



NCWIT Summit
on Women and IT
practices and ideas
to revolutionize computing

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Unconscious Bias

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Microsoft, Bank of America, Google, Intel, and Merck*

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WHAT WOULD YOU DO?

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You notice that someone is repeatedly interrupted in meetings

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Work meetings typically include spirited discussion and argument, but Samantha consistently avoids engaging in that manner; instead, she prefers to respond via email later on.

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I believe the
computing field is a
meritocracy.

I believe our
college/department
/company is a
meritocracy.

All of my students/team
members are
comfortable speaking
up in class or at work

I know top
technical talent
when I see it.

Why Increase Diverse Participation?

Research Shows That:

- ✓ The “Best” Don’t Simply “Rise to the Top”
- ✓ Societal Biases Prevent Talented People From Succeeding & Realizing Full Potential



Let's Start With a Story.....

For me, my experience as an undergrad, I was tormented constantly. They would always say mean things like “You shouldn’t be here. Women aren’t meant to be in computer science. You don’t know what you’re doing when you talk about this.” Yeah. And since there were never other females in my classes with me there was never ever anybody that I could kind of cling to.

Then I was in a group with two guys, and because the two guys ended up in my group they started facing the harassment of being with me. And these guys would constantly defend me, because they knew how hard I worked, they knew what I was doing for this project. It didn’t matter to them. [When people said] “Oh, you’re with the girl.”

Traditional Paradigm: Conscious Discrimination

- People who discriminate

- People who know better:

- Bad

- Good



This Results in Serious Costs & Consequences

- ✓ To the Department & the Field
- ✓ To the Individual



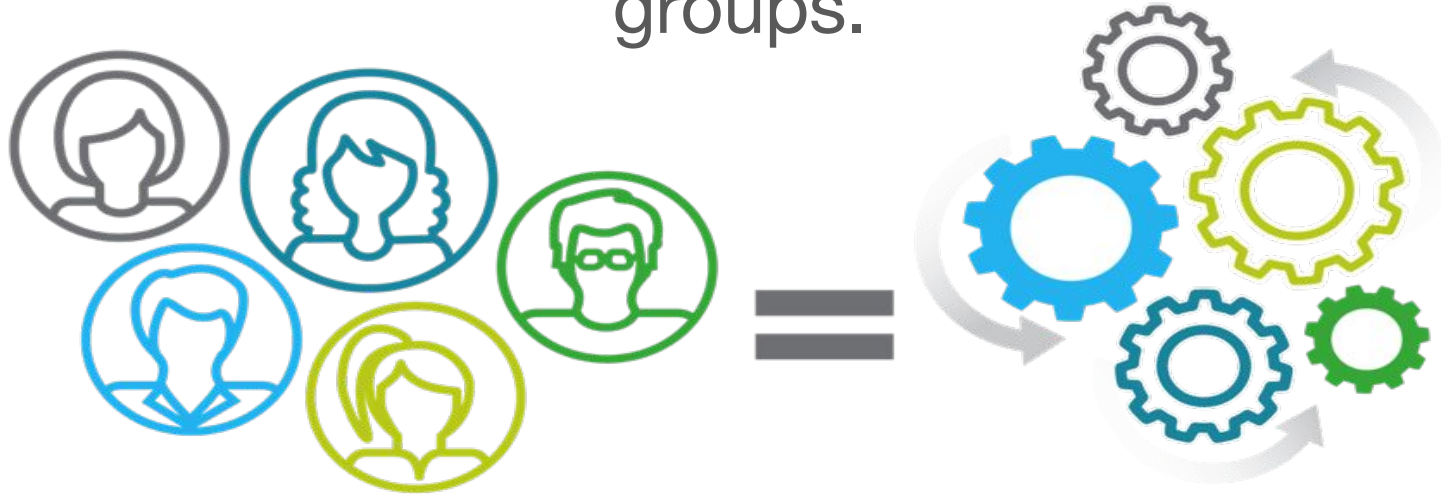
IN·NO·VA·TION

END GAME: DIVERSE AND INCLUSIVE TECHNOLOGY CULTURES FOR ALL GROUPS



DIVERSITY BENEFITS CREATIVITY

Groups with **greater diversity** solve complex problems **better and faster** than homogenous groups.

