

Inclusive Pedagogy

CER Lunch-N-Learn

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Goals of the Inclusive Classroom

- Create a learning environment where everyone feels safe to express ideas and questions
- Multiple diverse questions, opinions are considered
- Student experiences of marginalization are minimized

Two (of many) Challenges

Instructor Unconscious Bias
&
Student Stereotype Threat

99.999996%

of our processing uses

Unconscious

Reasoning

Unconscious Bias Stems From Expectation Bias

In Social Psychology

Bias: An error in decision making

Expectation Bias is Grounded in Stereotypes

- Women not as good at math or spatial learning
- Hispanics and African Americans are lower achieving than Whites
- Hispanics, African Americans, Poor or Obese People are Lazy
- Male athlete as a “jock” (muscular but not smart)
- Asians have higher math abilities
- Blondes less intelligent than brunettes

Do Science Faculty Display Unconscious Bias?



?? Science Faculty ??



But....

We are rigorously trained to be *objective!*

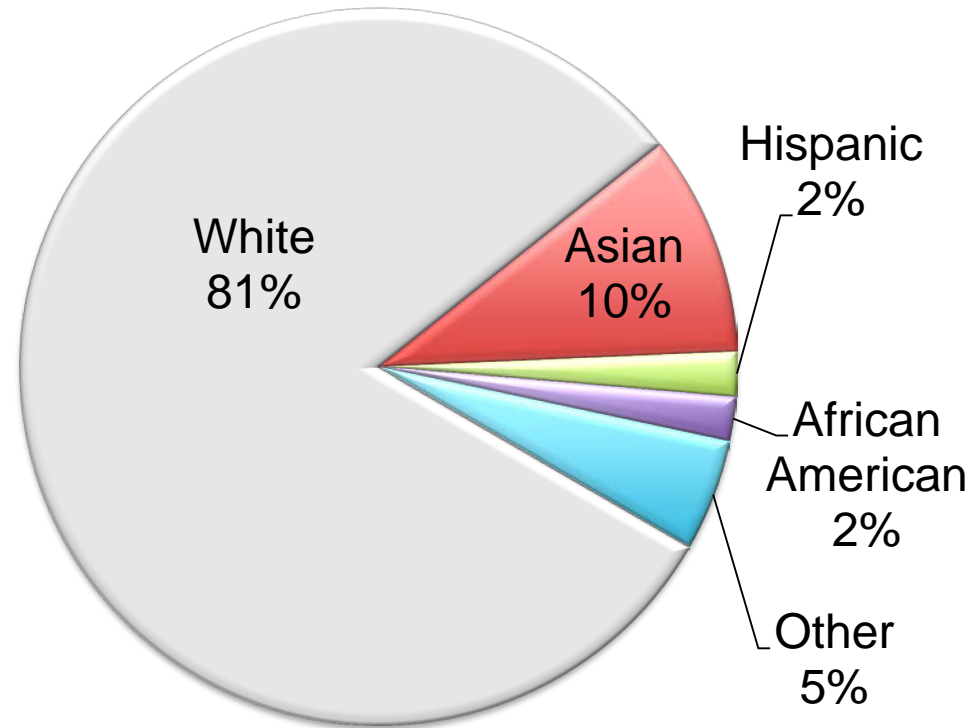
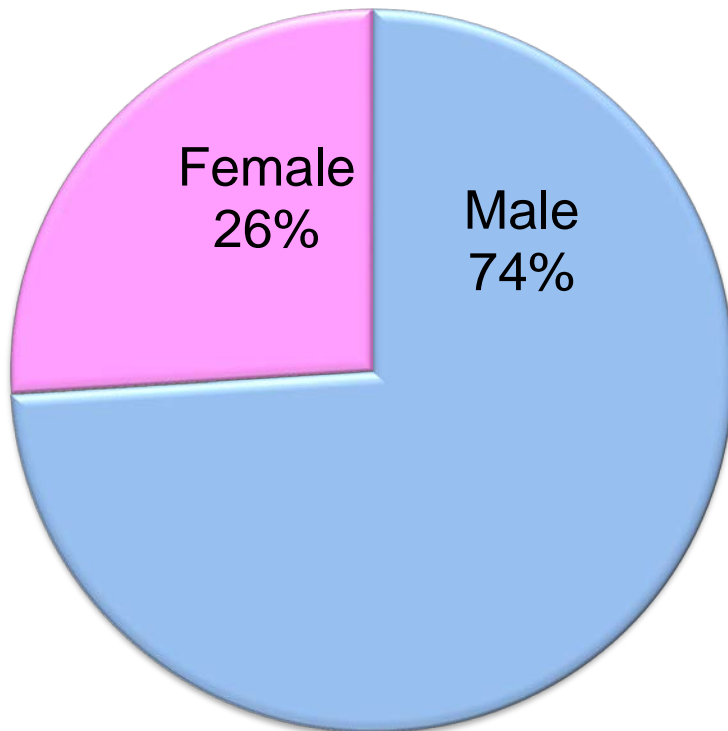
The Study: Evaluation of a Potential Lab Manager “Jo Handelsman Study”

