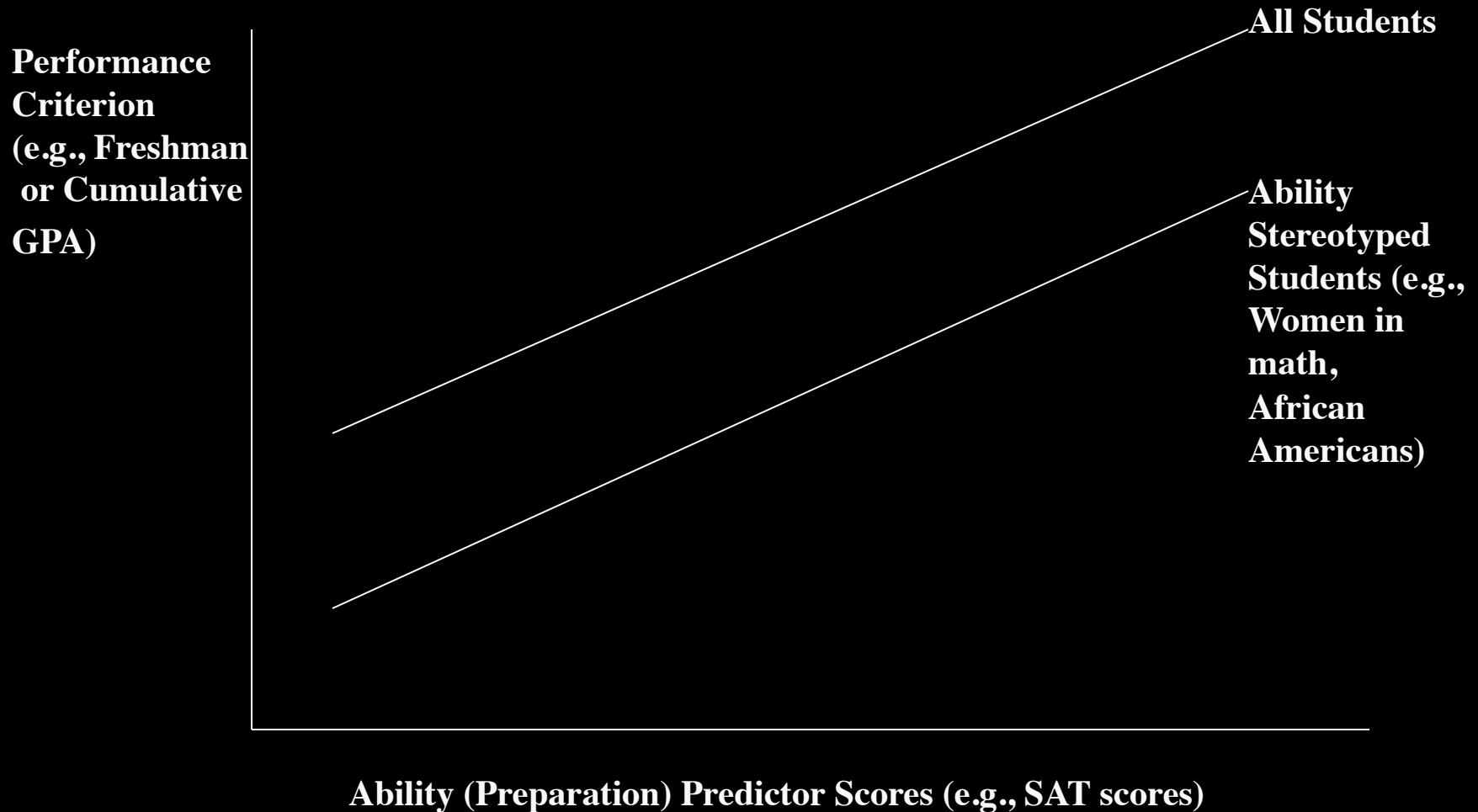


The Underperformance Phenomenon

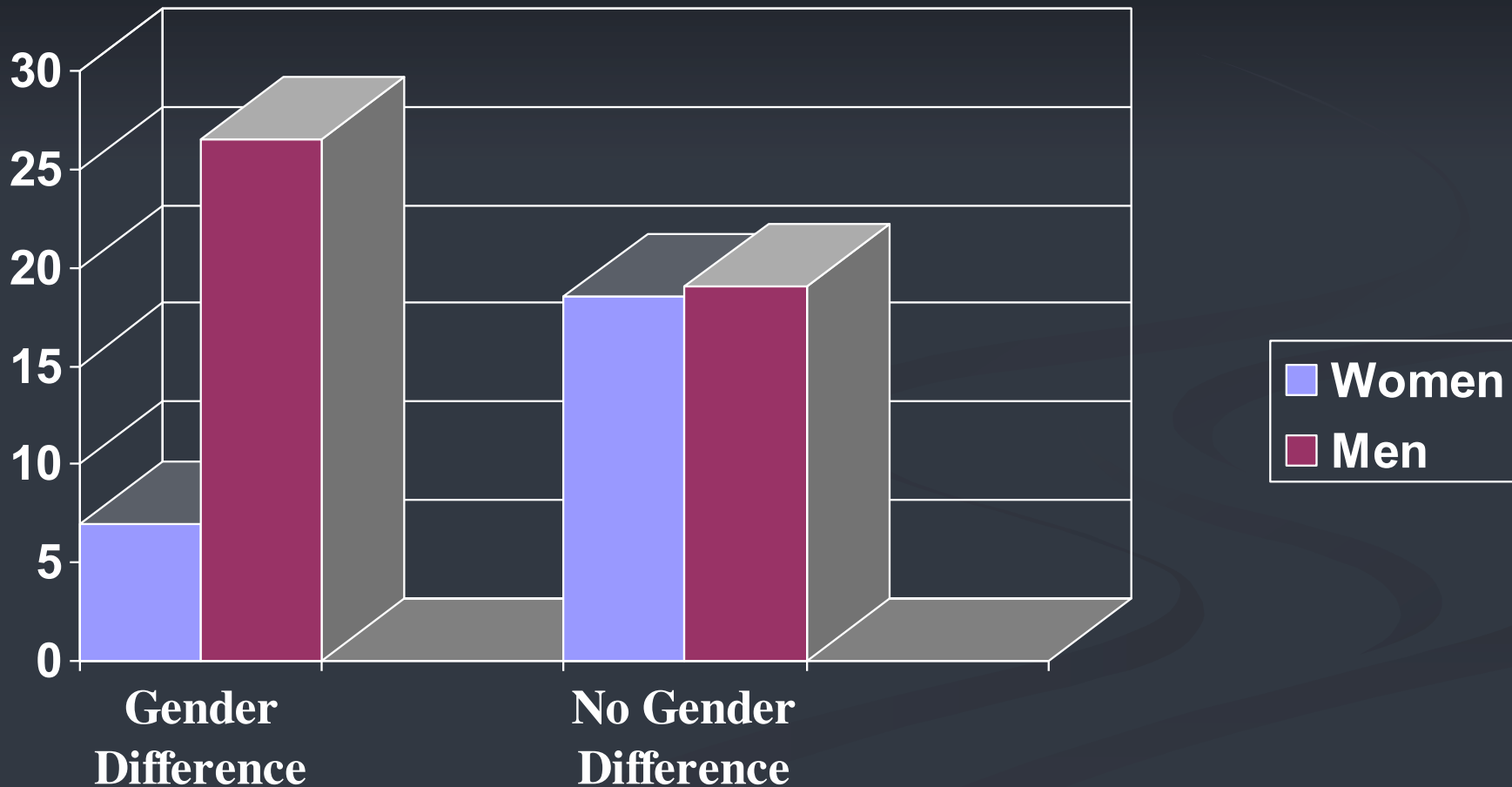


Underperformance: At every level of preparation, performance on the criterion measure is lower for members of the ability-stereotyped group.

Social Identity: The part of personal identity --our sense of who we are-- that comes from our group memberships and the social categories to which we belong: our age, sex, race, religion, profession, ethnicity, nationality, sexual orientation, region, social class, ideological persuasion, political affiliation, mental health status, etc.

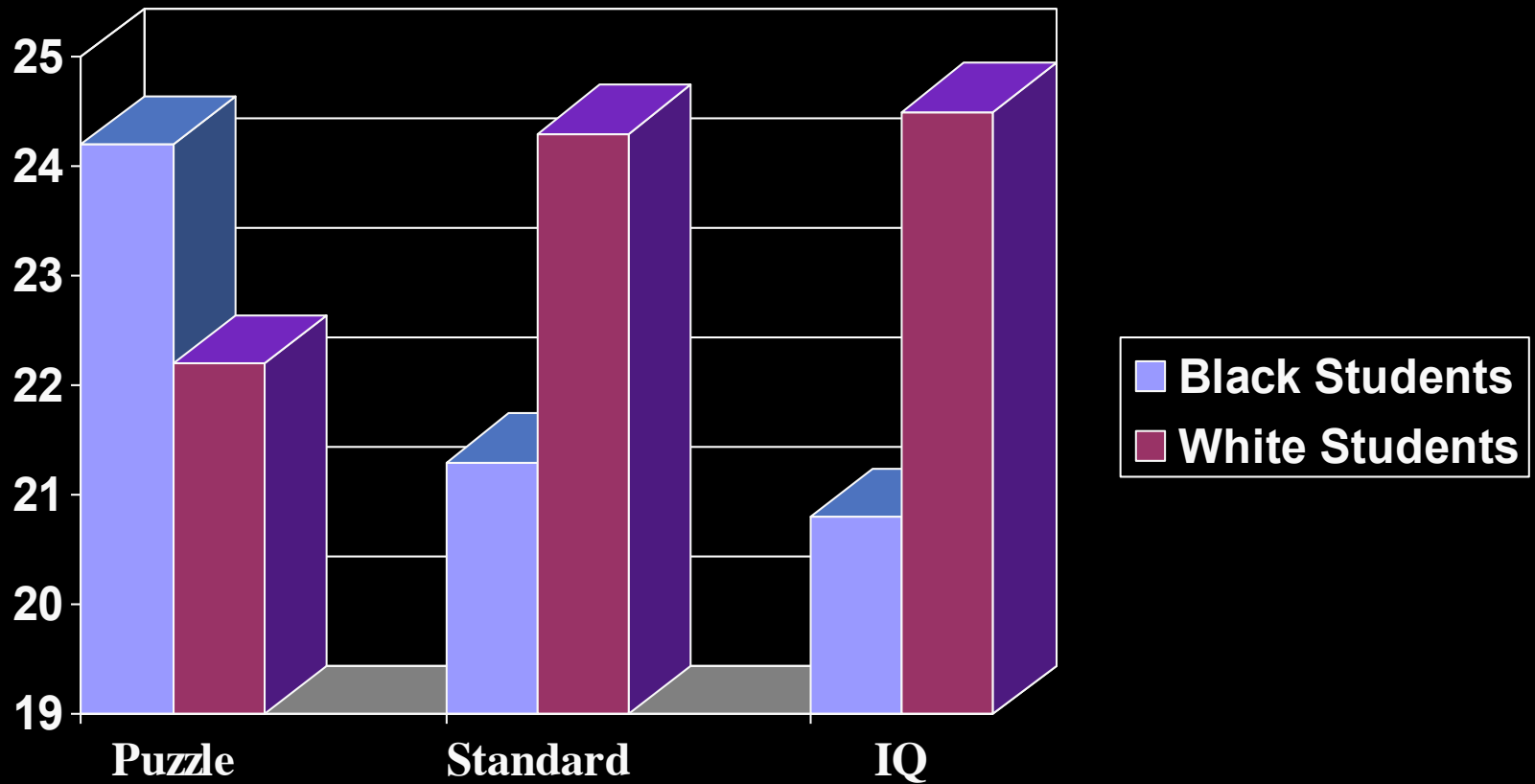
Stereotype Threat & Standardized Math Test Performance Among Women

(Percent Correct Corrected for Guessing)



Stereotype Threat & Performance on Raven's Progressive Matrices by Among African American Students

Brown & Day *Journal of Applied Psychology*, 2004



The Nature of Social Identity Threat

- You know that, based on an identity you have, something bad could happen.
- You don't know whether, in fact, it will happen.
- You don't know precisely what could happen.
- You don't know when it could happen.
- You don't know where it could happen.