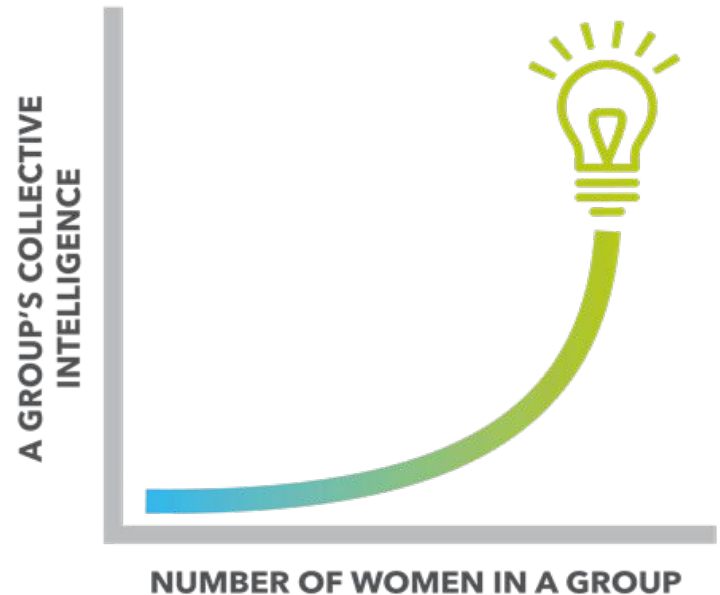


www.ncwit.org/businesscase

Scott Page, *The difference: How the power of diversity creates better groups, firms, schools, and societies*, Princeton University Press, 2009.

WOMEN IMPROVE INNOVATION

A group's collective intelligence is not predicted by the IQs of its individual members. But if a group includes more women, its collective intelligence rises.



*"Evidence for a Collective Intelligence Factor in the Performance of Human Groups,"
Science October 2010, Woolley, Chabris, Pentland, Hashmi and Malone.*

WHAT'S GOING ON?

LET'S CUT TO THE CHASE

- Minority groups aren't broken.
- Majority groups aren't the enemy.
- The culprit is societal bias (shared by both women and men) that manifests itself in technical cultures.
- We know what to do and should take action together.



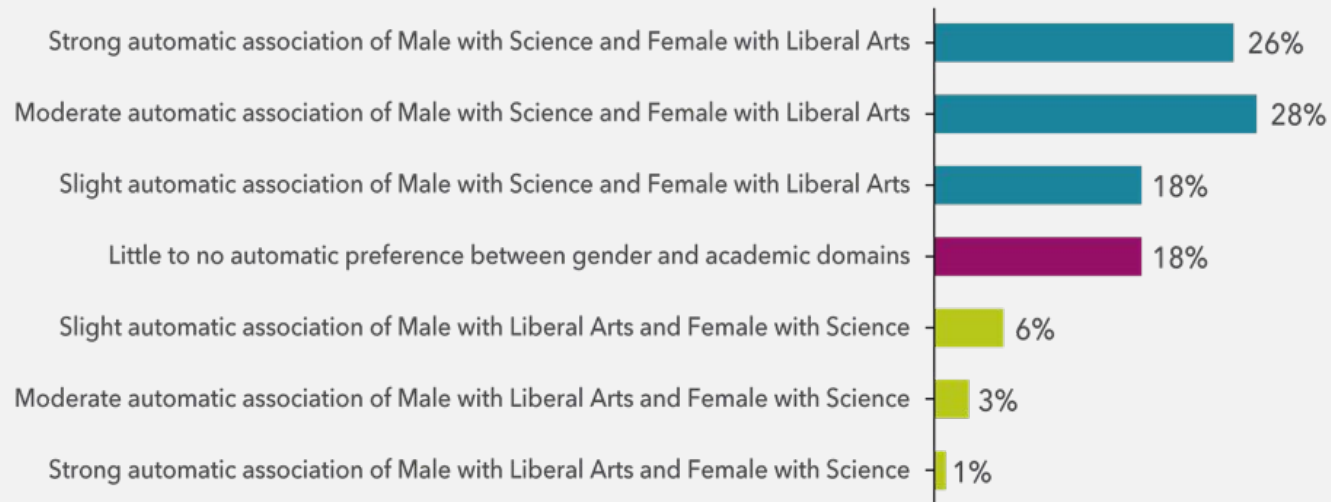
SOCIETY IS BIASED ABOUT GENDER AND TECHNOLOGY



"I'm only creating the design ideas," Barbie says, laughing. "I'll need Steven's and Brian's help to turn it into a real game!"

