Understanding and Overcoming Implicit Bias in Higher Education

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Overt prejudice...

... is still a problem
... and not just in professional sports...

Larry Summers (2005) suggests that sex differences “of intrinsic aptitude” partly explain disparity of women math and science professors.
But overt prejudice isn’t the only problem...

Price & Wolfers
“Racial Discrimination Among NBA Referees”
Racial Bias among NBA Referees

- Gamblers who factor in the racial biases of NBA referees consistently beat the spread!
- Considerably less (and different) media attention
- No outrage...
- ... except outrage against the authors of the study because they were calling the referees “racist” (which they didn’t)
- Charles Barkley: “That might be the most stupid study I’ve ever heard... there are a lot more black players in the NBA. So, of course, there are going to be more calls by white referees against Black players. But, also... I bet Black referees call more fouls against black players. For them to come out with a statement like that, is irresponsible and it’s asinine... [It’s] stupid and its not right.”
What to do when there’s no overt bigot to blame?

When we switch from overt bigotry to subtle but persistent patterns of bias among well-intentioned people...

We don’t know how to interpret or react.

We don’t know how to think or talk about implicit bias.

Paul Ryan says, “I don’t have a racist bone in my body.” Why does every famous person accused of racism say that?

By Jamelle Bouie
In this talk, I’m going to...

Start thinking and talking about implicit bias, with an emphasis on implicit bias in higher education.

Describe evidence for widespread implicit biases. Say a bit about where implicit biases come from. Say a bit about how these biases affect students and teachers. Start talking about institutional and individual reforms.
Overt prejudice on the outs...

- Overt prejudice, stereotyping, and discrimination has been in decline for decades.

- “a clear majority of Americans were telling pollsters in the early 1980s... that they opposed race discrimination in nearly all its forms...” (Alexander 2010)

- But psychologists knew that prejudice did not just vanish.
2 explanations for decline in overt prejudice

(1) We’re still biased, but we don’t admit it.
  • Tell others what they want to hear?
  • Deny that our ugly thoughts and feelings reflect our “true” selves?
  • (Like someone with a clown phobia who denies the phobia to impress a date, or refuses to admit it because it’s “irrational”)

(2) We’re still biased, but we don’t know it.
  • Unconscious prejudices persist despite conscious commitments to be fair and unprejudiced.

Spoiler alert: both explanations are partly true.
Both are worrying: just because discrimination is harder to detect doesn’t mean it’s not real.
Just because we mean well, doesn’t mean we always act right.
A new search began...

- ... for indirect measures of social attitudes
- Most popular: Implicit Association Test (IAT)
- Google “Project Implicit” and try it for yourself
- How does it work?
Easy sorting tasks

Suppose I asked you to sort a deck of cards as fast as you can into...

```
Spades   Clubs  Hearts  Diamonds
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Or...

