man

Brother

Right

Liberal Arts or Woman
Grandmother

Left

Science or Man

Right

Liberal Arts or Woman
Orchestra

Left
Science or Man

Right
Liberal Arts or Woman
Math

Left
Science
or
Man

Right
Liberal
Arts
or
Woman
Gender - Science. This IAT often reveals a relative link between liberal arts and females and between science and males.

Disability (Disabled - Abled' IAT). This IAT requires the ability to recognize symbols representing abled and disabled individuals.

Arab-Muslim (Arab Muslim - Other People' IAT). This IAT requires the ability to distinguish names that are likely to belong to Arab-Muslims versus people of other nationalities or religions.

Religion (Religions' IAT). This IAT requires some familiarity with religious terms from various world religions.

Presidents (Presidential Popularity' IAT). This IAT requires the ability to recognize photos of Barack Obama and one or more previous presidents.

Gender - Career. This IAT often reveals a relative link between family and females and between career and males.

Weapons (Weapons - Harmless Objects' IAT). This IAT requires the ability to recognize White and Black faces, and images of weapons or harmless objects.

Skin-tone (Light Skin - Dark Skin' IAT). This IAT requires the ability to recognize light and dark-skinned faces. It often reveals an automatic preference for light-skin relative to dark-skin.

Native American (Native - White American' IAT). This IAT requires the ability to recognize White and Native American faces in either classic or modern dress, and the names of places that are either American or Foreign in origin.

Race (Black - White' IAT). This IAT requires the ability to distinguish faces of European and African origin. It indicates that most Americans have an automatic preference for white over black.
When is Bias Likely to Exist?
Task- Kindergarten Teacher
Task- Kindergarten Teacher

Alison Yates
Director of Engineering
Zemax
Numbers
Clarity and Context
Perceiver
Methods Google uses to Overcome Bias

• Structure for Success

• Measure results
Structure for Success
Who is more Employable?

Applicant: Brendan, Greg, Emily & Anne

Applicant: Tamika, Aisha, Rasheed, & Tyrone

Who is the Stronger Candidate?

More Experienced  More Educated

Who is the Stronger Candidate?

More Educated

More Experienced

Structured Criteria for Success

Define
Structured Criteria for Success

Align
Structured Criteria for Success

Reinforce
Structured Criteria for Success

Hold Accountable
Measure Results
Barriers Specific to Women
In Group Bias

• “I like you, because you are like me”
  – Find a way to create rapport/similarity with group (i.e. hobbies, schools, etc)
Prove it Again

• Potential vs. Performance
  – Don’t hold yourself back. Apply to the job!

• Mistakes are noticed more
  – Objective metrics

• Skill vs. Luck
  – Advocacy group

• Stolen idea
  – Culture of Credit
Tightrope

Feminine

Likeability

Angry- Irrational

Office Housework

Ideas are Statements. Not Questions

“If I look angry, it is because you have jeopardized our shared business goal.”

When possible, pass on undervalued tasks.

Masculine

Respectable

Angry- Status

Strategic Work

University of Oregon
Maternal Wall (Strongest Form)

- Membership in PTA
  - 79% less likely to be hired
  - $\frac{1}{2}$ likely to be promoted
  - Offered 11k less in salary

- Affects mothers and non-mothers
  - Voice your commitment, meet and express short- and long-term goals
  - Express status: Primary earner, spouse will relocate, will travel
  - Be reasonable with yourself and set an example
Tug of War

- Queen Bee Syndrome
  - Only room for one woman
  - Harsher standards to one another
  - Judgement on masculinity/femininity
Implicit Bias Resources

- [https://rework.withgoogle.com/guides/unbiasing-raise-awareness/steps/introduction/](https://rework.withgoogle.com/guides/unbiasing-raise-awareness/steps/introduction/)

- [http://leanin.org/education/introduction-to-what-works-for-women-at-work/](http://leanin.org/education/introduction-to-what-works-for-women-at-work/)

- Implicit.Harvard.Edu

- [http://faculty.washington.edu/agg/](http://faculty.washington.edu/agg/)
Before Questions. . .
Master’s Industrial Internship Program

A program that combines concentrated lab and course work with a 9-month paid internship in industry.

Industry-focused tracks:
PV / Semiconductor Device Processing
Optical Materials & Devices
Polymer Science
What we’re about.

With input from industry, our focus is on preparing students for success in the industrial environment.
In just over a year, you can gain:

Nine-months work experience
earning $3,000 - $5,400 per month
Average, annualized income was about $49,000 in 2014

A master’s degree
in applied physics or chemistry

A professional network
that will provide the foundation for a career

A resume
with something on it.
Close to 90% of student interns receive regular offers at the end of their internships.
Professional Skills

In addition to science, we help you hone your professional skills:

- Resume Writing
- Interviewing
- Networking
- Leadership
- Communication
- Job Hunting Strategies
“People tend to think they are capable of far less than they actually are. I like to see students awaken to their true potential - and then go for it.”

- Lynde Ritzow, Director of Recruiting

“I am a Scientist, Boss, Mentor, Mom, Wife, PhD, Leader, LGBT Ally. Do not be afraid to embrace who you are and challenge yourself to grow in new directions.”

-Dr. Stacey York, Director of Strategic Partnerships

“As a first generation American seeking a career in physics I faced various forms of adversity which were not related to my capabilities but based on how I was born. I am honored and privileged that a major portion of my career is to support others who face similar challenges.”

-Dr. Nima Dinyari, Director of Optics Program
Anne Kenslea, M.S. Physics, Focus: Semiconductors
Applications Development Engineer, FEI

Samantha Nhim, M.S. Physics, Focus: Semiconductors
Process Engineer, Cascade Microtech

Chelsea Saldivar, M.S. Physics, Focus: Optics
Optical Engineer, nLight Photonics