WE ARE BIASED AND MOST LIKELY, YOU ARE TOO

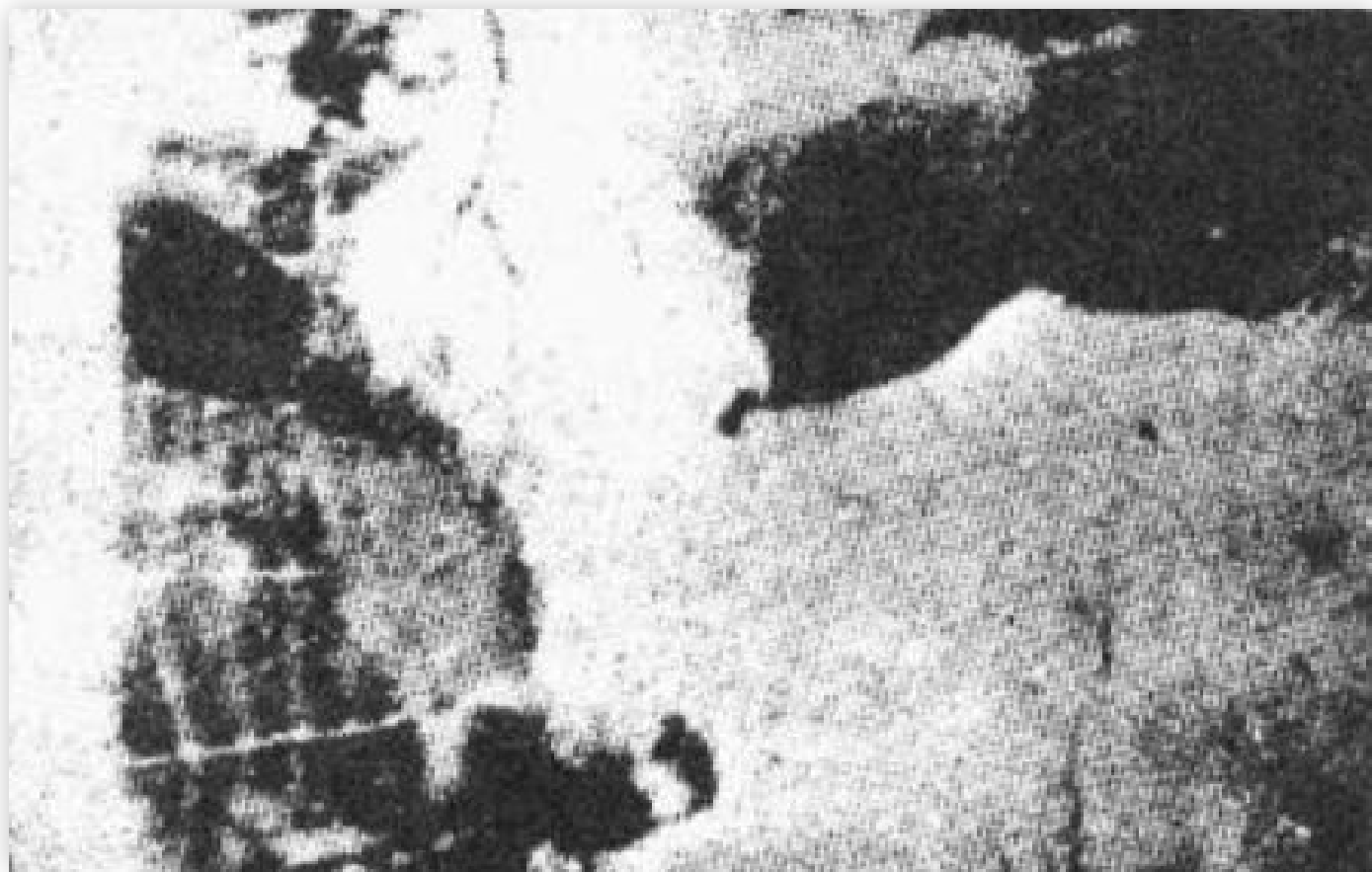
PERCENT OF WEB RESPONDENTS WITH EACH SCORE



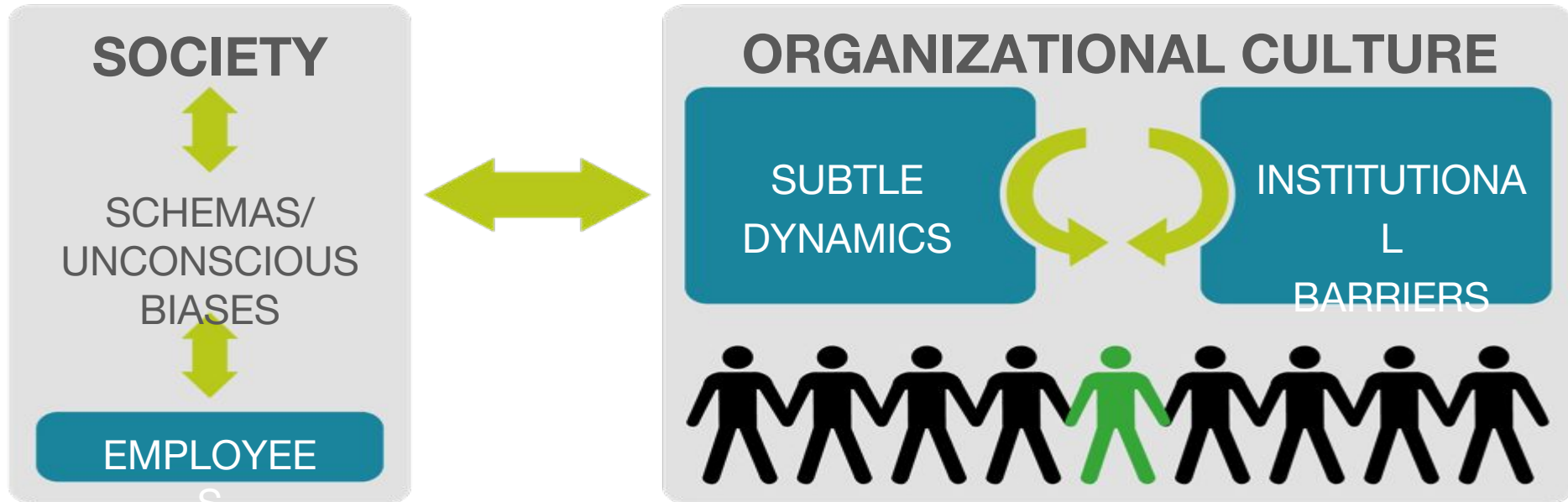
WHAT CAUSES SOCIETAL BIAS?



We all have shortcuts, or “schemas,” that help us make sense of the world. But our shortcuts sometimes make us misinterpret or miss things. That’s **unconscious bias**.