```
Kings   Queens  Jacks   Sevens  Sixes  Fives
```

Chances are you’d find it pretty easy and intuitive.
A harder sorting task

Suppose I asked you instead to sort a deck of cards as fast as you can into...

![Card Symbols]

Chances are you’d find it more difficult.

You’d take longer and make more mistakes.
A computerized sorting task

If you see a picture of an insect, press the “D” key.
If you see a picture of a flower, press the “K” key.

If you see a “negative” word (hate, evil, death), press the “D” key.

If you see a “positive” word (love, pleasant, good), press the “K” key.
More complex sorting tasks

If you see a picture of an insect OR a “negative” word, press the “D” key.

If you see a picture of a flower OR a “positive” word, press the “K” key.

This is a more difficult task, but odds are that (unless you’re a bug lover), you’ll find it much easier than....

More natural to “associate” flowers with “positive” than “negative”
Implicit Association Test (IAT)

Boy names (David)
math words (number, graph)

Girl names (Emily)
reading words (letter, story)
Even if we don’t agree with Larry Summers that there are “intrinsic” gender differences in aptitude for math and language, most of us (men and women alike) will find (A) easier than (B).
IAT

• Easier to associate “David” with “science” and “Sarah” with “literature”
  – “Stronger associations”: faster and more accurate

• Of 500,000 participants from 34 countries:
• 70% associated science-with-male.
  – So what?
• This measure of *implicit gender stereotypes* predicted national gender differences in levels of science achievement among 8th graders. (Nosek et al. 2009)
• IAT predicted **better** than overt self-reports about gender stereotypes.
What else does the IAT predict?

Rooth (2007) – field study in Sweden:

• Submitted 1500 job applications, some with Swedish-sounding names and some with Arab-sounding names (otherwise identical).
  – Overall, Swedes were 3x more likely to get a callback for an interview.

• 3 months later, the employers took an IAT.

• **Implicit preference** on IAT for Swedes over Arabs significantly predicted callbacks for interviews.
And on and on...
(see Jost et al. 2009 for summary)

1 month in advance, IAT predicted voting decisions among those who claimed to be “undecided” (Acruri et al. 2008)
- verbally reporting (maybe sincerely?) that they’re undecided
- but their preference is already detectable on the IAT
- (for most of us, explicit political attitudes correlate perfectly with implicit attitudes... but not so in other domains)

Physicians’ implicit (but not explicit) racial bias predicted quality of medical care they gave toward white vs. black patients. (Green et al. 2007)
- in the ER, black children receive less pain medication than white children.
- Hispanic and black children wait longer in the ER than white children. (Johnson et al. 2012)
Social actions and “microbehaviors”

In a 2002 study, white college students (Dovidio et al. 2002)
– completed a white-black racial IAT and filled out a questionnaire on their beliefs about racial stereotypes.
– engaged in an interracial social interaction.

Explicit (anti-racist) beliefs predicted their conscious and controllable behaviors, e.g., how friendly their words were.

Race bias on IAT predicted their tacit and subtle behaviors:
✓ how rapidly they blinked
✓ how far away they sat
✓ whether they leaned forward or back
✓ how much eye contact they made
✓ how much they laughed at a joke (McConnell & Leibold 2001)
Where do implicit biases come from?

Backdrop: we grow up and remain immersed in a society structured by visible disparities between social groups.
- bombarded with stereotypes in mass media
  - IAT race bias increases after listening to violent rap music, but not pop (Rudman and Lee 2002),
  - and after watching TV clips of white actors displaying subtle, nonverbal bias toward black actors (Weisbuch et al. 2009)
- *de facto* segregation: observe that people from specific social groups are more likely to occupy specific roles, have specific jobs, live in specific areas, and so on.

About 80% of white Americans show an anti-black bias on IAT, but so do about 40% of African-Americans.
But it’s not just about what’s “in the air”

Pervasive stereotypes and *de facto* segregation form the “background” for implicit bias,

But there are lots of individual habits and traits that reduce or enhance implicit bias.

Are you “internally” or “externally” motivated to be unprejudiced?

- **Internal**: “Because of my personal values, I believe that using stereotypes about Black people is wrong.”
- **External**: “If I acted prejudiced toward Black people, I would be concerned that others would be angry with me.”
- People who report only internal motivations to reject prejudice show less implicit racial bias.
It’s not just about what bombards us...

When we respond to stereotypes by (perhaps unconsciously) thinking, “There’s a grain of truth in that”...

→ Maybe that stereotype makes us feel better about ourselves.

Even true for prevalent stereotypes about members of professionally successful social groups (WASPs, Jews, Asians, businesswomen) as cold, calculative, and amoral (Fiske et al. 2002).

Suppose you’re watching a reality TV show about the fabulously wealthy, and you turn to your loved one and say, “Even though we ain’t got money, I’m so in love with you, honey.”

Maybe you’re “compensating”: successful people on TV must be cold and unloving (unlike me and my family, who are warm and loving).
Implicit Bias in Higher Education?

- Biases in emailing students
- Biases in the classroom
- Biases in student evaluations of teachers
- Biases in hiring and promoting
Replying to emails from prospective students...

“6,548 professors.... received e-mails from fictional prospective doctoral students seeking to schedule a meeting... [Milkman, Akinola, and Chugh 2012]

When the requests were to meet in 1 week, Caucasian males were granted access to faculty members 26% more often than were women and minorities; also, compared with women and minorities, Caucasian males received more and faster responses.”
Replies to emails from prospective students

<table>
<thead>
<tr>
<th>Student Race and Gender</th>
<th>Emails Ignored</th>
<th>% Increase Relative to Caucasian Males</th>
<th>Meetings Denied</th>
<th>% Increase Relative to Caucasian Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian Male</td>
<td>26.5%</td>
<td>N/A</td>
<td>52.4%</td>
<td>N/A</td>
</tr>
<tr>
<td>Caucasian Female</td>
<td>29.8%</td>
<td>12.5%</td>
<td>52.9%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Black Male</td>
<td>32.5%</td>
<td>22.6%</td>
<td>61.3%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Black Female</td>
<td>34.4%</td>
<td>29.8%</td>
<td>60.0%</td>
<td>14.6%</td>
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<tr>
<td>Hispanic Male</td>
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<td>39.2%</td>
<td>58.2%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Hispanic Female</td>
<td>27.1%</td>
<td>2.3%</td>
<td>55.7%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Indian Male</td>
<td>41.8%</td>
<td>57.7%</td>
<td>68.2%</td>
<td>30.2%</td>
</tr>
<tr>
<td>Indian Female</td>
<td>37.7%</td>
<td>42.3%</td>
<td>67.9%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Chinese Male</td>
<td>36.7%</td>
<td>38.3%</td>
<td>66.8%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Chinese Female</td>
<td>46.9%</td>
<td>77.0%</td>
<td>62.9%</td>
<td>20.2%</td>
</tr>
</tbody>
</table>
Male students speak more frequently, and blurt out more answers without raising hand.
Female students are interrupted more, speak less, speak less loudly, hedge more (“I may be wrong but...”)

Gender Inequalities in the College Classroom

A large body of research shows that instructors:

--Call on male students more frequently than female students.

--Are more likely to use male students’ names when calling upon students and in attributing ideas discussion.

--Ask male students more abstract questions and female students more factual questions.

--Are less likely to elaborate upon points made by female students.
Environmental cues in the classroom
Environmental cues in the classroom

Comp-sci classrooms with sci-fi cues:
• reduce women undergraduates’ interest and expected success in computer science,
• but have no effect on men.

Replacing the stereotypical objects with neutral ones increased women’s interest.

Cheryan: environments “influence students’ sense of ambient belonging... or feeling of fit in an environment.”
Mountains out of Molehills?
Gradual Accumulation of (Dis)advantage

“A computer simulation (Martell/Lane/Emrich 1996) shows the importance of very small amounts of bias. The researchers simulated an 8-level hierarchical institution, with a pyramidal structure. They staffed this hypothetical institution with equal numbers of men and women. The model assumed a tiny bias in favor of promoting men, a bias accounting for only 1% of the variability in promotion. After many iterations of promotions, the top level was 65% male. Even very small amounts of disadvantage accumulate.” (Valian 2010)
At the end of each semester, most professors gingerly open the e-mail that contains the results of student evaluations of their teaching. Some cringe more than others when doing this. (Okay, and some have completely stopped looking.) Female faculty often express worry about these evaluations, thinking that they may face bias: Are they perceived as not funny enough, or does their voice not project sufficient authority? Do students focus more on women’s appearance than on men’s?

The evidence on these questions is mixed. Some studies have shown that women do, on average, receive lower scores on student evaluations of teaching (SETs); others have argued that the effects are small and inconsistent. Based on accumulating evidence in the psychology literature on implicit associations and role congruity, I propose that bias does exist, but that it is conditional: Students see women as effective teachers in more intimate settings such as seminars, but women teaching larger classes face barriers to receiving high ratings.
Student evaluations and gender roles

- Women instructors receive the highest ratings if they are both agentic and sensitive (both assertive/ambitious and nurturing/empathetic)
- Men instructors receive highest ratings just for being agentic (Arbuckle and Williams 2003)
Biases in evaluating job applications
(Uhlmann and Cohen 2005)

Participants evaluated 2 hypothetical candidates for job as chief of police.
- 1 candidate had extensive “street” experience but little formal education;
- 1 had extensive formal education but little street experience.

When street-smart candidate was male and book-smart was female, participants said that street smarts were most important for being an effective police chief, and recommended promoting the man.

When street-smart candidate was female and book-smart was male, participants said book smarts were more important, and, once again, recommended the man.

They unwittingly tailored their judgments about the tools necessary to be a successful police chief to match their gut feeling that the man was better suited than the woman for the job.
- Exactly reverse pattern was found for assessing applications for chair of women’s studies department.
Benefits of counter-stereotypical role models (Dasgupta and colleagues)

After attending an all-women’s college for 1 year, undergraduates’ implicit attitudes regarding gender and leadership qualities were overhauled.
- Implicit associations between “Emily” and “Greg” and “nurturing” and “assertive” vanished.

Attending a coed university had the opposite effect:
- women had stronger associations of “Greg” and “assertive”

The difference? Not primarily about a supportive, encouraging atmosphere.
- But the total number of classes taken with women math and science profs
- true *regardless* of which institution they attended.

Neither group showed any changes in their reflective, self-reported beliefs about women, nurturance, and leadership. Participants explicitly reported that women possess *more* supportive qualities than leadership ones.
Rigid minds or rigid environments?

In this case, their implicit attitudes revised to *get it right*, but their explicit attitudes continued to *get it wrong*!

Commonsense says that our biases are too deeply ingrained in childhood to change. But...

“The rigidity that tends to characterize the human mind, then, may be more a reflection of a stubborn environment than a stubborn psyche.” (Olson, Fazio 2006)

Even just **believing** that biases are malleable can reduce prejudiced behavior.
Counter-Conditioning
Wiers et al. (2011) (replicated in Eberl et al. 2013)

Prior to clinical treatment, alcoholics worked through 4 sessions of 15 min. → Significantly less likely to relapse up to one year later

Takeaways from Clinical Research on Approach-Avoid Training
• Minimal intervention with surprisingly durable effects
• Not done in isolation, but as one part of comprehensive program
A Further Takeaway: Wide Variety of Psychological Effects

Similar training procedures can influence:
- cognitive, affective, and motivational dispositions (i.e., beliefs, emotions, and desires)

*Implicit prejudice:* Interracial social behavior (eye contact, seating distance),

*Stereotype accessibility:* reflective hiring decisions (not hiring man over equally qualified woman),

*Stereotype threat:* motivation & performance on Math GRE & working-memory

... long-term recovery from addiction... implicit self-esteem... preferences for gummy bears vs. milk chocolate...

Consider the possibility: training techniques could influence just about any psychological disposition you like!

Approach voting and political marches? Dislike the status quo? Get outraged at injustice? Feel more compassion toward the disadvantaged?
Individual and Institutional Reforms

Have a plan...

• For students
• For faculty
• For everybody
The Power of If-Then Plans

Make concrete plans that specify the when, where, and how:
“I’d like to cut back on smoking” vs. “If I feel a craving for cigarettes, then I will chew gum!”

“My New Year’s resolution is to work out more” vs.
“When I leave work on Tuesdays, then I will go to the gym!”

Identify the problem contexts and formulate concrete plans for how to act in those contexts.
- easy to form, easy to remember, easy to execute

Many individual-level reforms can be bolstered with if-then plans.
The Power of If-Then Plans

More likely to interrupt women than men?
→ “If she’s talking, then I won’t.” (Louise Antony)

Student participation?
→ “If someone who hasn’t spoken yet raises her hand, then I’ll call on her!”
→ “If a student says something anomalous, then I will assume the problem is that I don’t understand (not that the student isn’t making sense)!”
→ “If a quiet student says something, then I will refer back to her comment later!”
“If I contact a professor, then I will make my qualifications clear!”
- attach my résumé, name-drop, etc.

DON’T: “leave any ambiguity about your quality as a candidate. One reason why people discriminate is that they don’t think you’re going to be as good of a candidate, so show that you are — attach your CV, say whom you’ve worked with. Any ambiguity can be used against you.” (Katherine Milkman)
Prospective minority students...

Prospective minority students are more likely to get email responses from members of the same race:

“If someone in the department shares my social identity, then I will reach out to that person!”

(You can reach out to other people, too!)
Profs replying to students...

“If a prospective student emails me, then I will reply and try to schedule a meeting!”

Put “rules of thumb in place at the encouragement stage. If people in your organization are getting requests for assistance from potential applicants, instead of just responding with their gut instinct, there should be a policy in place for how to handle those requests... try to respond uniformly across the board to everyone.” (Katherine Milkman)
Context context context

• “If a person underperforms, then I will consider situational causes!”
  – personal challenges, course load, etc.

• “If a person acts in a stereotype-consistent way, then I will consider other possible explanations!”

Sweat the small stuff:
“Every evaluation is important... small differences add up to considerable disparities in advantage and disadvantage over time.” (Valian 1998)
Syllabi: The 20% Challenge
Eddy Nahmias, Toni Adleberg, Morgan Thompson at Georgia State

• In philosophy classes, about 50% of students in intro classes are women.
• But fewer women take further classes. Why?
• Not so much about having a woman prof or a friendly class ambience...
• Biggest factor: whether the syllabus included at least 20% women!
• Diversify your syllabus portfolios!
Decision-making and states of mind

Decision-making worsens when we are tired, hungry, distracted, upset, or stressed.

- Judges grant more parole requests immediately after meal breaks than before (Danziger et al. 2011)

Don’t make important decisions on an empty stomach, or at the end of a long, tedious, tense meeting.

Do have snacks and frequent “study breaks”
Criteria in advance

Police chief study: biases eliminated simply by deciding in advance whether street-smarts or book-smarts were more important.

• Develop criteria in advance and stick to them.
• More than one way to do a job well! (Valian 1998)
  – Revisit and revise criteria, evaluate effects of new strategies
  – COLLECT AND ANALYZE DATA
Checklists

List criteria in a systematic, checklist format
  – Rubrics for grading papers,
  – Criteria for evaluating applications

Repackage your information
  – write up an easy-to-read list of pro’s and con’s

Be careful that the criteria are not arbitrary or unfairly favor one group.
  – E.g., factoring in total number of hours worked may favor men.
  – “stereotype incumbency” – we think the stereotypical traits of previous jobholders are necessary for success
  – how many successful and unsuccessful people have these traits?
Broadcast: Seek and Disseminate Information

Broadcast expectations to everyone involved. Sometimes just spreading knowledge of promotion criteria increases representation of women and minorities.

- Most jobs and opportunities are hired via word-of-mouth.
- This privileges insiders.
- Broadcast information to places that might not get it.
- Don’t just give a summer research position or internship to the student you know best.
- Advertise the position; make it a fair competition.
Accountability

• Explain your decisions in light of pre-established criteria

• Make everybody accountable at every step of the decision-making process

• Create a task force or committed devoted to improving diversity and countering implicit bias
Top-down and peer-to-peer endorsement of social norms

- Top-down support for new norms and policies
- Vocal endorsement of norms and talk openly about following them
- Leaders legitimizing leaders: vouch for a new leader’s expertise. (Brown & Geis 1984)
Improvements?

In some cases, yes...

In 1999, it was found that MIT had been allocating much less lab space to women than men in faculty.

- Dean Robert Birgeneau: “I believe that in no case was this discrimination conscious or deliberate. Indeed, it was totally unconscious and unknowing.”
- President Charles Vest: “I have always believed that contemporary gender discrimination within universities is part reality and part perception... I now understand that reality is by far the greater part of the balance.”

The administration took responsibility for changing things once the facts were known... and made “stunning” progress.

- In 12 yrs, number of women faculty doubled, more women in leadership positions, and almost no remaining gender differences in salary, lab space, and teaching loads.
And yet...

Unintended Consequences at MIT (2011):
- created perception that women at MIT have “unfair” advantage
  - but increase came from broadening job searches, not lowering standards or using “diversity reasons”.
- every committee must include women, who are still in the minority among faculty.
  - So they lose up to 50% of research time on committee work.
- women must still battle expectations for behavior that is “neither too aggressive nor too soft”
- and childcare is still perceived as an issue for women.
Continuing disparities...

- Still fewer tenured women professors in many fields.
- (Not just about women “losing time” due to pregnancy and childcare. Even women without children do not succeed at the same rate as men. (Valian 2010))
- (But you should offer childcare, make policies for dual-career couples, etc.)
Humility

We all want to think we’re objective and fair. But everybody is biased (as far as I know).

- Not everybody has every possible bias; everybody has some biases sometimes.
- Everybody’s on notice.
- Biases can influence us without our noticing.

The Bias Blind Spot: we are much better at identifying biases in others than in ourselves. (Pronin, Gilovich, & Ross, 2004)

“If others call me out, then I will assume that they’re right!”

- My first thought should be: OK, how can I do better;
- Not: whether the accusation is fair, etc.
Two steps forward, one step back

- Whenever we put new interventions and strategies in place,
- we tend to lose motivation to keep pushing (effectively thinking, “ok, my work here is done”).
  – This is true even if the intervention has no effect!
- Treat effective interventions as evidence that we can make progress if we keep trying, not that we have met all our goals.

“When we make progress, then we will remind ourselves how far we have to go!”
thanks to Shirley Yap and everybody at CSU East Bay!

(email me questions and comments! alexmadva@gmail.com)