By affecting the comfort level and performance pressure that we feel in specific situations and in entire walks of life, identity contingencies can affect both specific performances and life defining choices of careers, relationships, regions of the country to live in, etc.

“People often see themselves in terms of whichever one of their allegiances (identities) is under attack...whether he accepts or conceals it, proclaims it discreetly or flaunts it, it is with that allegiance that the person concerned identifies” (p. 26) Amin Maalouf from *In the Name of Identity; Violence and the Need to Belong*.

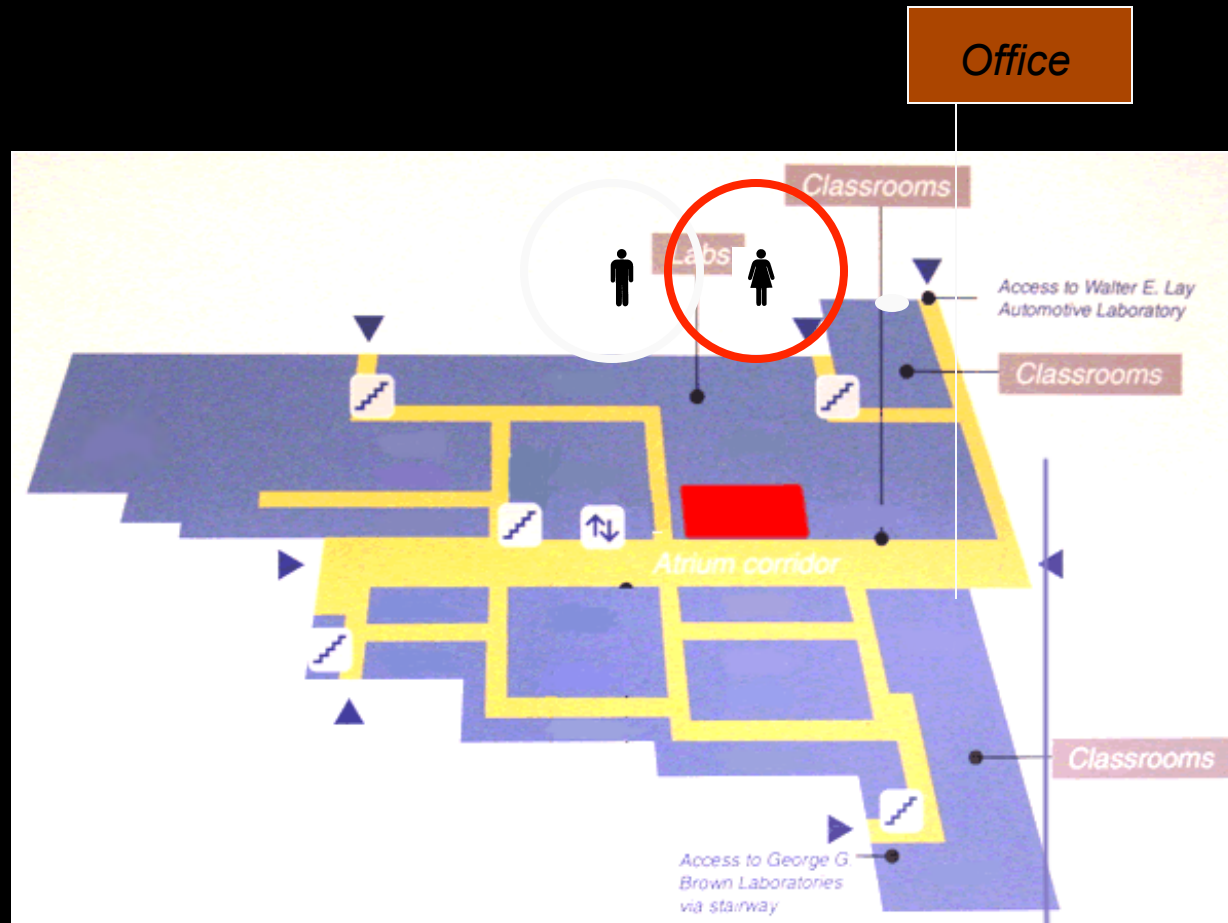
- Social identities originate from, and are sustained by contingencies that go with them in particular situations.

- The most psychologically impactful identity contingencies are those that in some way threaten the individual.

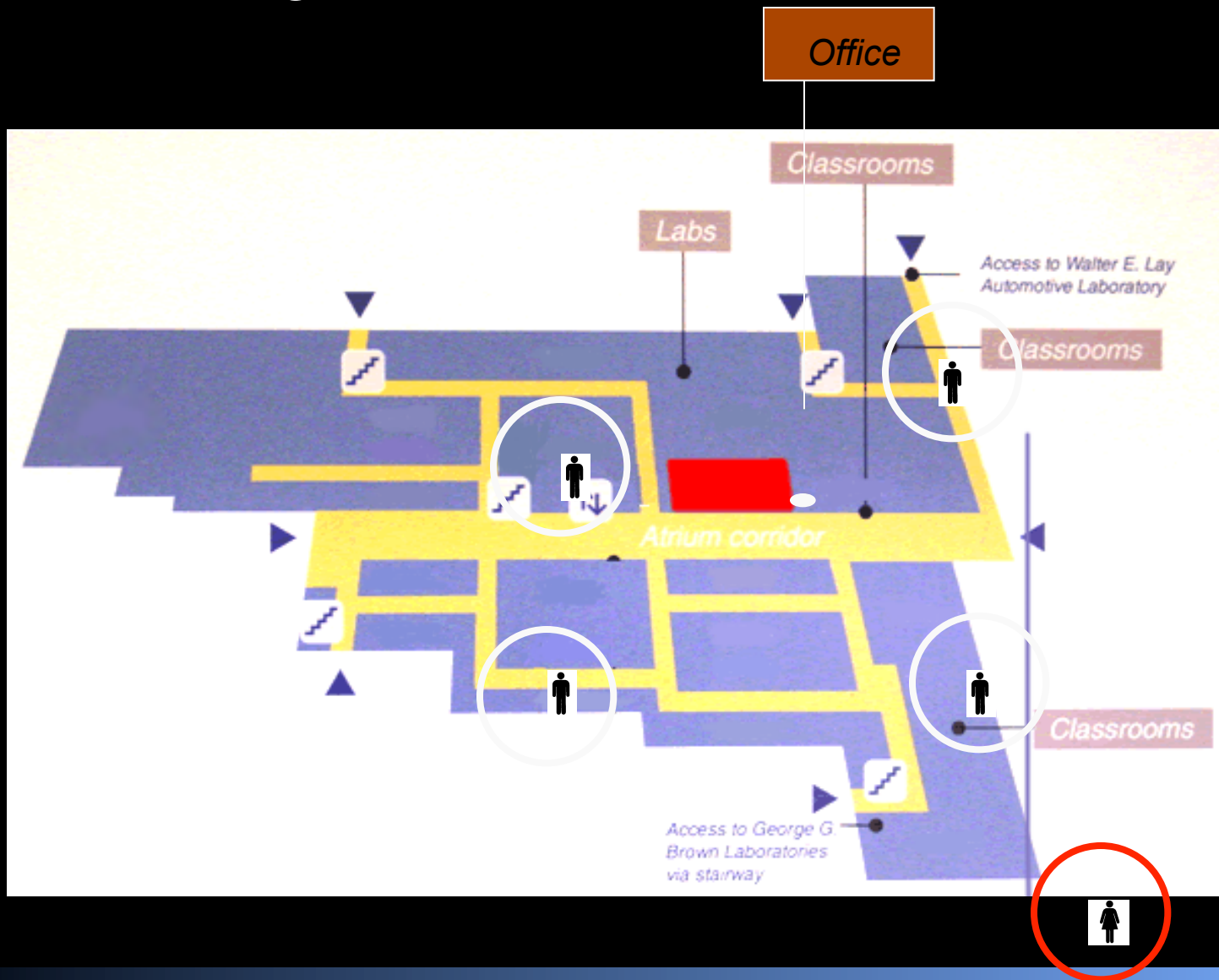
- Cues that signal threatening contingencies foster vigilance and hamper a sense of belonging in the setting. This, in turn, impairs learning and performance.

- Cues that signal non-threatening contingences foster belonging in the setting and thus, learning and performance.

Neutral Structural Cue



Threatening Structural Cue

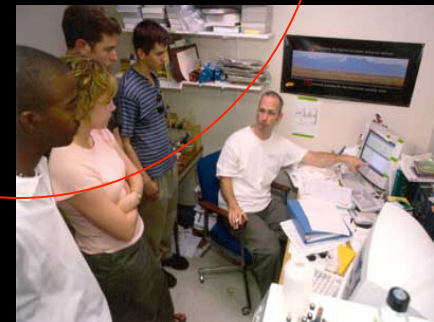
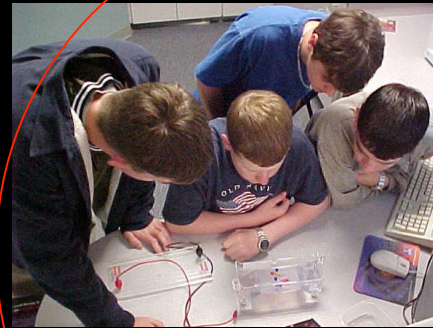
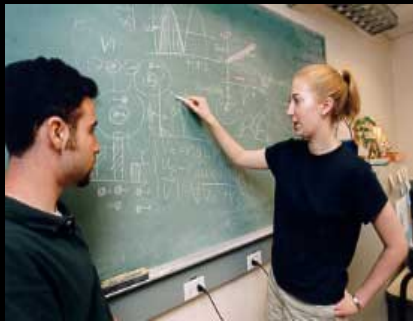


Summer Conference Video

Murphy & Steele

•Balanced Video (1:1)

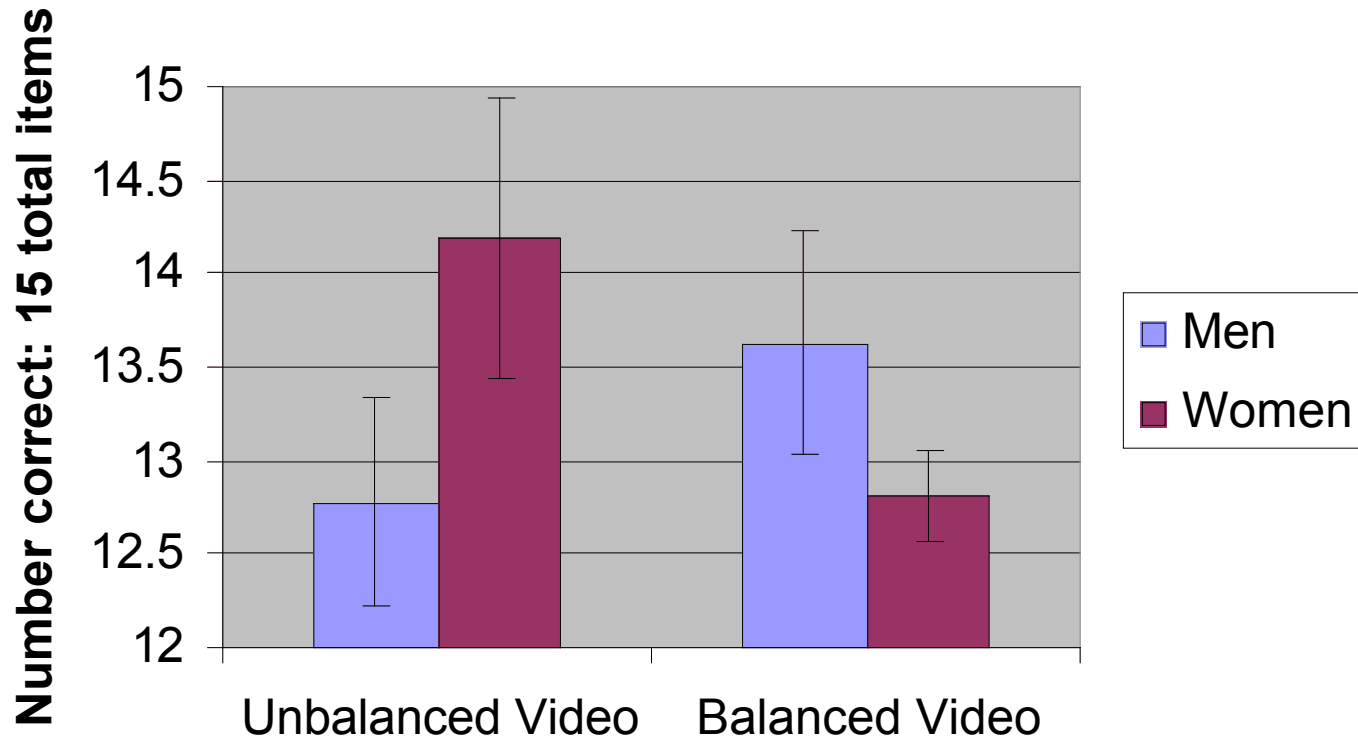
•Unbalanced Video (3:1)



2 (participants gender) X 2 (video) factorial design

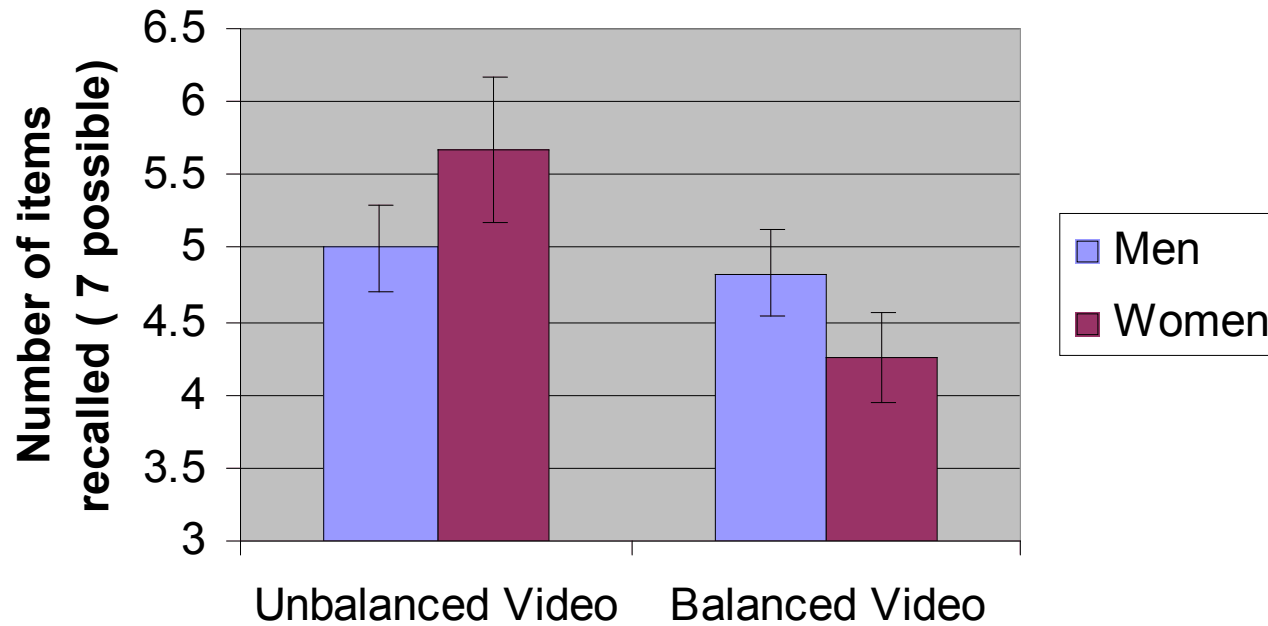
Unbalanced Video = cue of identity threat for women

Vigilance: Recognition Memory for Details of the Conference Video



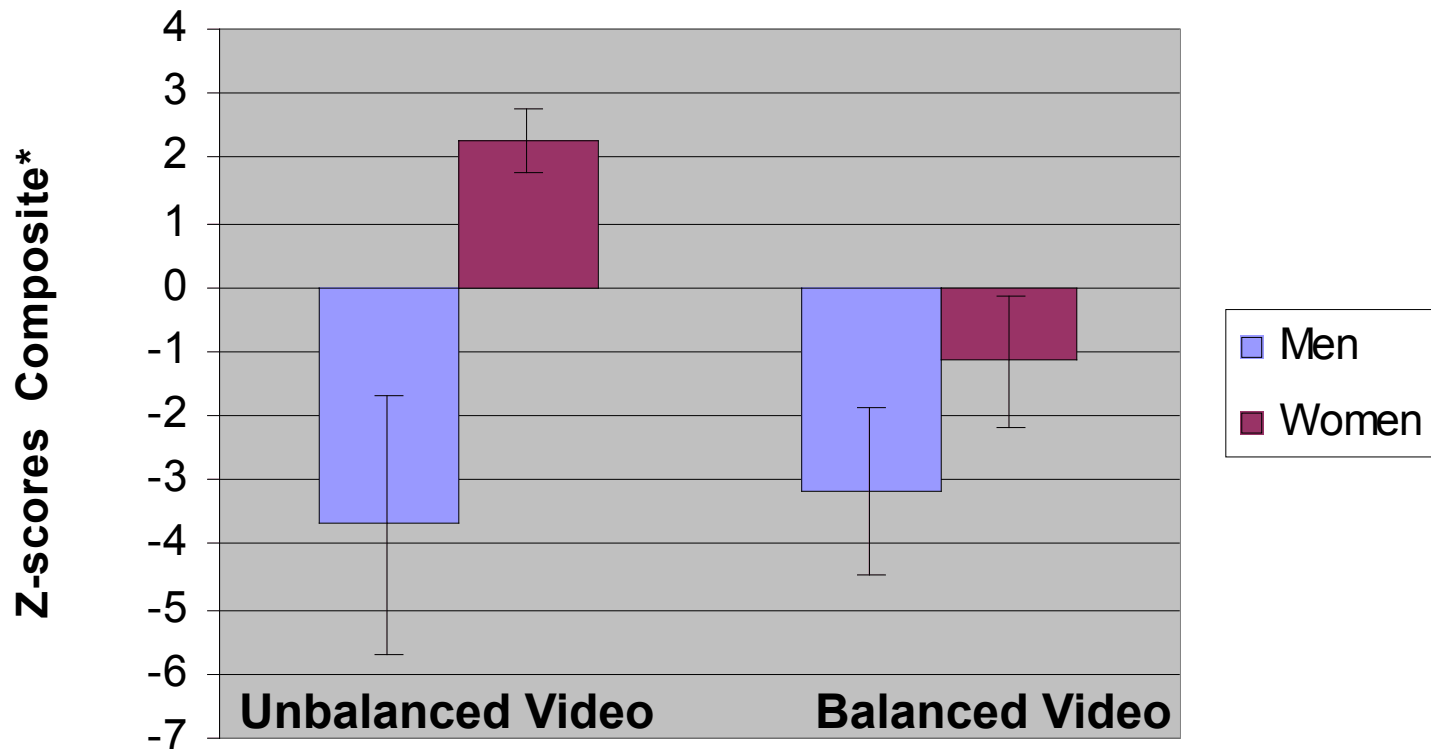
Interaction, $F(3, 42) = 4.35, p < .01$

Vigilance: Recall of Cues in Experimental Room



Interaction, $F(3, 46) = 2.80, p < .05$

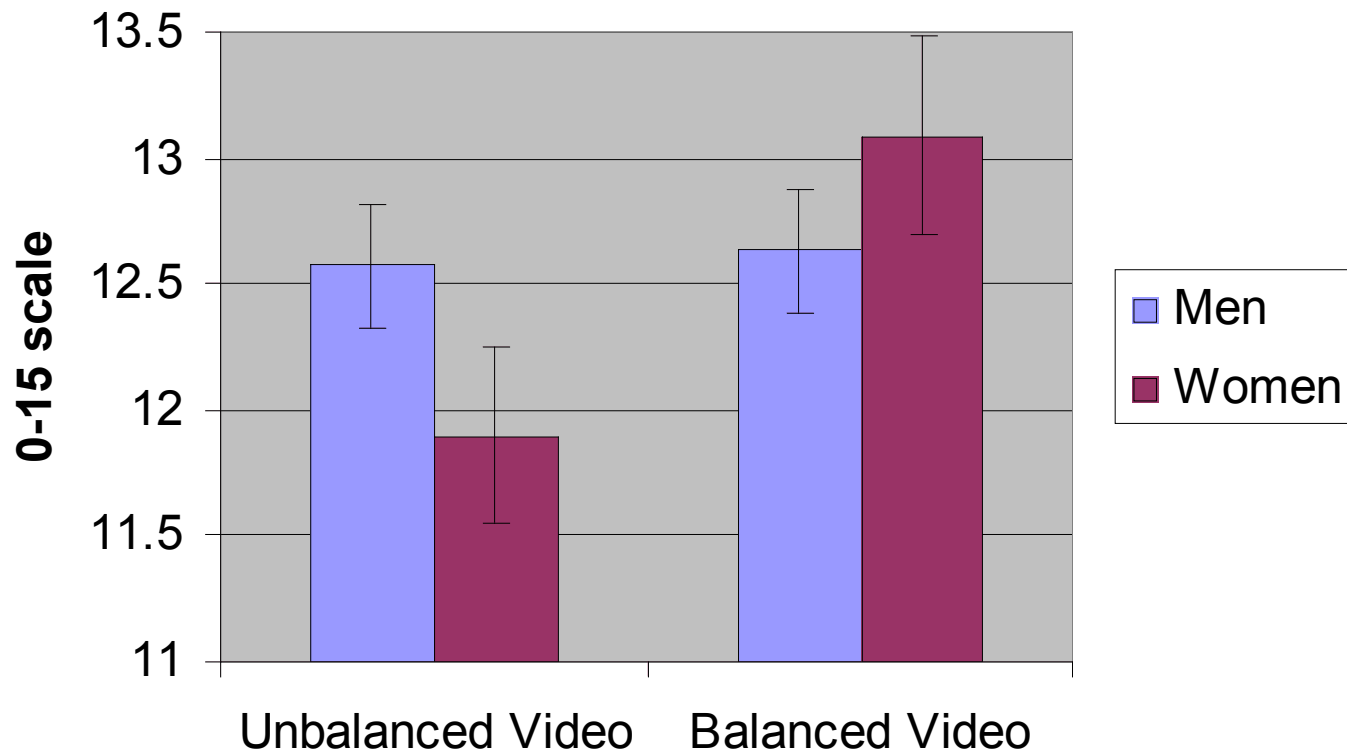
Cardiovascular Reactivity



Interaction: $F(3, 42) = 4.35, p < .01$

* Finger pulse amplitude, Ear pulse amplitude, Finger pulse transit time, Temperature

Sense of Belonging



Interaction: $F(3, 46) = 2.17, p < .04$

Toward Remedy

- **Bad news:** Identity threat is intrinsic to most diverse settings, the default state of affairs unless something is done to reduce it.

- **Good news:** Some level and salience of identity safety cues in a setting can foster trust even when other cues in the setting might suggest otherwise.

Principle of Identity Safety

- When enough (implicit) cues signal that identity-based threats are not normative in the setting, or that genuine acceptance in the setting is possible, a sense of identity safety results. Performance and trust are then less tied to group identity.

Schooling Implications

(Positioning these processes in school reform)

- Quality Schooling: Necessary but not sufficient to reduce group performance gaps.
- Identity Safety: Necessary but not sufficient to reduce group performance gaps.
- Quality Schooling plus Identity Safety both necessary and sufficient to reduce group performance gaps.

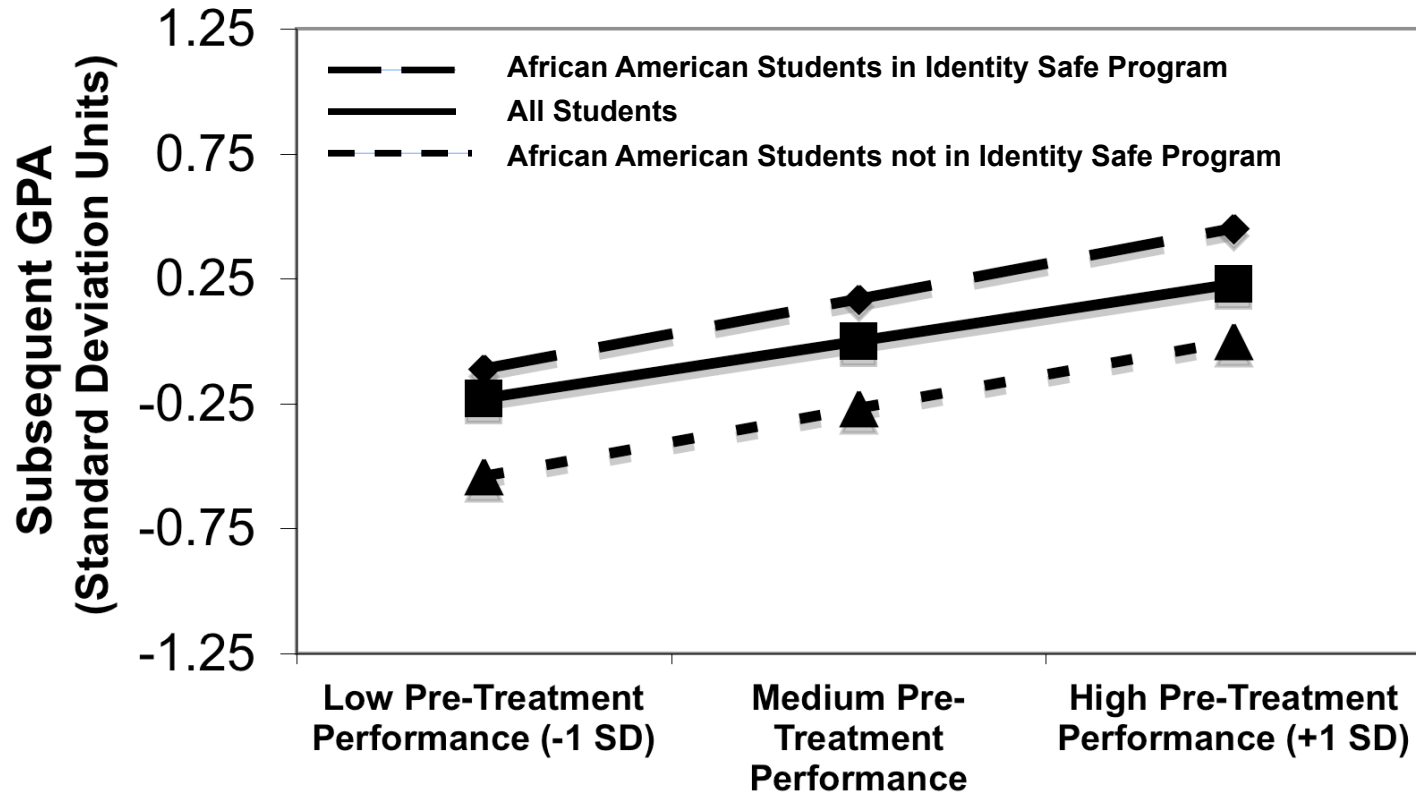
Achieving the inter-subjective sense of “identity safety”: Strategies for Settings

- Leadership/Normative Influence
- Critical Mass
- Resist permanent tracking & fixed ability representations of jobs, careers, tests & performances
- De-racializing perception of setting
- Self-Affirmation
- Belongingness Interventions
- Challenge & support (e.g., feedback)
- Relationships
- “Wise” teaching; all of the above

Black Student Over-Performance

Walton & Spencer In Press

Meta-Analytic Combination



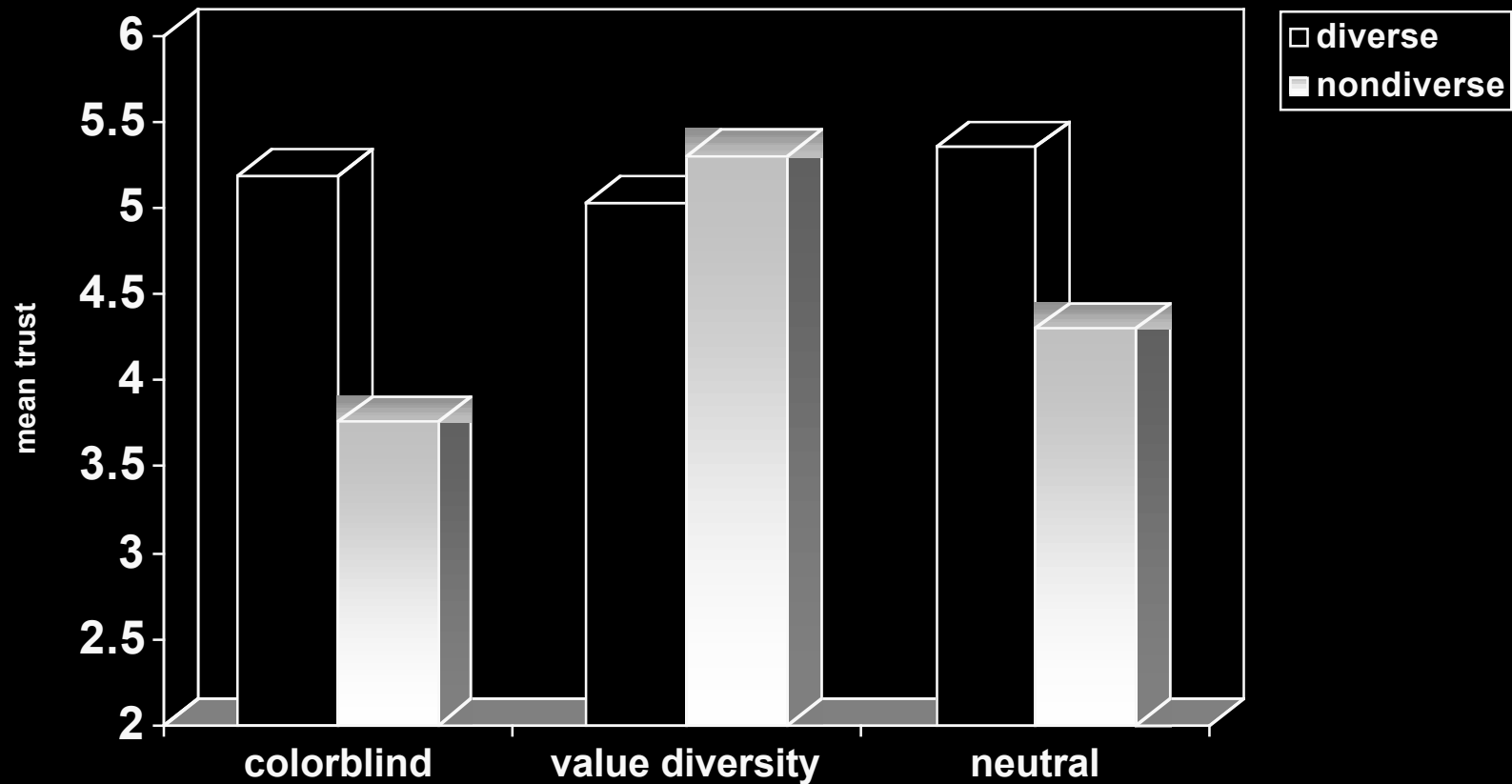
Elevating Learning Through Inclusive Teaching

Dr. Claude Steele

University of Colorado Summit 2011

February 4, 2011

Trust and comfort composite for Black participants

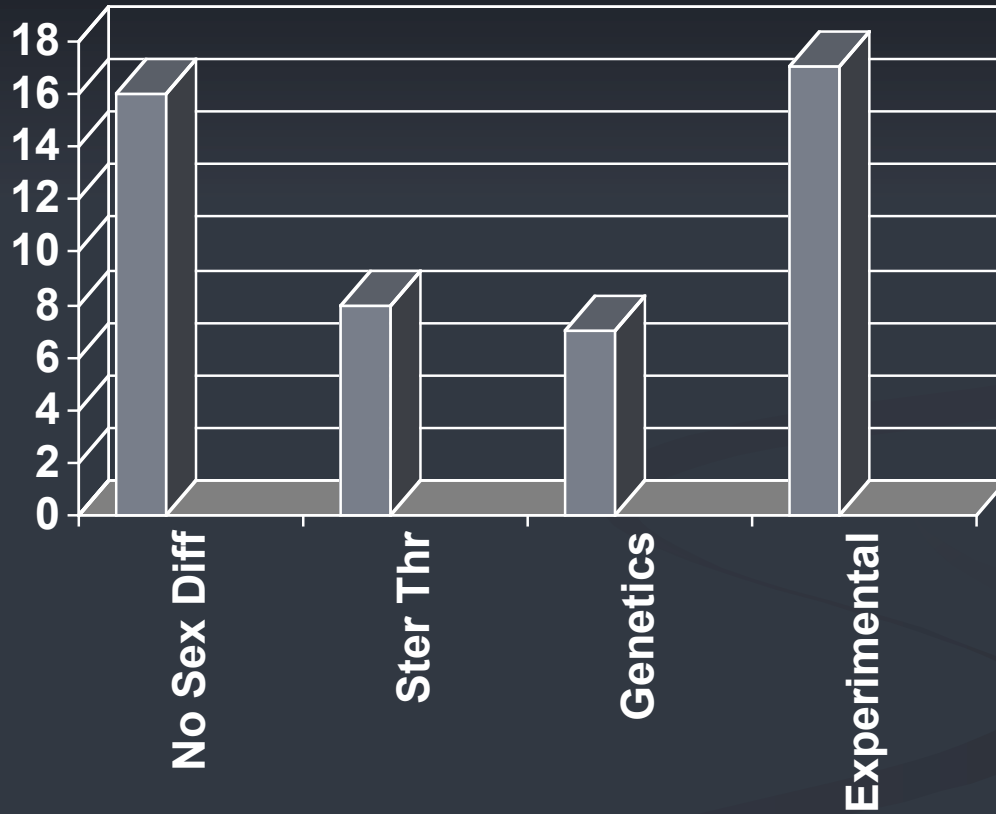


Lawrence Summers, January, 2005

“There are three broad hypotheses about the sources of the very substantial disparities that this conference’s papers document and have been documented before with respect to the presence of women in high-end scientific professions. One is what I would call the high-powered job hypothesis. The second is what I would call the differential availability of aptitude at the high end, and the third is what I would call different socialization and patterns of discrimination in a search. And in my view, their importance ranks in exactly the order I have just described.”

Effects of reading that math ability is genetic on women's math scores

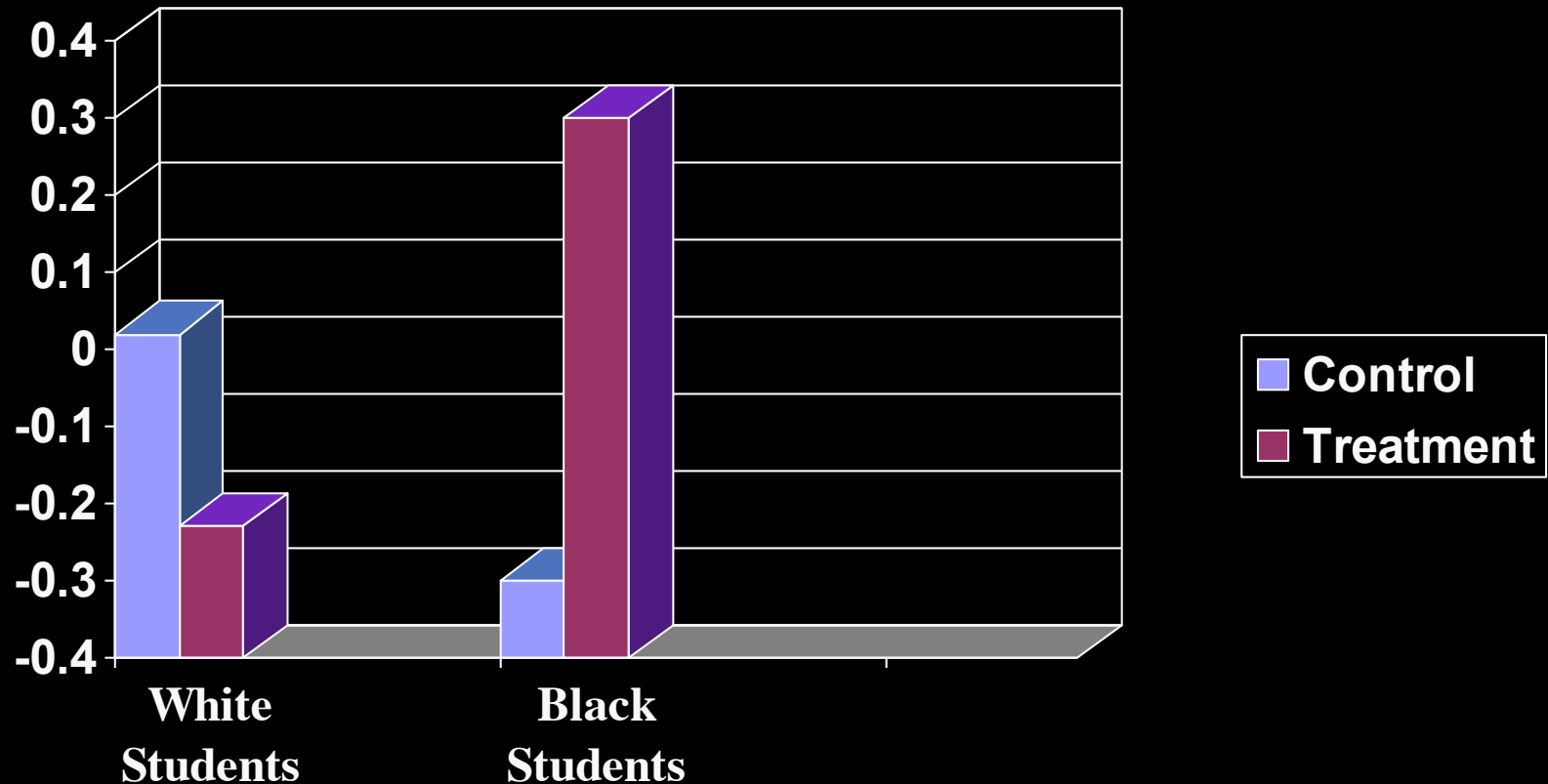
Heine, et al, *Science*, 2006



Post Intervention Achievement Composite

(Review session, study group & office hour attendance, hours spent studying, emails to professors, in standardized score units)

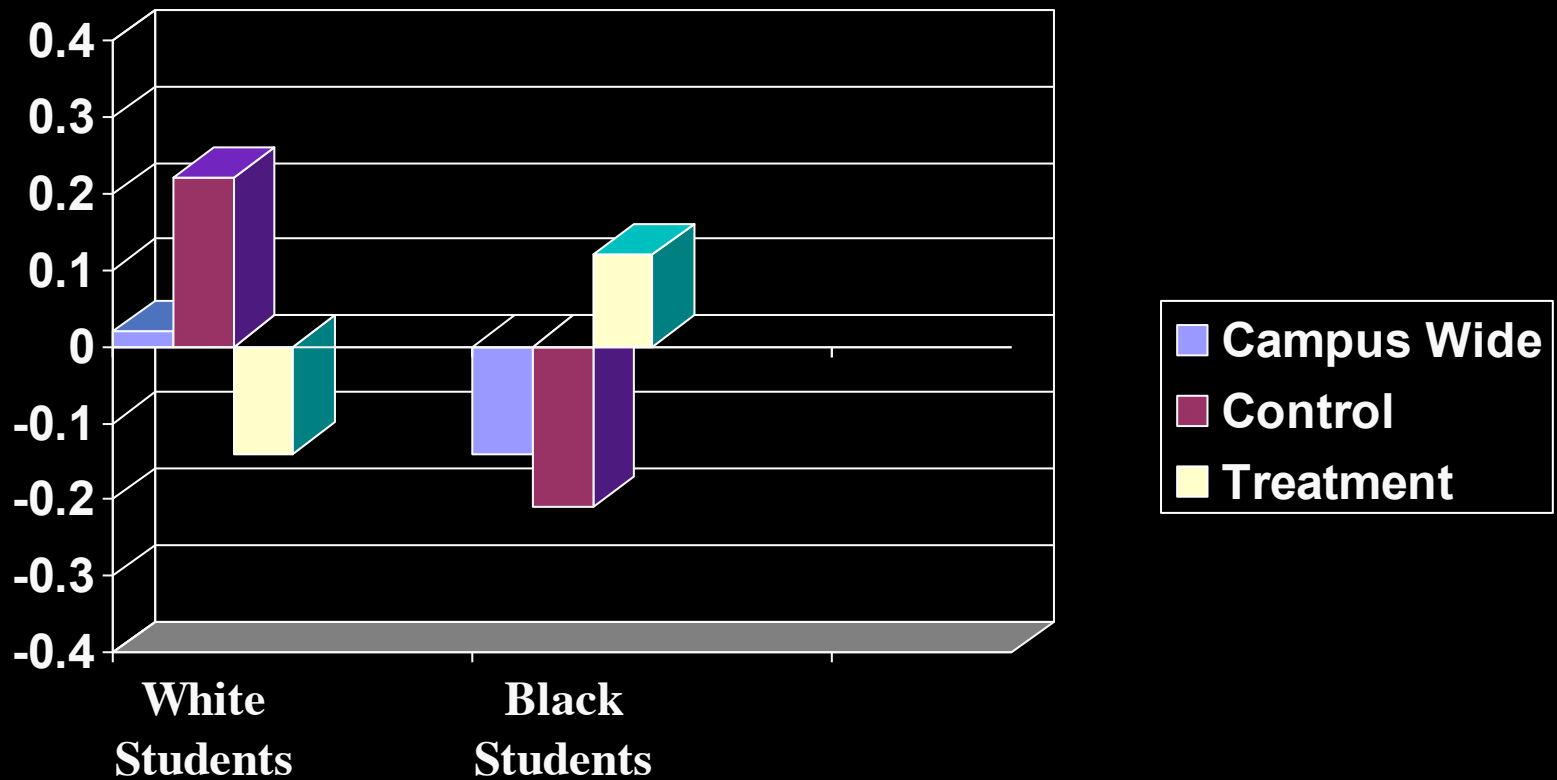
Walton & Cohen, *Journal of Personality and Social Psychology*, 2007



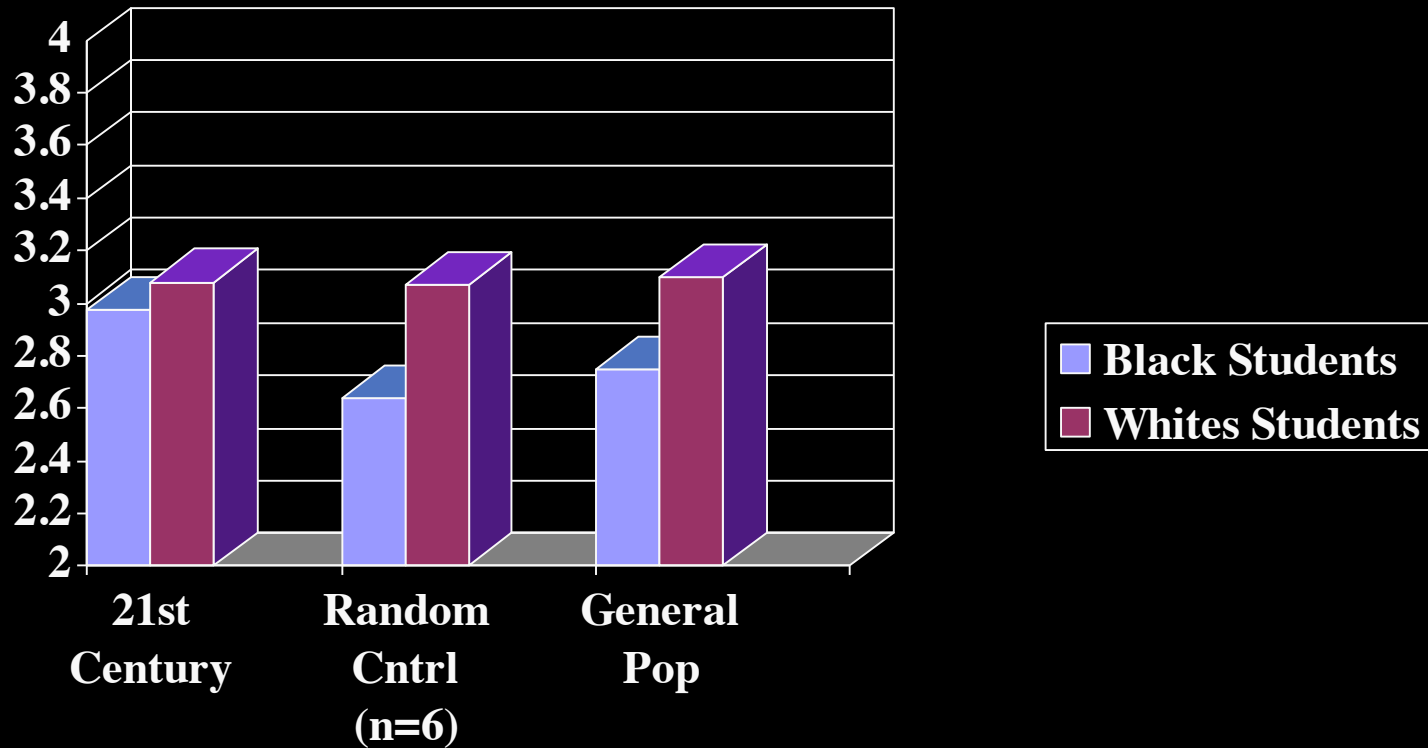
GPA Change Pre and Post Intervention

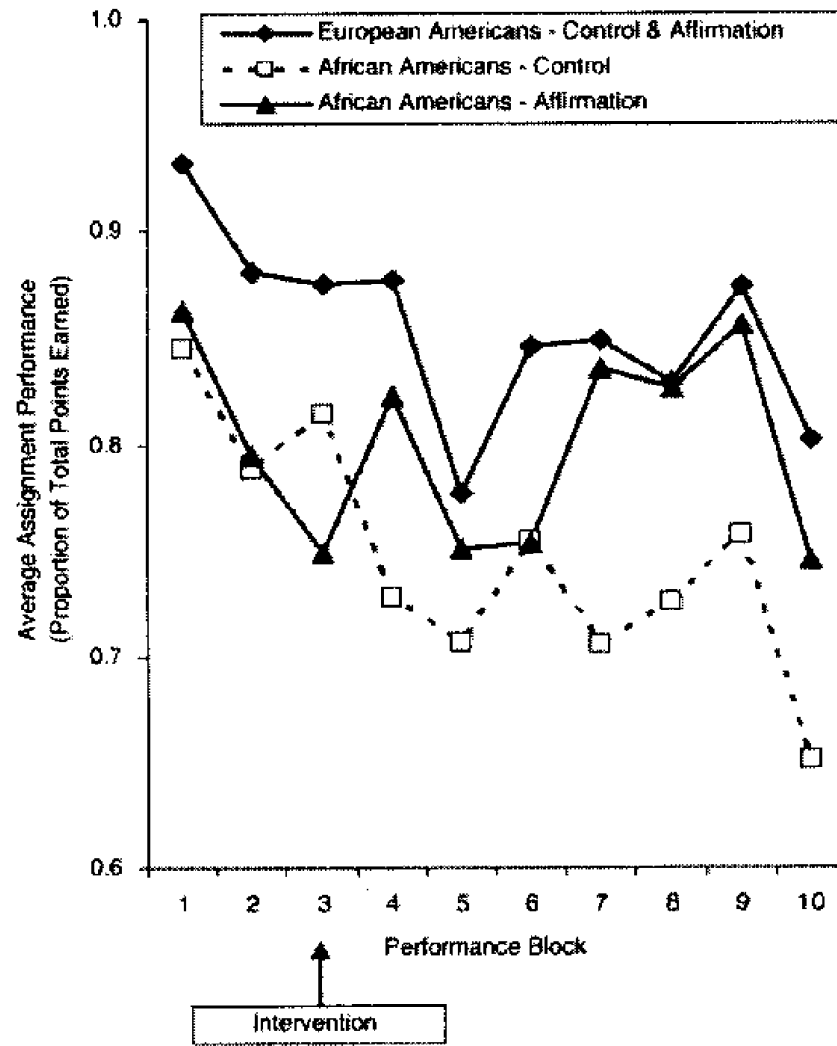
(In Unstandardized residuals)

Walton & Cohen, *Journal of Personality and Social Psychology*, 2007



First Term GPA of University of Michigan Students (1994) by Program & Admission Status





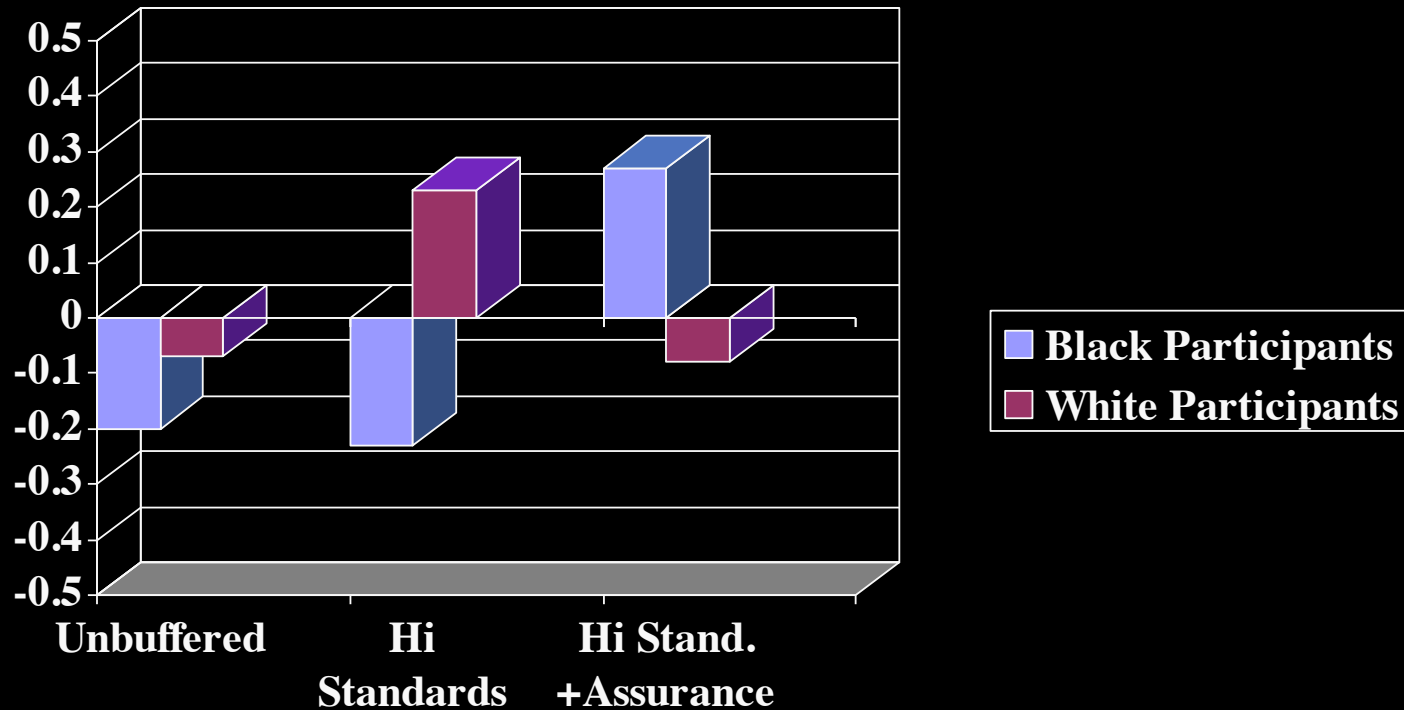
Achieving the inter-subjective sense of “identity safety”: Individual Strategies

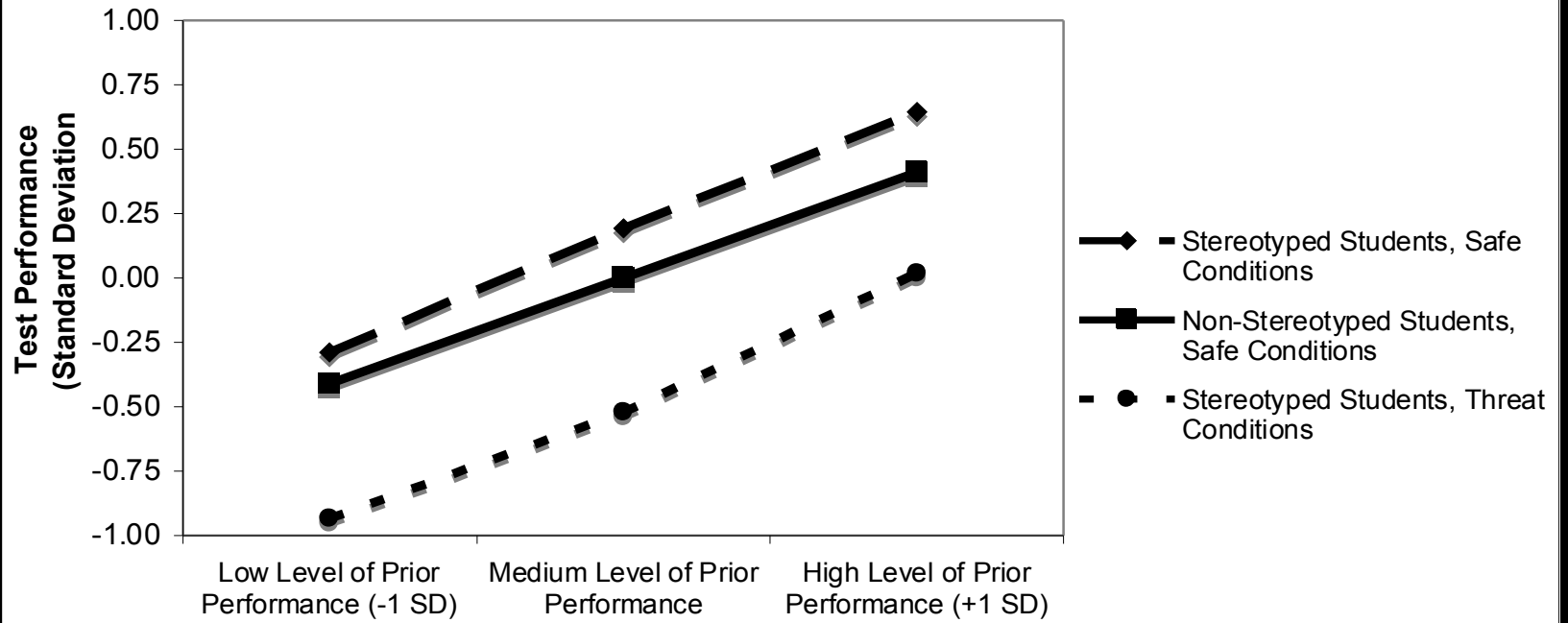
- Learning goals and self-management.
- Attributional strategies
- Stereotype dilution
- Thorough skill building--a role for supplemental education

Task Motivation by Race and Feedback Condition

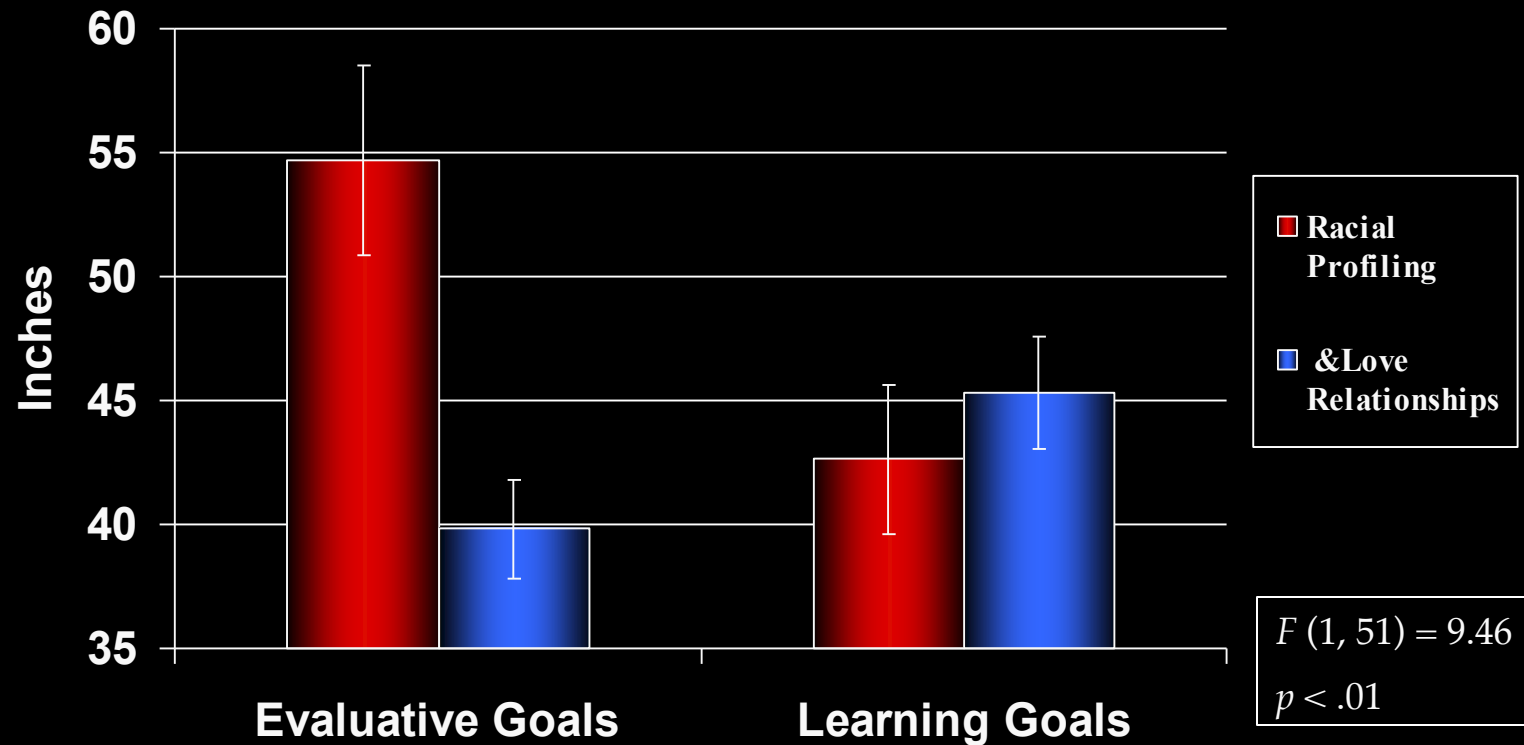
(Composite motivation index in standardized scores. Sample item: "How motivated are you to revise your essay before submitting to the journal?")

(Cohen, Steele & Ross, 1999)





Distance Results





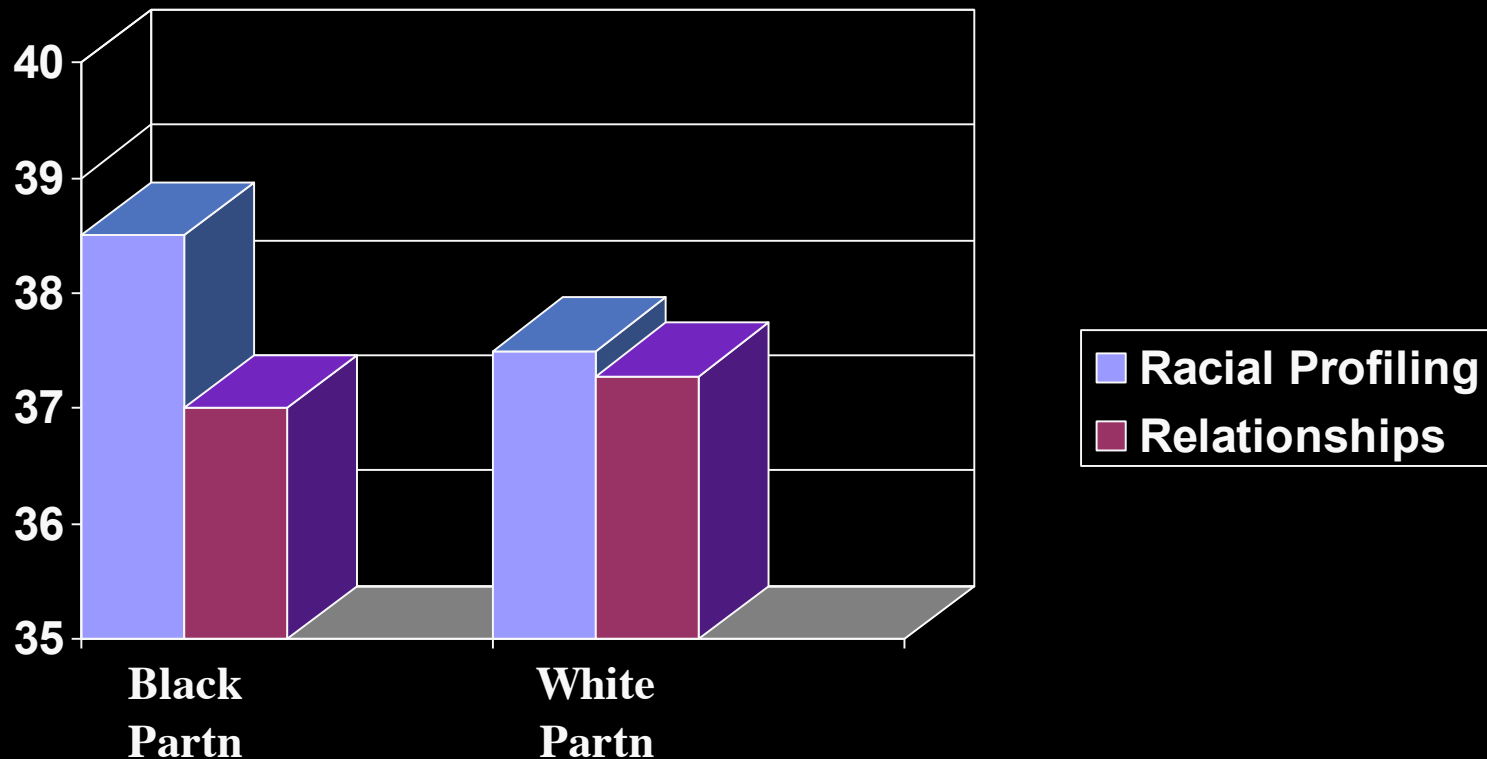
University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

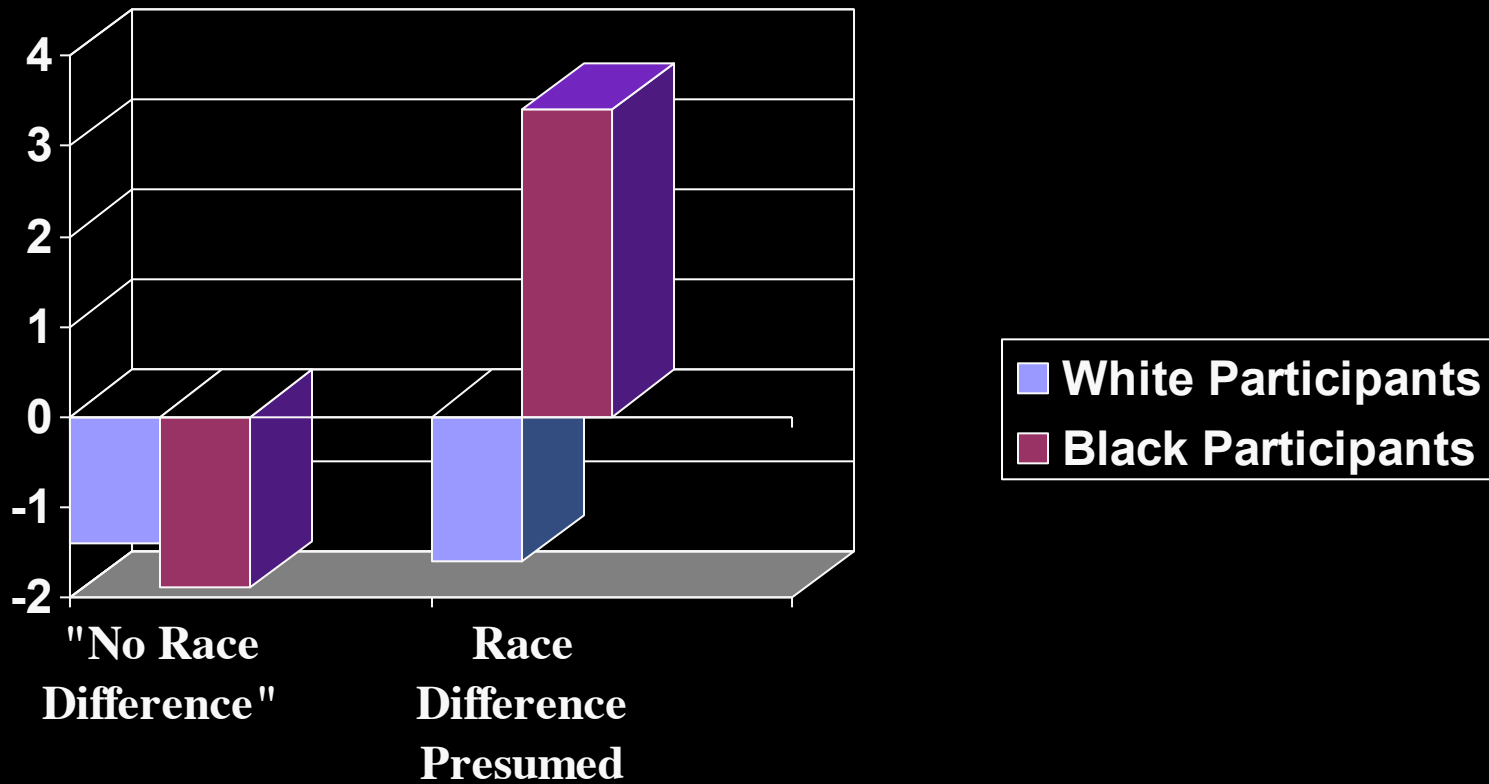
Diversity Summit 2011
Berger Hall in the University Center
UCCS

Social Distance as a Function of Race of Conversation Partner & Topic

Goff, Steele & Davies, *Journal of Personality and Social Psychology* 2008

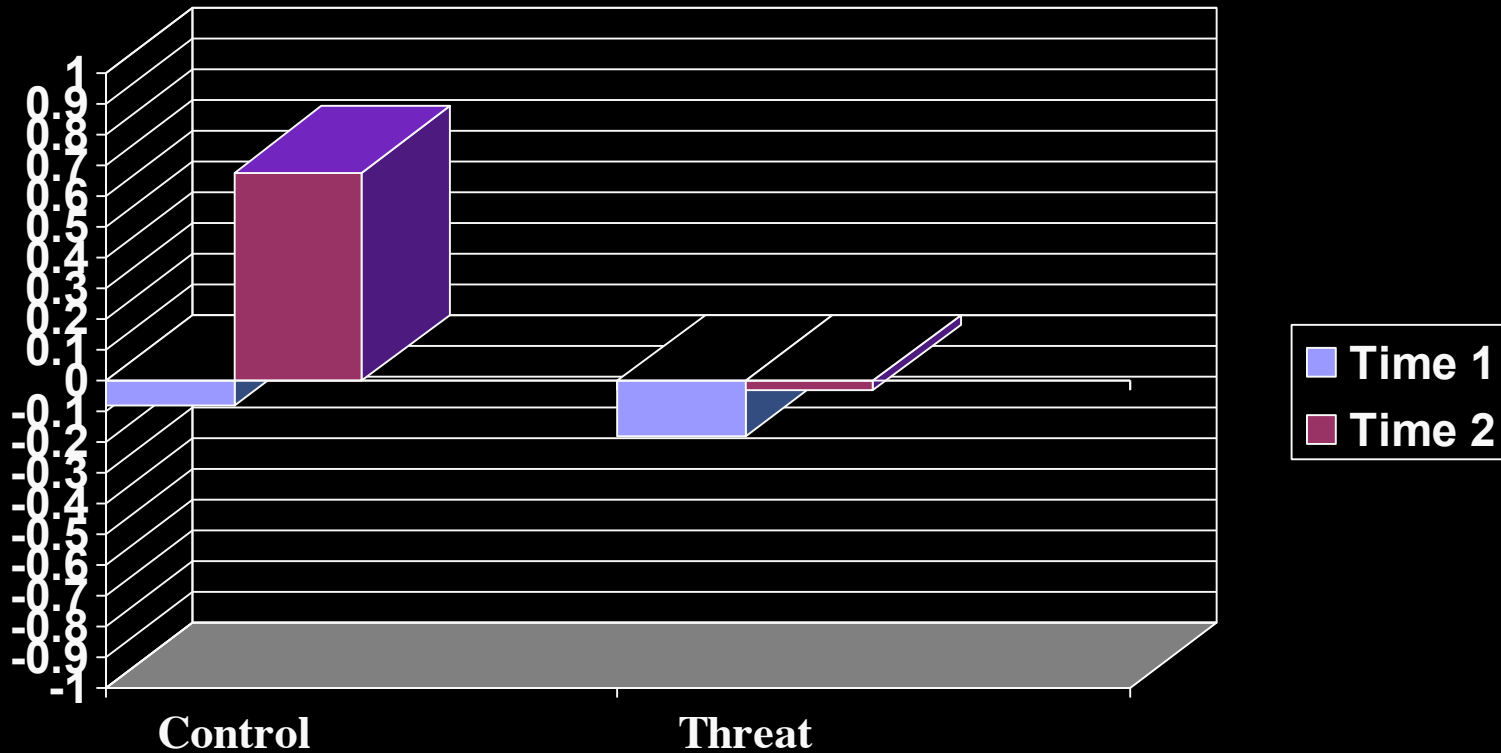


Change in Mean Arterial Pressure (MAP) from Pre-Test Resting Baseline (Millimeters of Mercury)

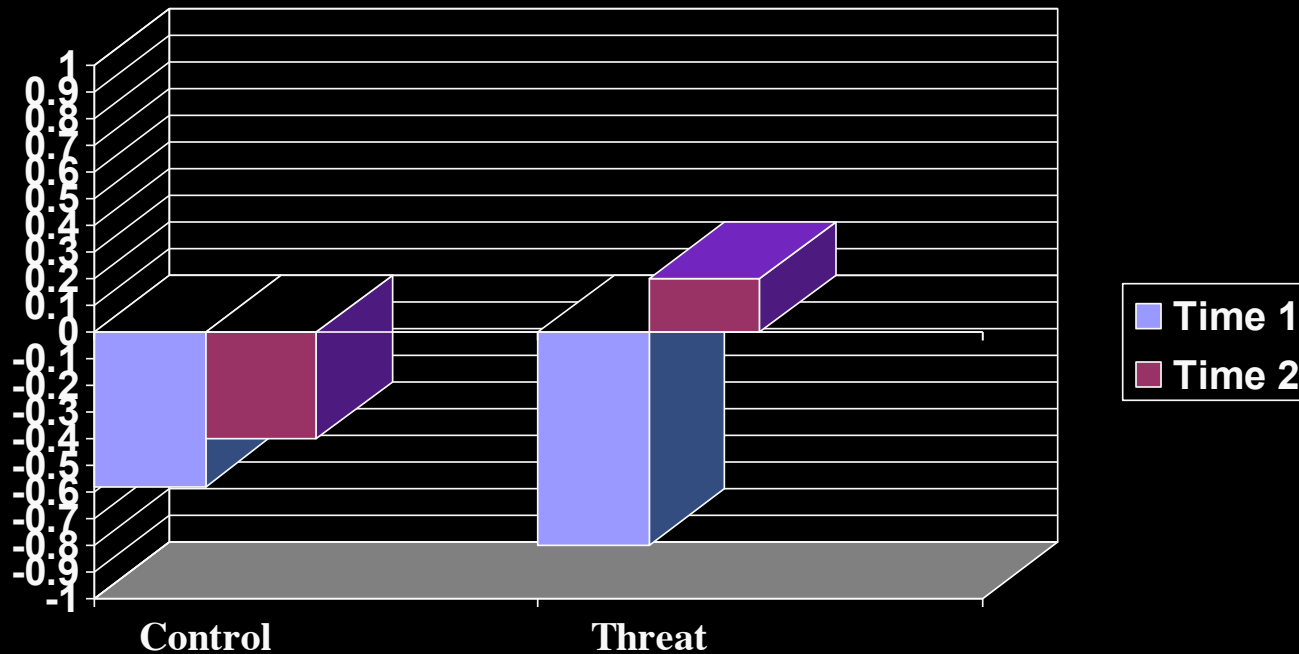


Activation of Brain Areas Used for Math Performance by Women Doing Math

(Angular Gyrus & Left Parietal & Prefrontal Cortex) Krendl, Richeson, Kelley & Heatherton *Psychological Science*



**Activation of Brain Areas Associated with
Social/Emotional Processing among Women Doing Math
(ventral anterior cingulate cortex)**
Krendl, Richeson, Kelley & Heatherton *Psychological Science*

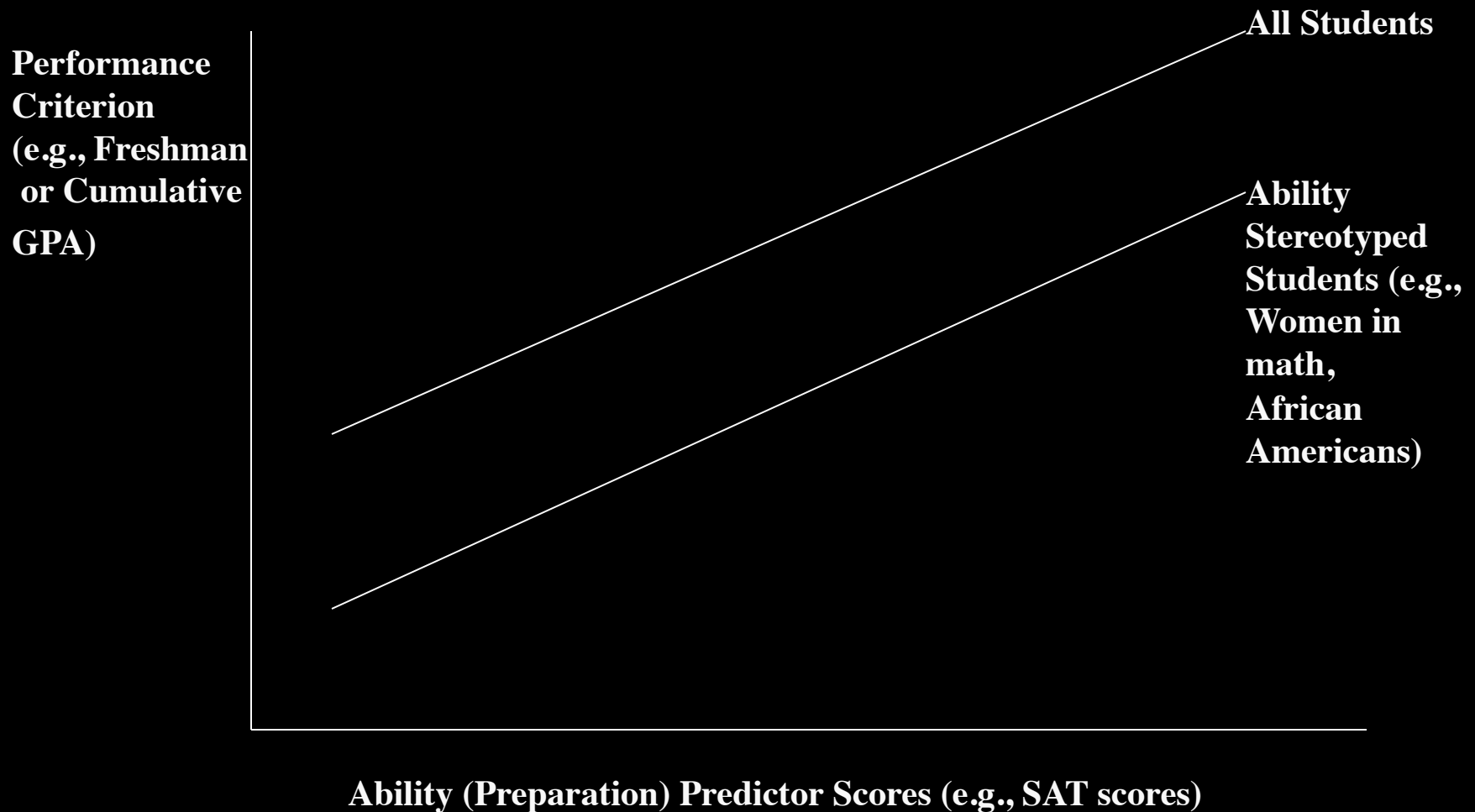


Contingencies of Social Identity: The particular way that society and settings are set to judge and treat people based on a social identity they have.

Contingencies deriving from features of a setting that would exist even without ongoing prejudice

- Identity-based marginalization
- Identity-segregated networks, personal & professional
- Stereotype threat
- The form of “color-blindness” in which group differences in identity contingencies are not recognized
- Low priority on identity integration in the setting
- The identity threat of others

The Underperformance Phenomenon



Underperformance: At every level of preparation, performance on the criterion measure is lower for members of the ability-stereotyped group.