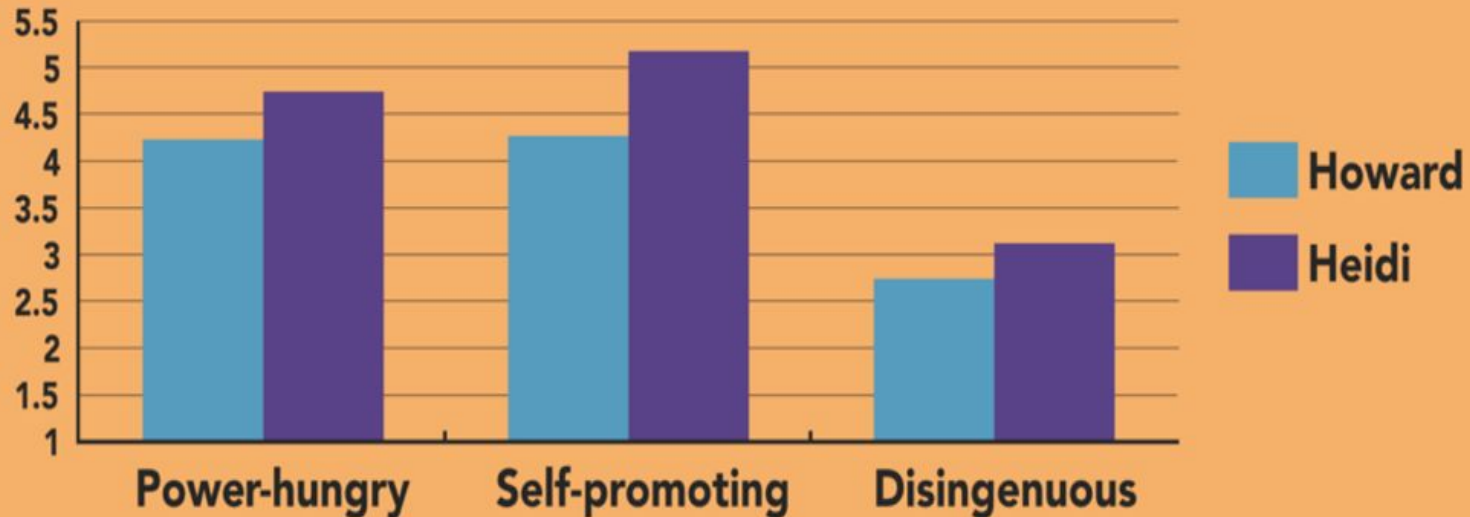


WE ALL BRING UNCONSCIOUS BIAS TO WORK



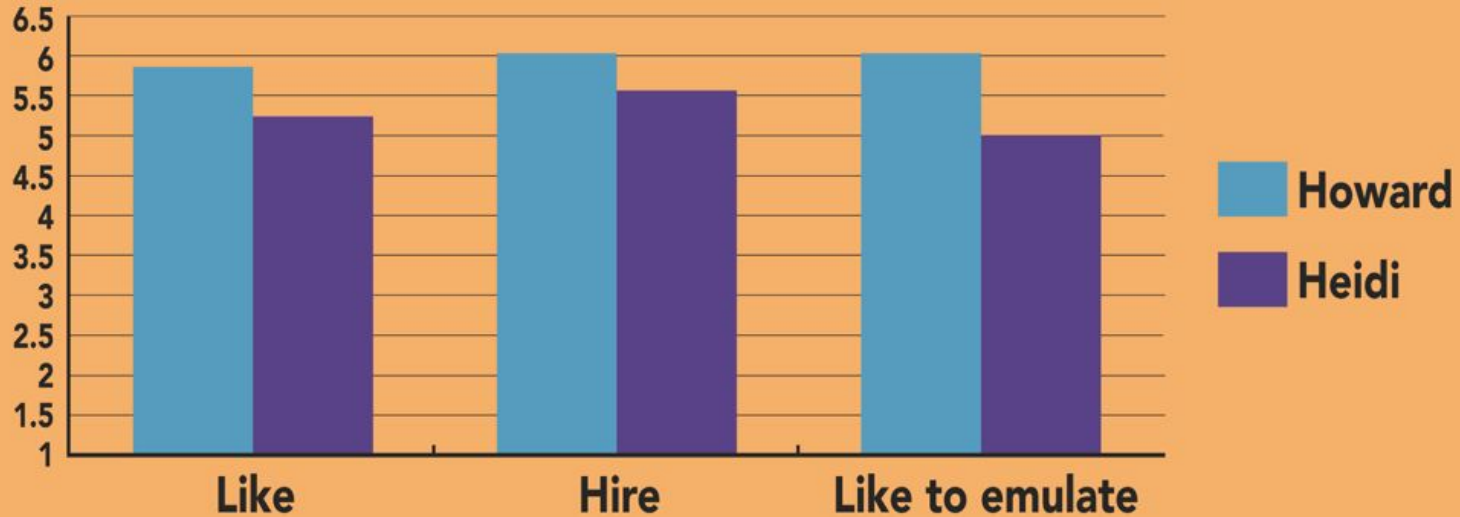
HOWARD VS. HEIDI

How power-hungry, self-promoting, and disingenuous was Roizen?



HOWARD VS. HEIDI

Would you like, hire, like to emulate Roizen?



Meet Phillip

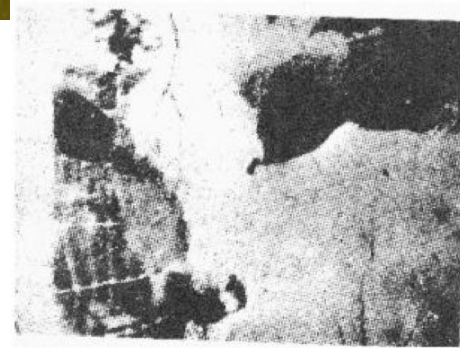
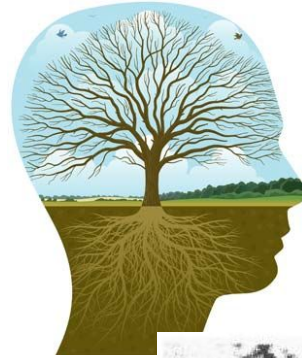
This was me at nine years old (with horrible posture):

I started programming when I was five...by the time this photo was taken, I had already written several BASIC games...When I started my freshman year at MIT as a Computer Science major, I already had over ten years of programming experience. So I was right at home there.



