

Reducing Stereotype Threat and Fostering a Growth Mindset



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whistling vivaldi

how stereotypes affect us and what we can do

CLAUDE M. STEELE

"This is an intellectual odyssey of the first order—a true tour de force."
—WILLIAM G. BOWEN

Stereotype Threat



"If you manage any people or if you are a parent (which is a form of managing people), drop everything and read *Mindset*."
—GUY KAWASAKI, author of *The Art of the Start*

mindset
THE NEW PSYCHOLOGY OF SUCCESS

HOW WE CAN
LEARN TO FULFILL
OUR POTENTIAL

- *parenting
- *business
- *school
- *relationships

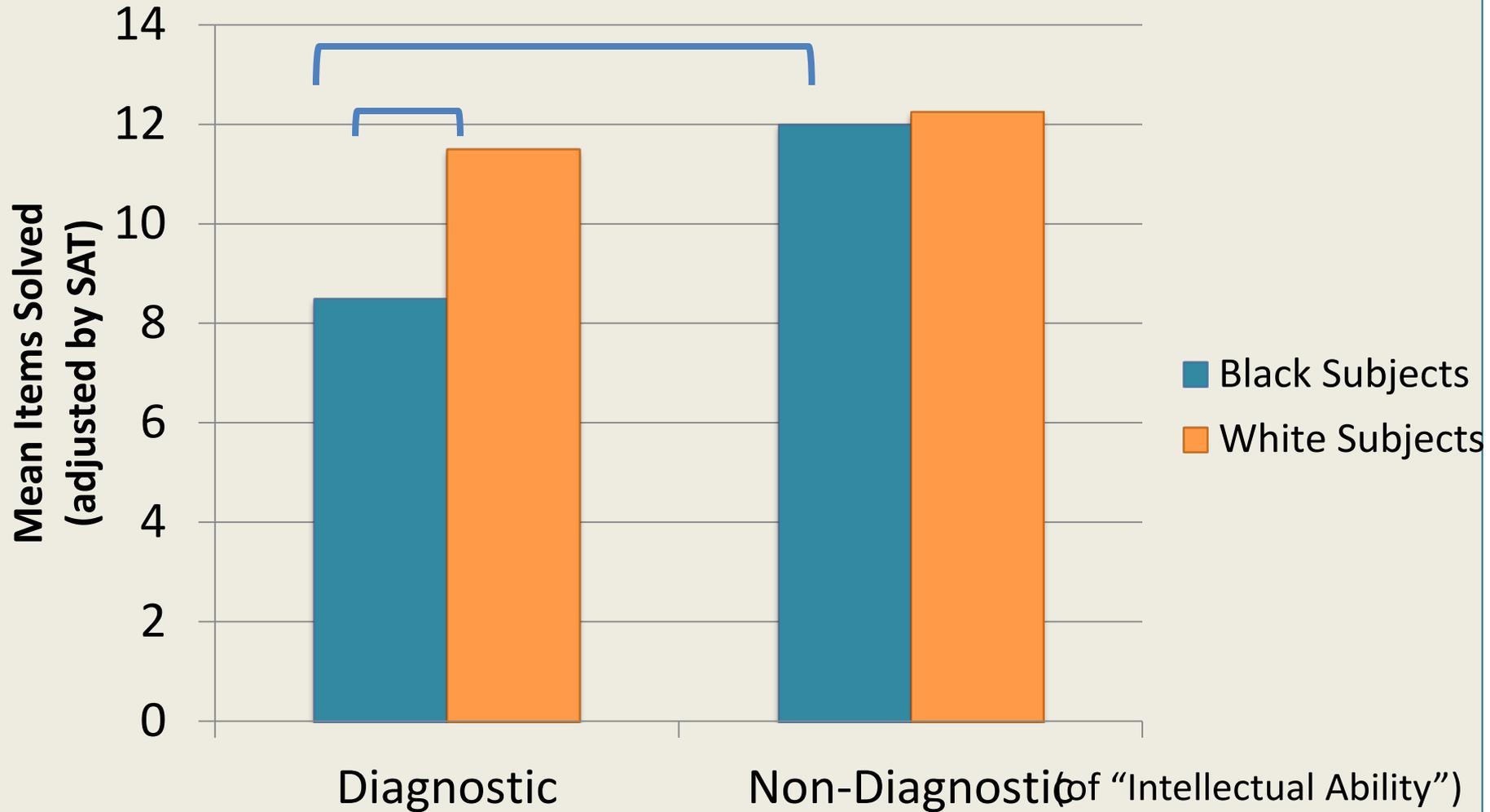
"Will prove to be one of the most influential books ever about motivation."
—Po BRONSON, author of *Nature Shock*

CAROL S. DWECK, Ph.D.