Randomized, Double Blind Study ($n = 127$ Faculty)

Biology, Chemistry & Physics Professors

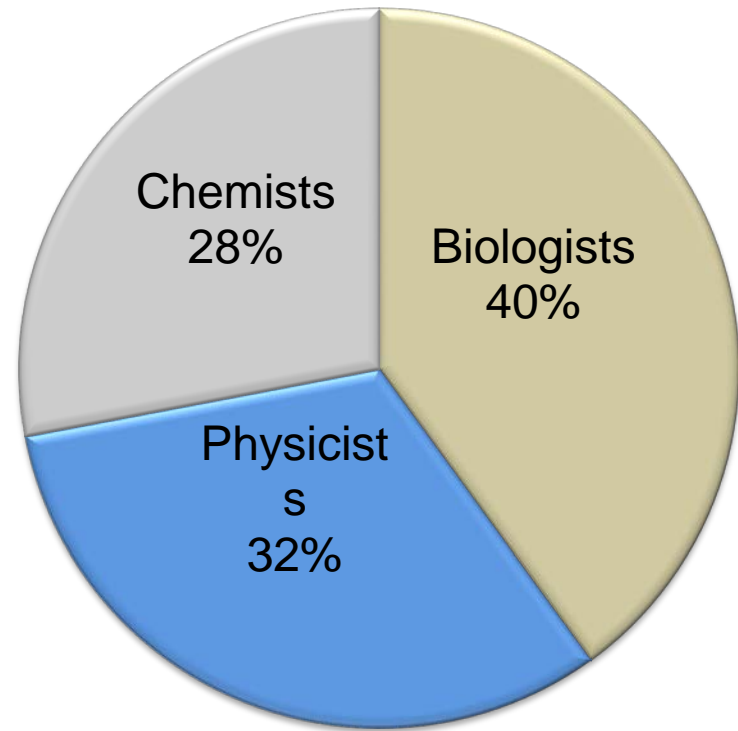
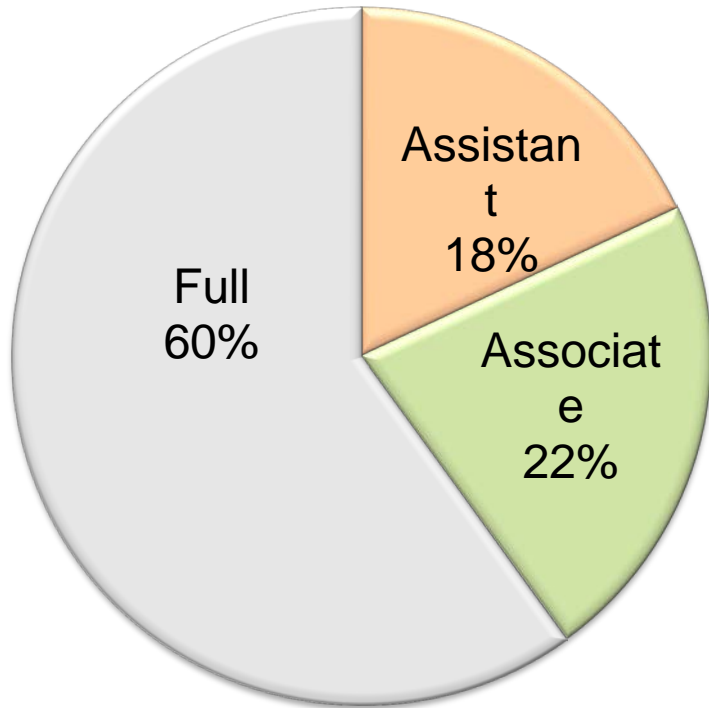
3 public & 3 private R-1 Institutions in the US
(Geographically diverse)