“I looked the part so I got the benefit of the doubt”

Even though I didn't grow up in a tech-savvy household and couldn't code my way out of a paper bag, I had one big thing going for me: *I looked like* I was good at programming.



-

I was never told

Well, you only got into MIT because you're an Asian boy.”

(while struggling with a problem set)

“Well, not everyone is cut out for Computer Science; have you considered majoring in bio?”

(on a class project team) “How about you just design the graphics while we handle the backend?”

“Are you sure you know how to do this?”

The Power of Implicit Endorsement

They assumed I knew what I was doing (regardless of whether I actually did or not)...I was able to fake it till I made it, often landing jobs whose postings required skills I hadn't yet learned but knew that I could pick up on the spot.



When you don't "fit the schema" or
"look the part":
Implicit Discouragement

SUBTLE DYNAMICS: MICRO-INEQUITIES

SLIGHTS: “Actually, Susan has a good idea.” Interrupting in Meetings. Ignoring ideas in meetings.

RECOGNITION: “Are you in the right meeting?” Validation of credentials and contributions.

ISOLATION: “We decided on the right architecture at the Friday beer bash.”



PHRASES TO AVOID WHEN TALKING TO OR ADDRESSING A FEMALE AUDIENCE (RESPONSES)

TIMESTAMP	WHAT IS ONE PHRASE...
9/25/2014 13:21:11	Are you here with your boyfriend?
9/25/2014 13:21:17	Are you a designer?
9/25/2014 13:52:21	As a developer, hearing "you can design the UI"
9/25/2014 14:00:56	You do realize you are the only girl, right?
9/25/2014 14:02:38	Leave it to the woman to try to clean the hackerspace. (was told this at a hackathon once)
9/25/2014 14:03:08	You do the writing/designing, you'd be better than us guys.
9/25/2014 14:04:25	Do you know what _____ (common thing) is?
9/25/2014 14:04:49	This is how you should feel _____
9/25/2014 14:05:20	I didn't think it was offensive or you shouldn't be offended by:
9/25/2014 14:08:09	Because it hasn't happened in my experience means it shouldn't be a big deal to you
9/25/2014 14:13:50	Is it simple enough so that your mother could use it?
9/25/2014 14:14:43	"Excuse me, I'd like to talk to the engineer"
9/25/2014 14:16:12	"Does that make sense?" after something that was not confusing in any way
9/25/2014 14:16:19	Evaluating technical skill based off of the way a person dresses
9/25/2014 14:16:20	"You may know"
9/25/2014 14:16:28	"Obviously"
9/25/2014 14:16:54	That's cute.
9/25/2014 14:17:37	Are you design/UIUX/front-end/any sort of "visual art" person?
9/25/2014 14:18:59	"You're just a freaking girl"
9/25/2014 14:19:33	*talking through me as though I don't exist*
9/25/2014 14:19:49	"are you on design?" "are you a PM?"

SUBTLE DYNAMICS: STEREOTYPE THREAT



Example: White male engineering students score lower when told in advance that Asians typically score higher on math tests.

HOW STEREOTYPE THREAT SHOWS UP IN TECHNICAL ENVIRONMENTS

- Not speaking up in meetings or class
- Reluctant to take leadership positions or seek out mentors
- Overly harsh about their own work
- Discounting their performance



SUBTLE DYNAMICS: PERSONALITY PENALTIES

- Pushy, bossy, aggressive
- Has a challenging personality
- Could tone it down a little
- Be more professional