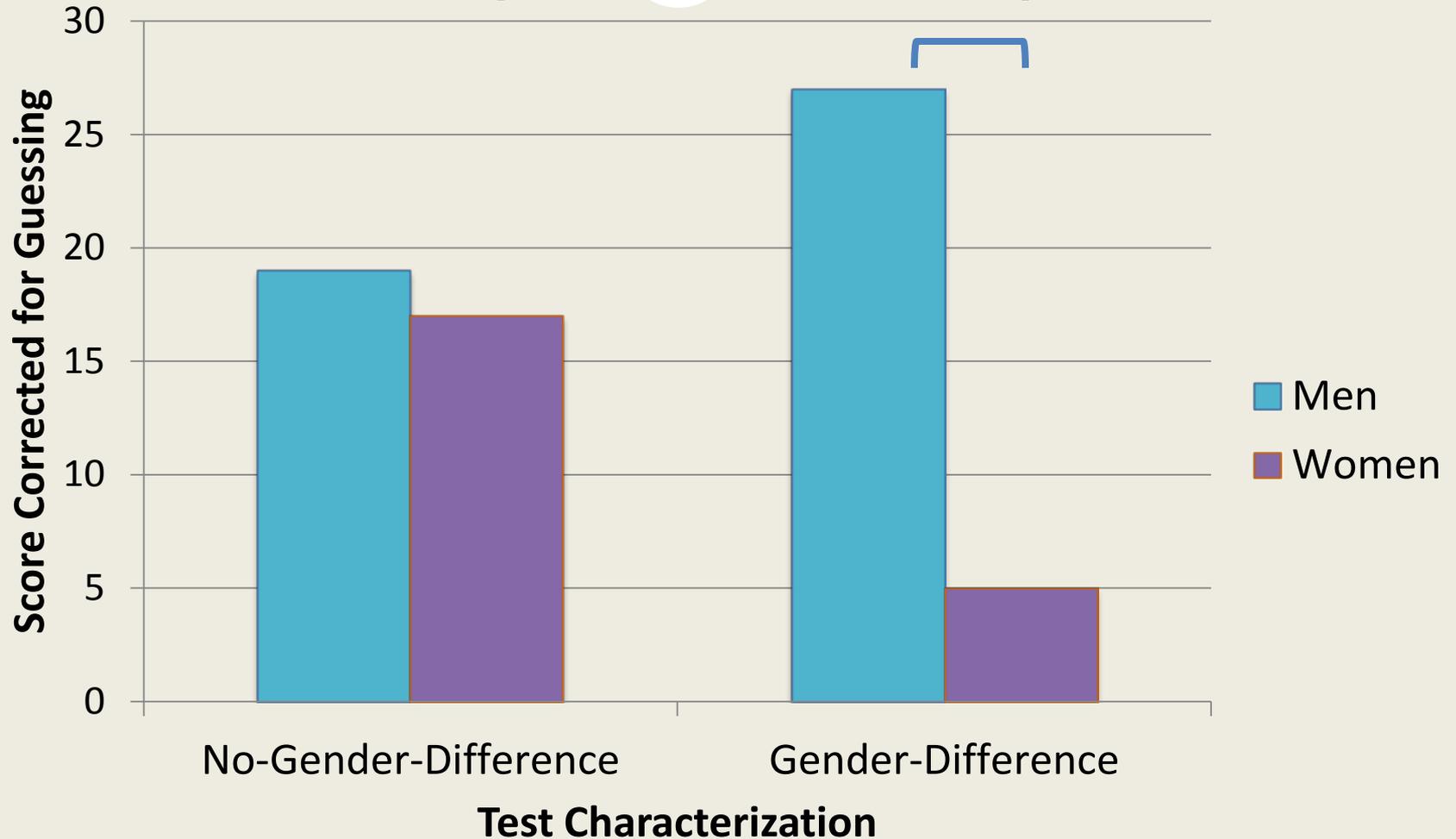
Growth Mindset



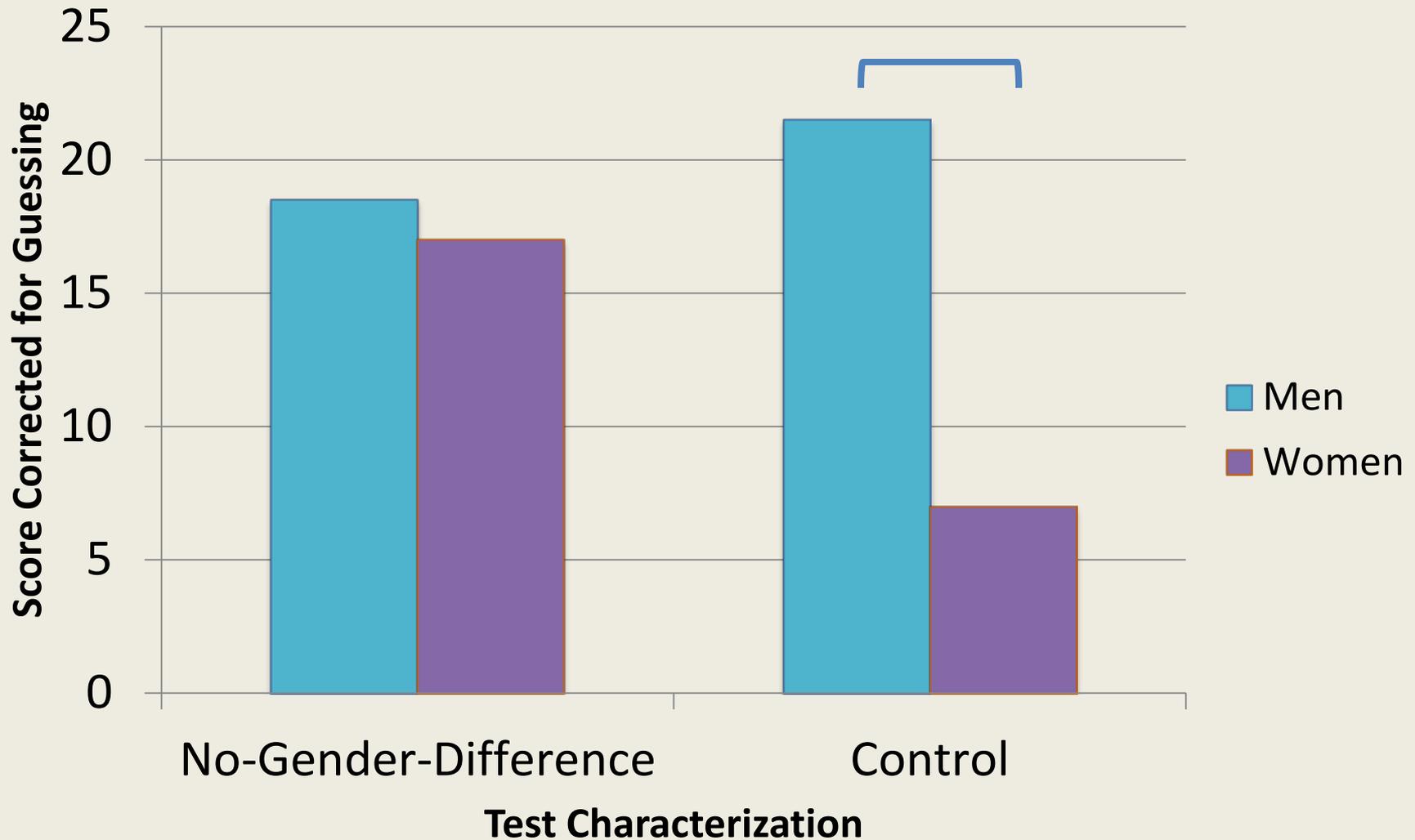
Performance on a 30-Minute Verbal Test (27 Qs from GRE study guides + 3 anagrams)



Performance on a 30-Min Math Test (Qs from GRE)



Performance on a 20-Min Math Test (Qs from GMAT)



Stereotype Boost



Two examples: in both studies, the participants were Asian-American, female college students

1. Performance on a quantitative test

- Higher when participants' ethnic identity was made salient prior to test
- Lower when participants' gender identity was made salient

(Shih, et al., 1999)

2. Performance on a verbal test

- Lower when participants' ethnic identity was made salient prior to test
- Higher when participants' gender identity was made salient

(Shih, et al., 2006)

Mechanism behind Stereotype-Threat Effect



Frustration during
a difficult
assessment

When students identify
with a group that is
negatively stereotyped
in the assessed domain

Anxiety that
poor
performance
could confirm
stereotype about
the group

**Reduced
capacity of
working
memory**

Stereotype Threat: Summary of Major Points



- Awareness of a stereotype that links identity to ability or intelligence can depress students' performance, even when a stereotype is not explicitly invoked
- Stereotype threat is contextual
 - Can affect anyone, depending on context, but does affect some more than others (e.g. if among a numerical minority in the discipline or at the institution)
 - More prevalent when students strongly identify with domain in which they are being assessed



Reducing Stereotype Threat: Research-Based Strategies



- Teach students about Stereotype Threat
- Counter stereotypes and numerical underrepresentation by teaching students about contributions to discipline by diverse individuals
- Avoid referring to students' performance as reflective of “natural” ability or talent—or lack thereof
- Combine high standards and specific feedback with expressed confidence that all can achieve



Implications for Teaching and Learning



How might you apply knowledge about Stereotype Threat to teaching in your discipline, at your institution?

- Discuss in groups of three for ~5 minutes.

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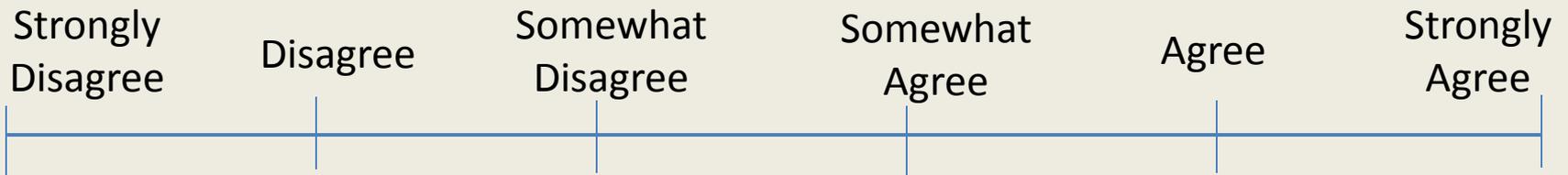
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- Combine high standards and specific feedback with expressed confidence that all can achieve
- Foster a “growth mindset” --intelligence and ability grow over time



Mindsets about Intelligence



You can learn new things, but you can't change your basic intelligence.



GROWTH

Intelligence is malleable; it can change and increase.

[Video: What is Growth Mindset?](#)

FIXED

Intelligence is innate and does not change.

Mindsets of Students: Effects on Response to Academic Struggle



Intelligence is
unchanging
(Fixed or Entity)

- Likely to be outcomes-focused
- Assess performance relative to classmates
- Confidence is fragile
- Focus on repairing self-esteem in response to failure (blame others)

Intelligence is
malleable and
can increase,
with “exercise”
(Growth or
Incremental)

- Likely to be process-focused
- Assess performance relative to mastery of material
- Confidence is resilient
- Focus on working harder in response to failure (take responsibility)

Environmental Mindset and Sense-of-Belonging



Undergraduates in Calculus courses completed survey measuring “sense of belonging to math community” 3 times during semester – once after each exam

- **Results:**

- ✦ For all students (male and female)
 - Students’ perception of a fixed-mindset environment was correlated with a lower sense of belonging to the math community”
- ✦ The more that women perceived a growth-mindset environment, the more they maintained a sense of belonging to the math field, “even when they perceived their environments as highly gender-stereotyped”

Research-Based Insights about Mindsets



- Students' mindsets can affect their reaction to and improvement in performance after evaluation
- Instructor feedback can promote “growth mindset” and resilience
- Perception of a “growth-mindset” environment can help students maintain sense of belonging in a field, even when they encounter negative stereotypes

Encouraging a “Growth Mindset” Environment



- Approach faltering as opportunity for learning and improvement
 - Describe struggling as crucial to learning
 - Show that failure can lead to development of new ideas and discoveries (give examples)
 - Ask questions such as “Who made an interesting mistake today?” or “Did you find any stumbling blocks or places where you struggled? How did you work through those difficulties?”
- Actively show enthusiasm for ideas of ALL students
 - Show interest via verbal and NON-VERBAL cues
 - Encourage students to think out loud and point to specific strengths of their contributions and questions

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