The Demographics on Faculty Participants Agree with National Averages



Mean age was 50.34 (SD = 12.60, range 29–78)

The Demographics on Faculty Participants Agree with National Averages



Essence of the Application that Faculty Received

Designed to reflect high but slightly ambiguous competence

Name: Jennifer or John

Gender: Female or Male

Ethnic Background: Caucasian

Age: 22

Degree: BS, May 2011 from xx University; GPA: 3.2

GRE score: 650 Verbal, 780 Quant

Awards/honors: President's Service Award, Rotary Club
College Scholarship

Letters of recommendation: 3 (2 from former faculty research
supervisors, 1 from intro science professor), all supportive

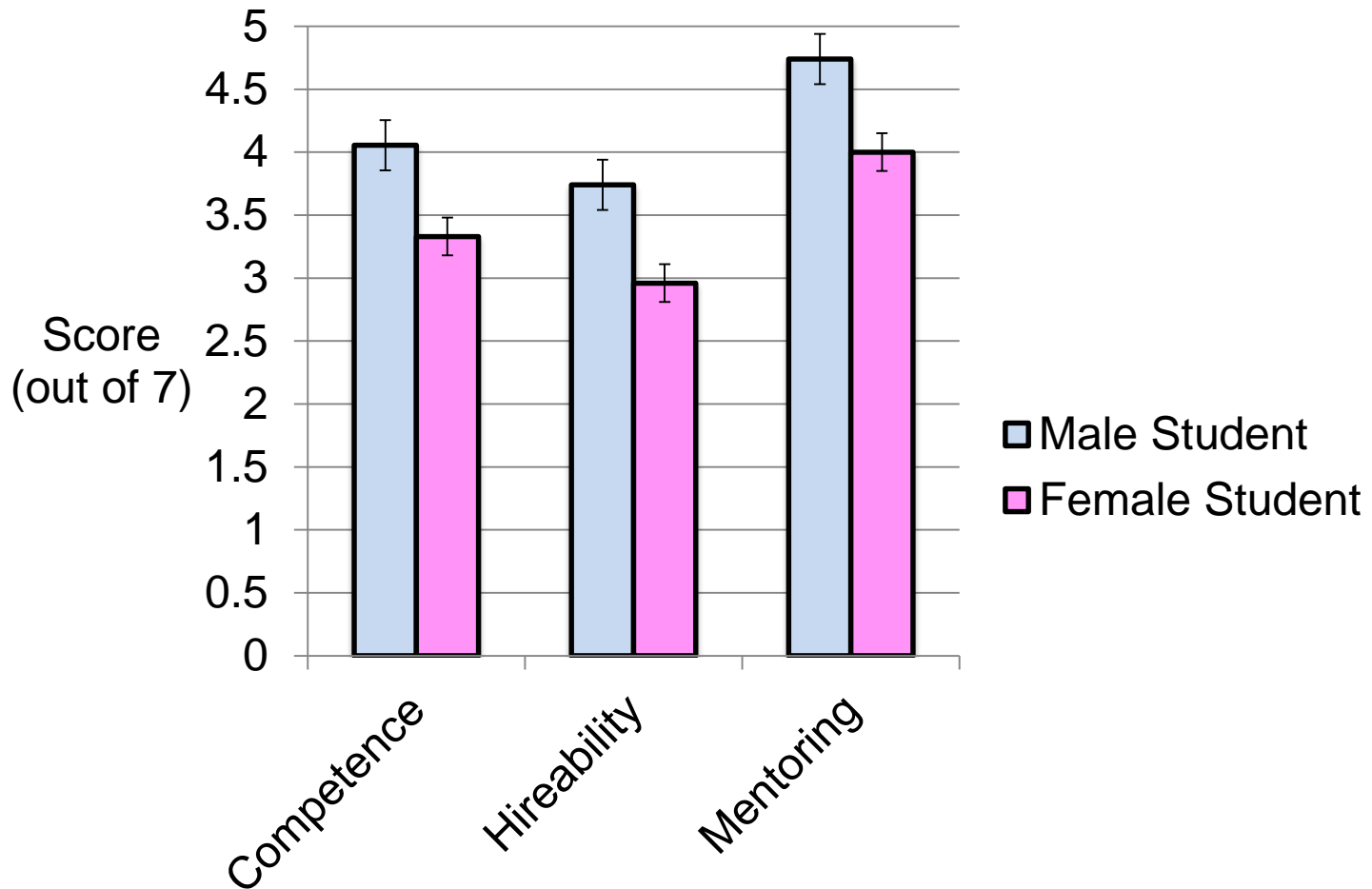
Future plans: Apply to doctoral programs

Faculty received a survey and were tasked with
Evaluation Metrics:

Rank a potential Lab Manager Candidate for

- Competency
- Hireability
- Mentoring

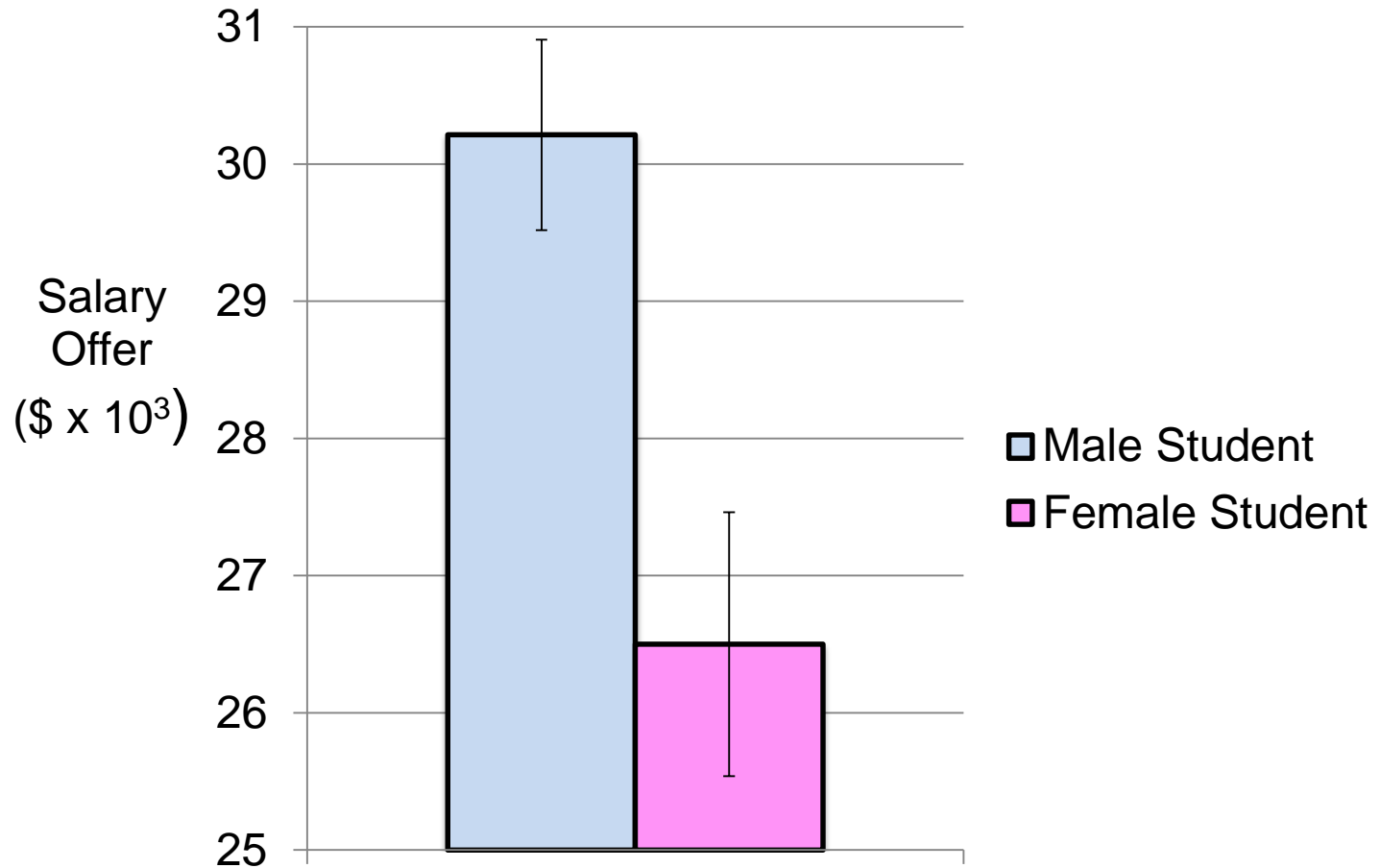
Both Men *and* Women Faculty Show Gender Bias Favoring Male Applicants



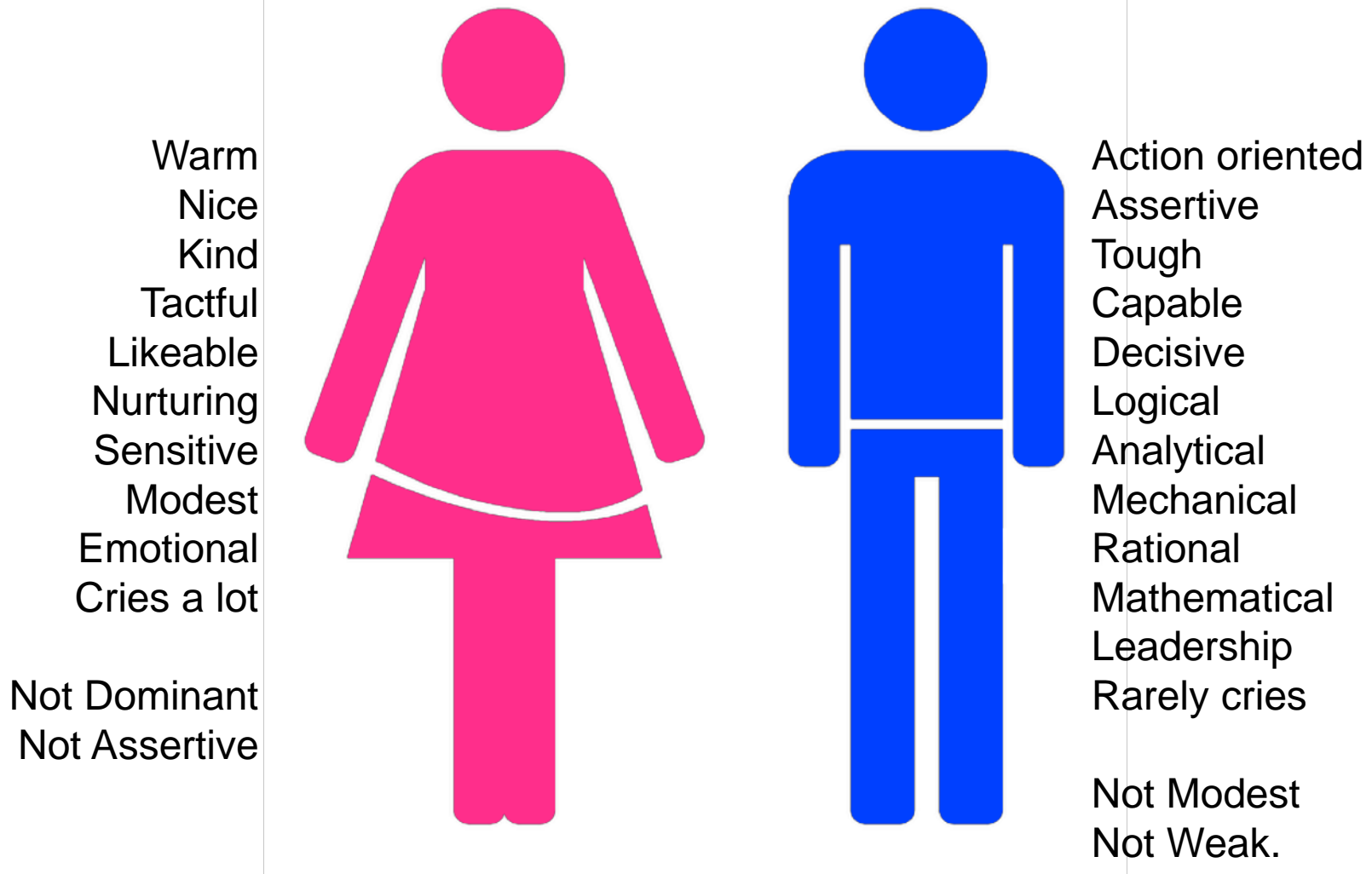
Faculty were asked to pick a starting salary

- (\$15,000)
- (\$20,000)
- (\$25,000)
- (\$30,000)
- (\$35,000)
- (\$40,000)
- (\$45,000)
- (\$50,000)

Both Men *and* Women Faculty Offered Equally Qualified Female Candidates Lower Salaries than their Male Counterparts



One Possible Explanation: Male Stereotypes meet the Expectation for the Lab Manager Position



Expectation Bias → Different Standard

When a man performs well in a *traditional male-type* task, this performance is what we expect



When a woman performs well in a *traditional male-type* task this performance conflicts with stereotypic expectations



As a result, her performance is really scrutinized, and women are required to repeatedly prove their competence.

Check your Bias

<https://implicit.harvard.edu/implicit/>



Project Implicit[®]

Gender & Science; Gender & Career; Race ('Black – White');
Age; Weight; Skin-tone; Sexuality

Stereotype Threat

- Performance in academic contexts can be harmed by the awareness that one's behavior might be viewed through the lens of stereotypes
- Culturally-shared stereotypes suggesting poor performance of certain groups can disrupt performance of an individual who identifies with that group.

Classic “Stereotype Threat” Study

114 undergraduate students volunteered for the study from Stanford

They were required to provide their verbal SAT scores (and presumably their race)

They take a test composed of Verbal GRE questions

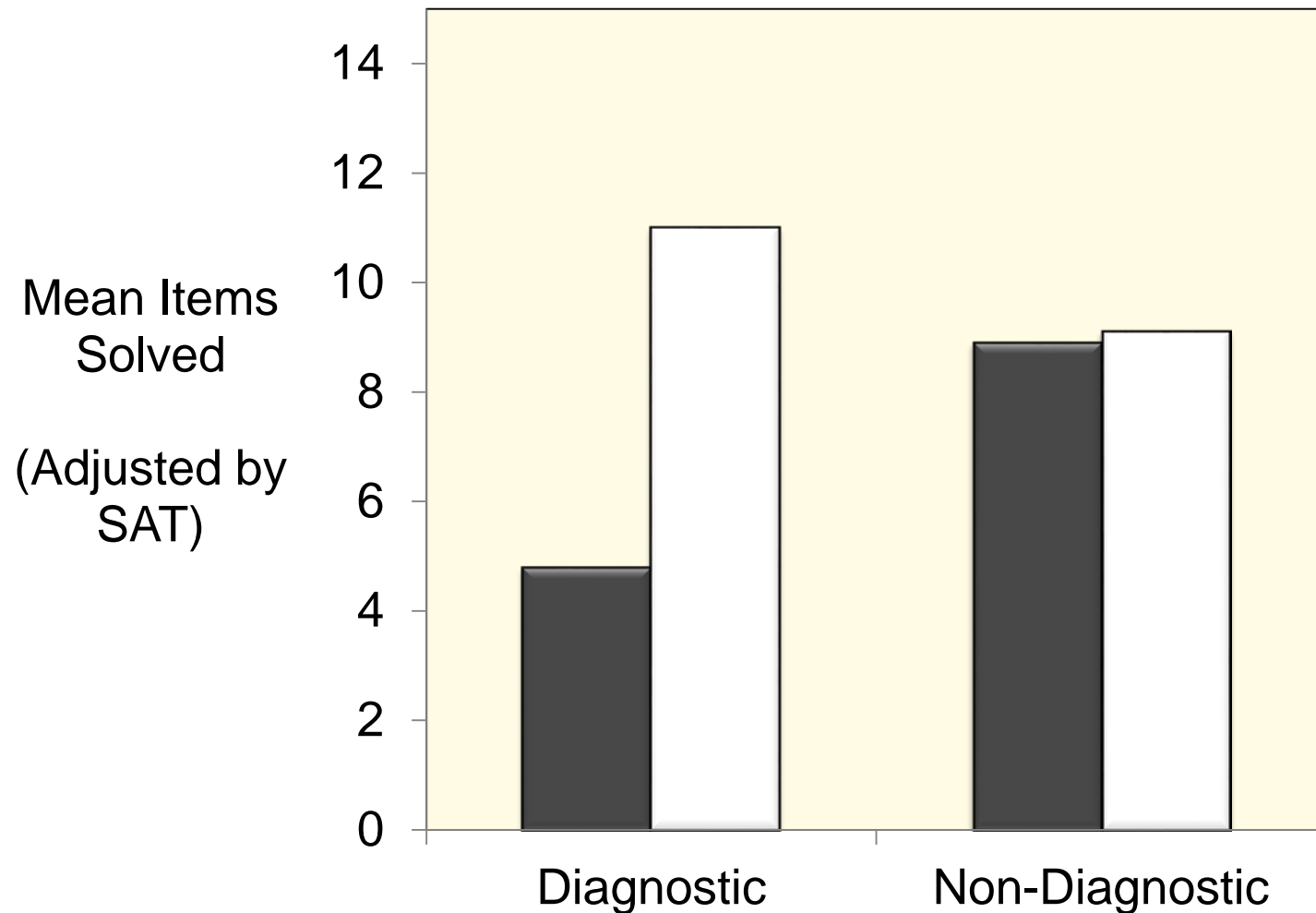
Diagnostic

Test is presented as a
measure of intrinsic ability

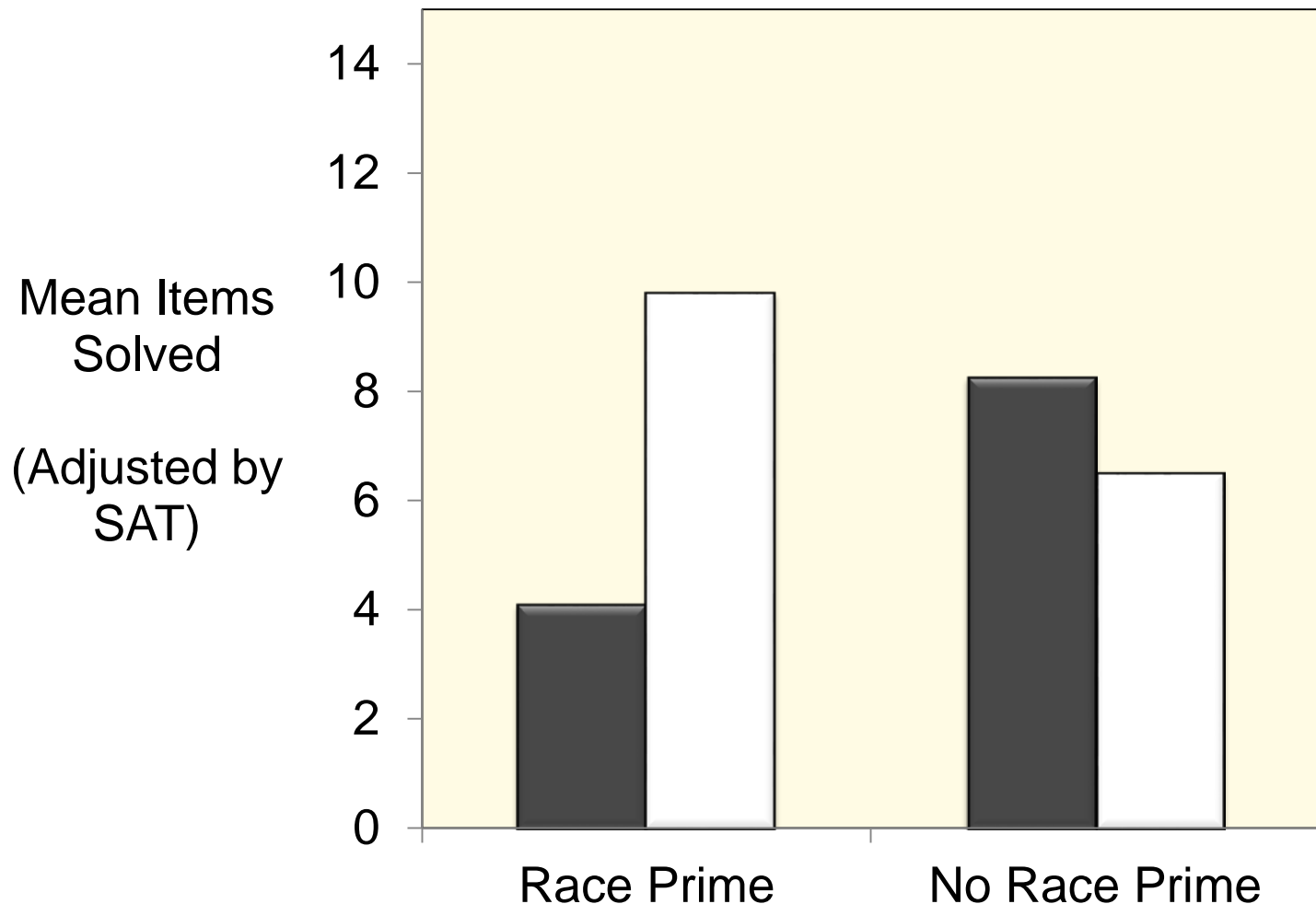
Non-Diagnostic

Test is presented as a
laboratory tool for studying
problem solving

Invoking Stereotype Threat Affects Performance in an *Evaluation* Setting



“Race-Priming” Students Affects Performance in an *Evaluation* Setting



How To Be More Inclusive?

Establish a Growth Mindset

Set clear, equal and high but achievable expectations for all students

Include material created by people of different backgrounds

Pay attention to group dynamics (especially compositions of small groups)

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