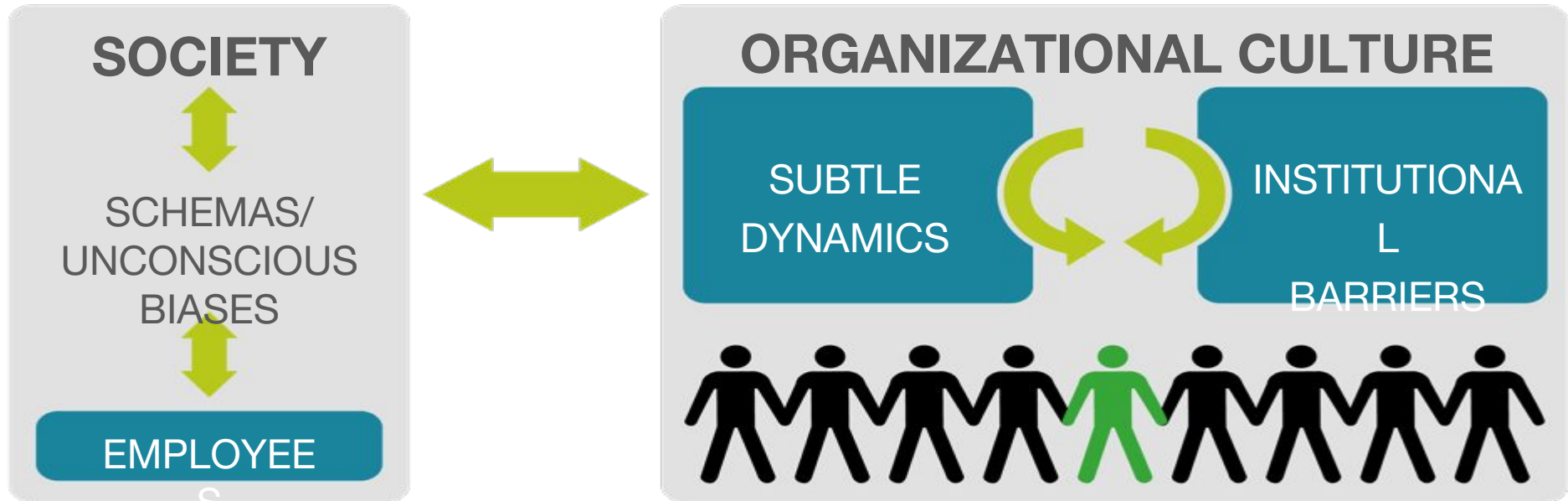


BOSS



BOSSY

UNCONSCIOUS BIAS INSTANTIATES ITSELF IN BUSINESS PROCESSES



INSTITUTIONAL BARRIERS

HIRING

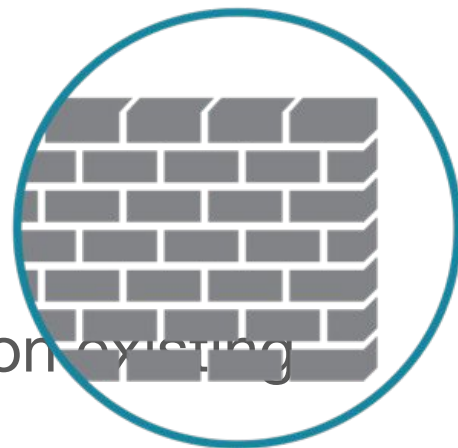
Hiring people “like me”

TASK ASSIGNMENT

Women find themselves in “low status” jobs

PROMOTION

High potential talent criteria modeled implicitly on existing senior male leaders



PERFORMANCE APPRAISAL

Men appraised for effort, skill; women for collaboration, luck

Institutional Barriers: Hiring

- “Blind” orchestra auditions, with musicians behind a curtain, increased the number of female musicians hired by 25% to 46%.



Goldin & Rouse (2000) *The American Economic Review*, 90(4), 715-741.

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The Critical Listening Guide

**A HOLISTIC ECOSYSTEM APPROACH FOCUSES ON
THE FIXING THE ENVIRONMENT,
NOT THE PEOPLE**

INDUSTRY SYSTEMIC CHANGE MODEL



IMPLEMENT CHANGE PERSONALLY

Practice Bias Busting – Staff Meeting Discussions

Model Inclusive Behaviors – Spirit of Inquiry

Question Check Box Solutions

Become Curious – “I wonder how task assignment really happens?”

Examine Your Physical Environment and Entertainment Rituals

STRATEGY DISCUSSION

1. What strategy or actions has YOUR company taken to address unconscious bias?
2. What new or additional longer-range strategies are needed in YOUR company?
3. What is the best way to roll these strategies out?

SEEN ON A CONGESTED HIGHWAY



A green rectangular highway sign with a white border, supported by two grey posts. The sign contains two lines of white text.

**We Are Not Stuck
In A Culture**

We Are The Culture

THANK YOU

Lifetime Partner:



Strategic Partners:



Investment Partners:

