



W I S E L I

*Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison*

Understanding and Minimizing Unconscious Bias to Improve Department Climate

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About WISELI

- WISELI – Women in Science and Engineering Leadership Institute
 - Research Institute at the University of Wisconsin-Madison
 - Mission: Advancing and promoting women in academic Science, Technology, Mathematics and Medicine (STEMM) – focus on faculty
 - Broader goals – fostering a diverse faculty body
 - Funding: NSF ADVANCE, NIH, Campus support

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WISELI Programs

- Workshops for Search Committees
Searching for Excellence & Diversity
- Department Climate Workshops
Enhancing Department Climate: A Chair's Role
- Bias Literacy Workshops
Breaking the Bias Habit
- Research & Evaluation
Faculty Worklife Surveys and more
- Vilas Life Cycle Professorships
- Celebrating Women in Science & Engineering Grant Program



Introduction: Benefits of Diversity

- Diverse working groups are more productive, creative and innovative than homogeneous groups
 - Herring, Cedric. "Does Diversity Pay?: Race, Gender, and the Business Case for Diversity." *American Sociological Review* 74 (2009): 208-224.
 - Page, Scott E. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton, NJ: Princeton University Press, 2007.
 - van Knippenberg, Daan and Michaéla C. Schippers. "Work Group Diversity." *Annual Review of Psychology* 58 (2007): 515-541.
 - Chang, Mitchell J., Daria Witt, James Jones and Kenji Hakuta. *Compelling Interest: Examining the Evidence on Racial Dynamics in Colleges and Universities*. Stanford, CA: Stanford University Press, 2003.



Introduction: Benefits of Diversity

- Diverse groups engage in a higher level of critical analysis than do homogenous groups
 - Nemeth, Charlan Jeanne. "Dissent as Driving Cognition, Attitudes, and Judgments." *Social Cognition* 13 (1995): 273-291.
 - Nemeth, Charlan Jeanne. "Differential Contributions of Majority and Minority Influence." *Psychological Review* 93 (1986): 23-32.
 - Sommers, Samuel R. "On Racial Diversity and Group Decision Making: Identifying Multiple Effects of Racial Composition on Jury Deliberations." *Journal of Personality and Social Psychology* 90 (2006): 597-612.
 - Antonio, Anthony Lising et al. "Effects of Racial Diversity on Complex Thinking in College Students." *Psychological Science* 15 (2004): 507-510.



Introduction: Benefits of Diversity

- Diverse scholars and professionals can invigorate and expand disciplines and fields
 - New approaches to teaching
 - New research questions
 - New perspectives and interpretations
 - New concerns



Introduction: Commitment vs. Results

- Despite broad commitment to the goal of diversity, why are results less than satisfactory?
 - Department and campus climate
 - Influence of unconscious bias and assumptions



What is Climate?

Ethnicity *celebration* Age *respect*
Ideas *advocacy* Gender *participation*
Income *inclusion* Language *support*
Race *engagement* Religion *tolerance*
Physical Ability *understanding*
Sexual orientation *recognition*

- Behaviors within a workplace or learning environment, ranging from subtle to cumulative to dramatic, that can influence whether an individual feels personally safe, listened to, valued, and treated fairly and with respect.
- The atmosphere or ambience of an organization as perceived by its members. An organization's climate is reflected in its structures, policies, and practices; the demographics of its membership; the attitudes and values of its members and leaders; and the quality of personal interactions.

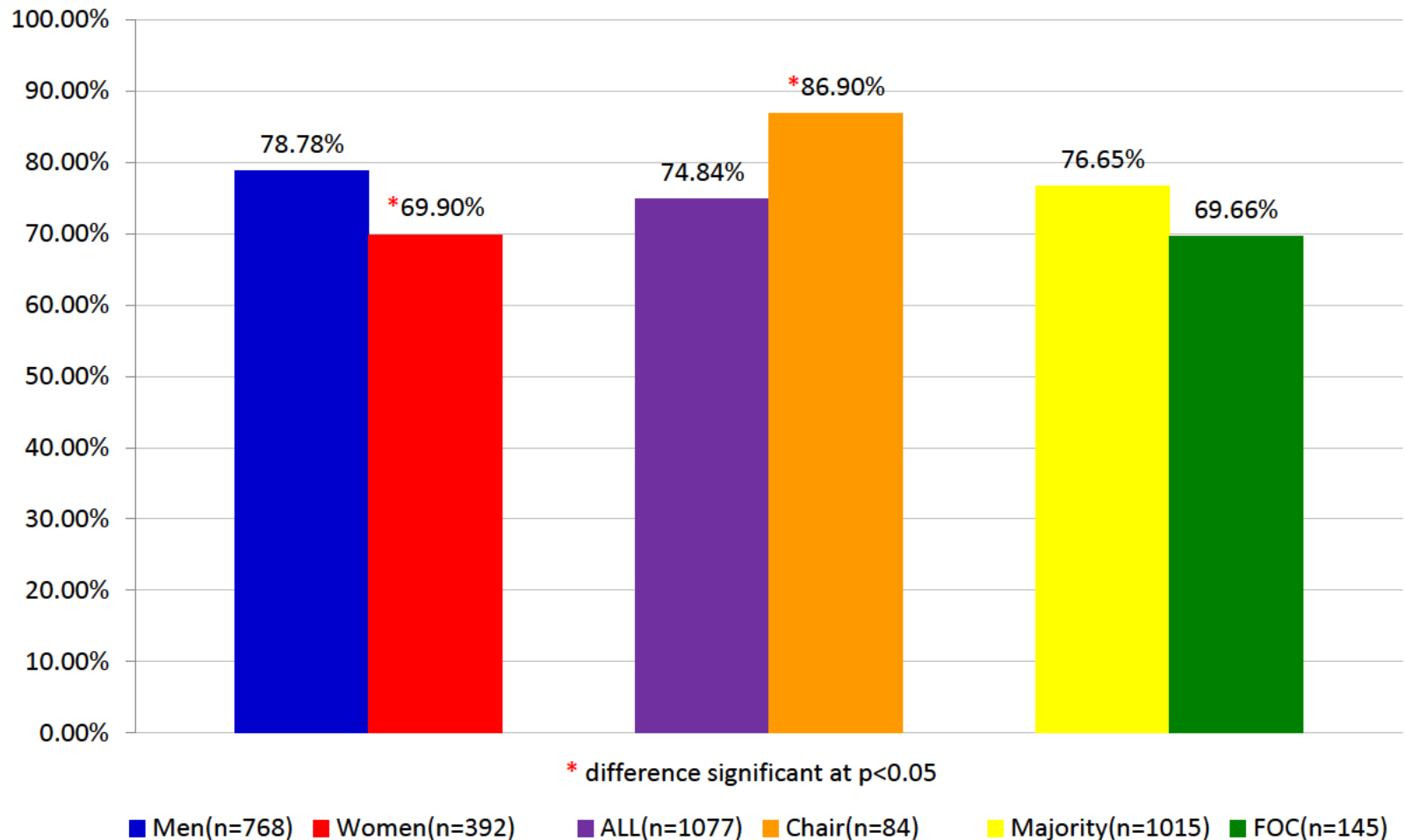


Why focus on climate?

- Individuals experience climate in their immediate workplace – the department
- Perceptions about department climate are key determinants for faculty satisfaction and retention
- Improving department climate is critical for the retention and advancement of women faculty and faculty of color
- Numerous campus surveys show that women and faculty of color experience a more negative climate than do male and majority faculty



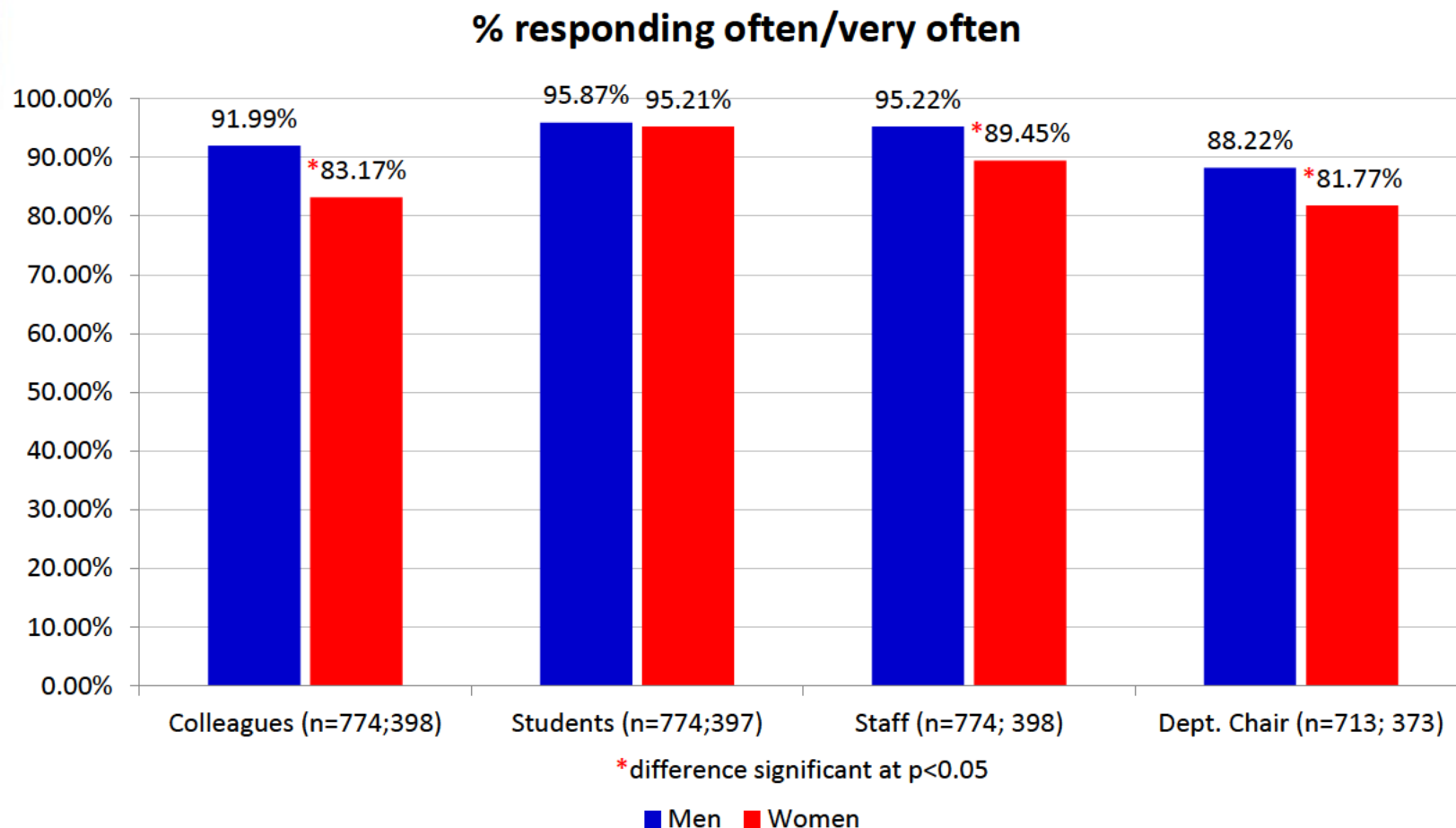
The climate in my department is positive/very positive





How often are you treated with respect by ...

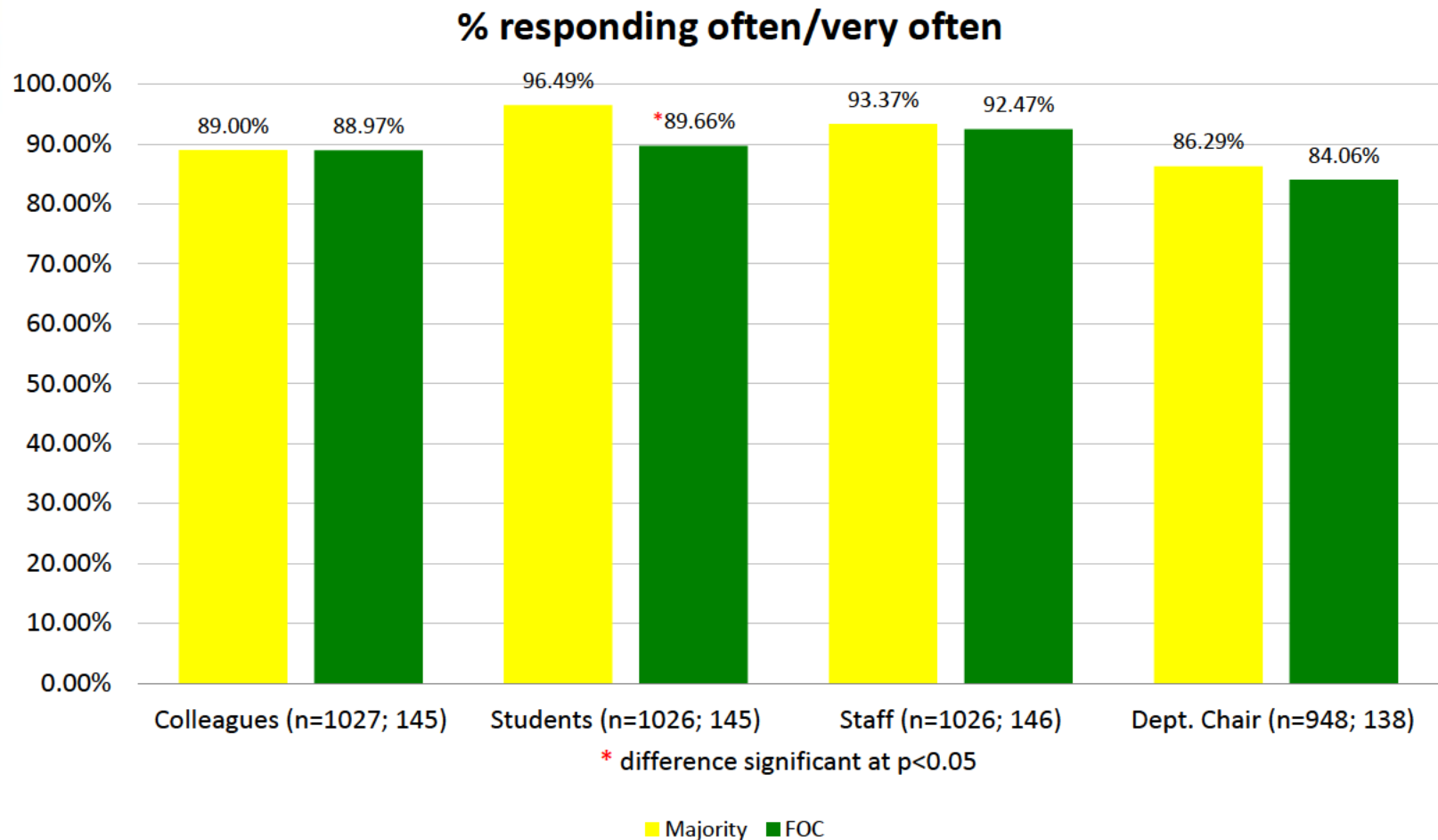
... colleagues, students, staff, department chair





How often are you treated with respect by ...

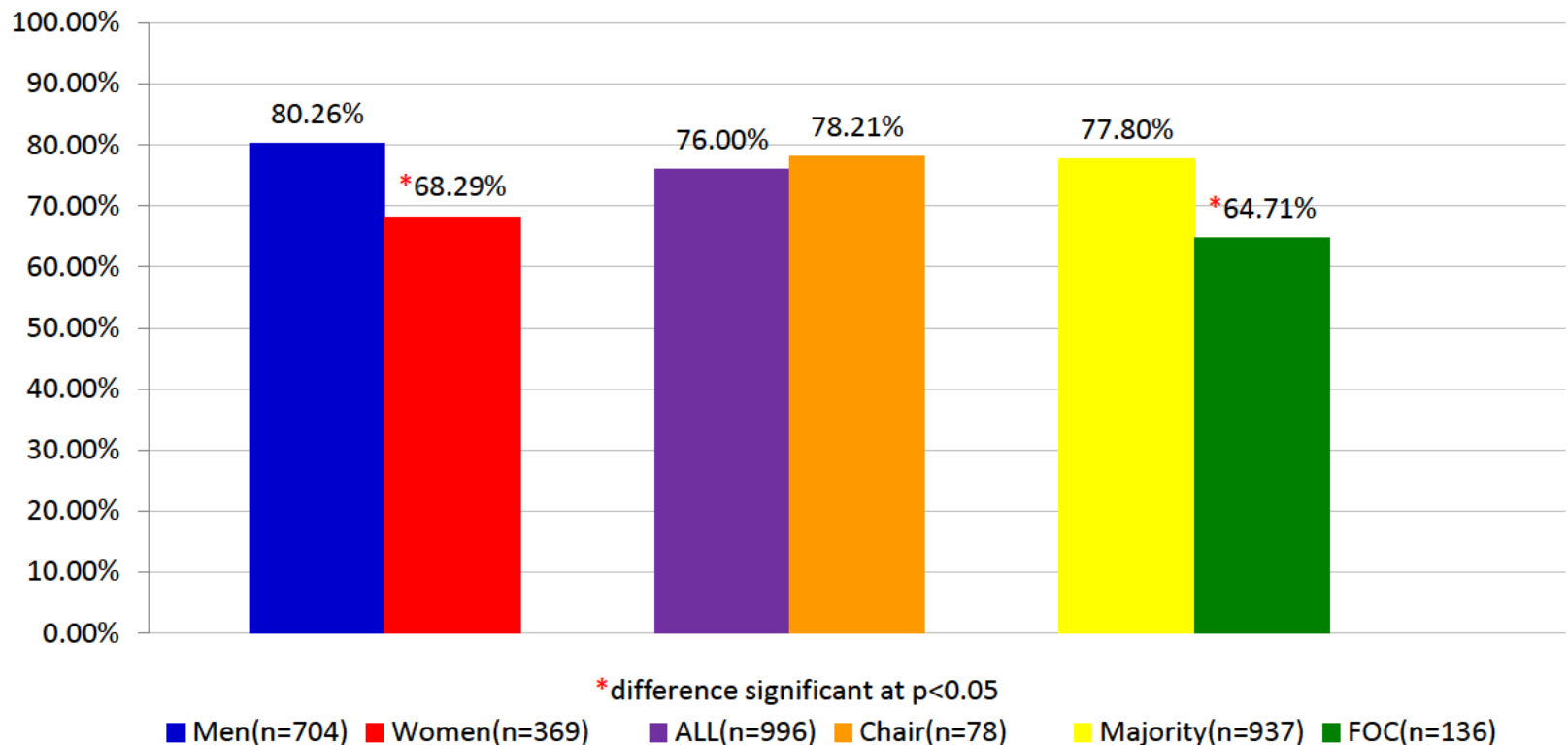
... colleagues, students, staff, department chair





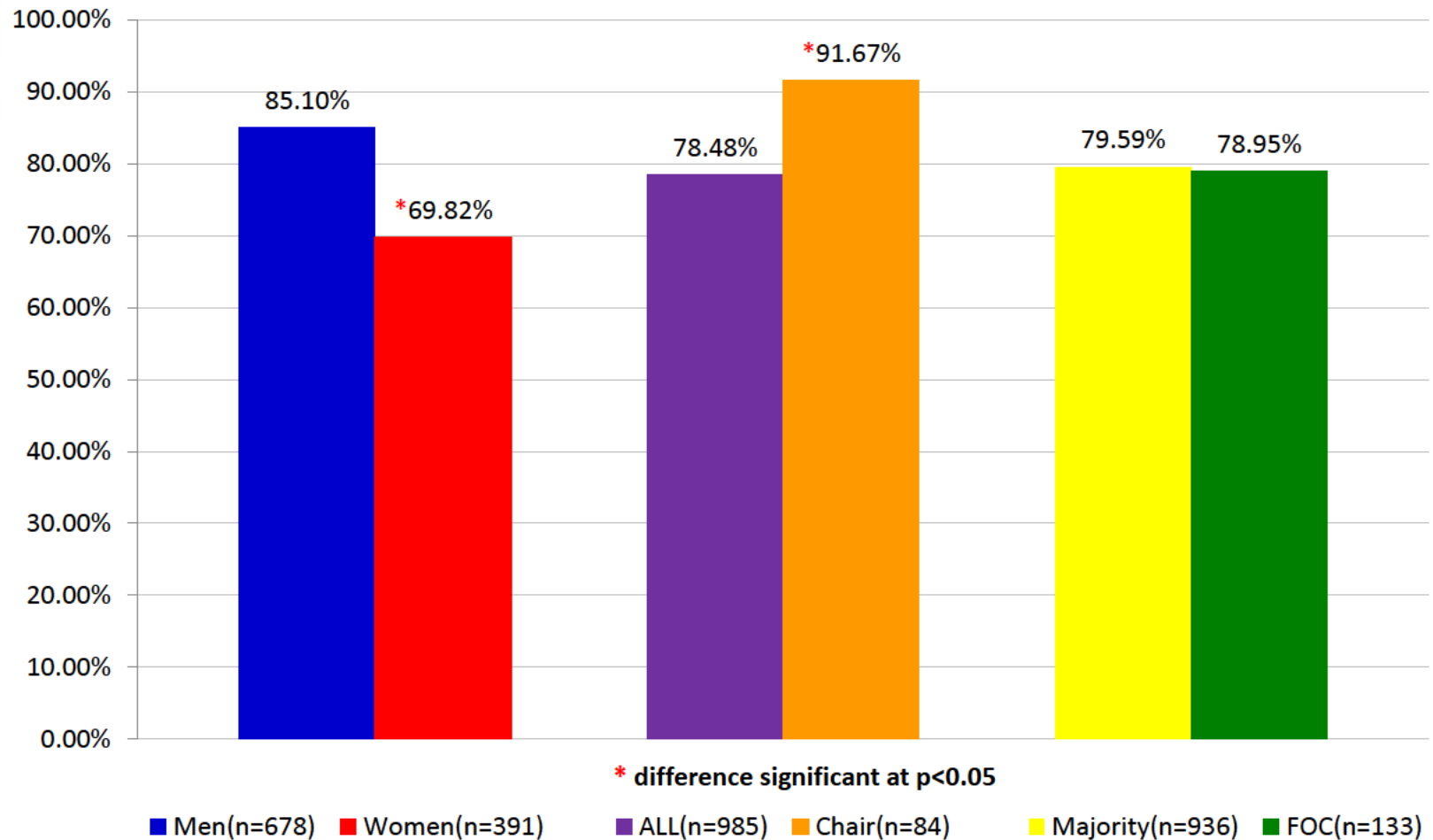
Perceptions of legitimacy as a scholar

**Compared to your colleagues, how much harder to you have to
work to be perceived as a legitimate scholar?**
% responding: not at all, a little, or somewhat



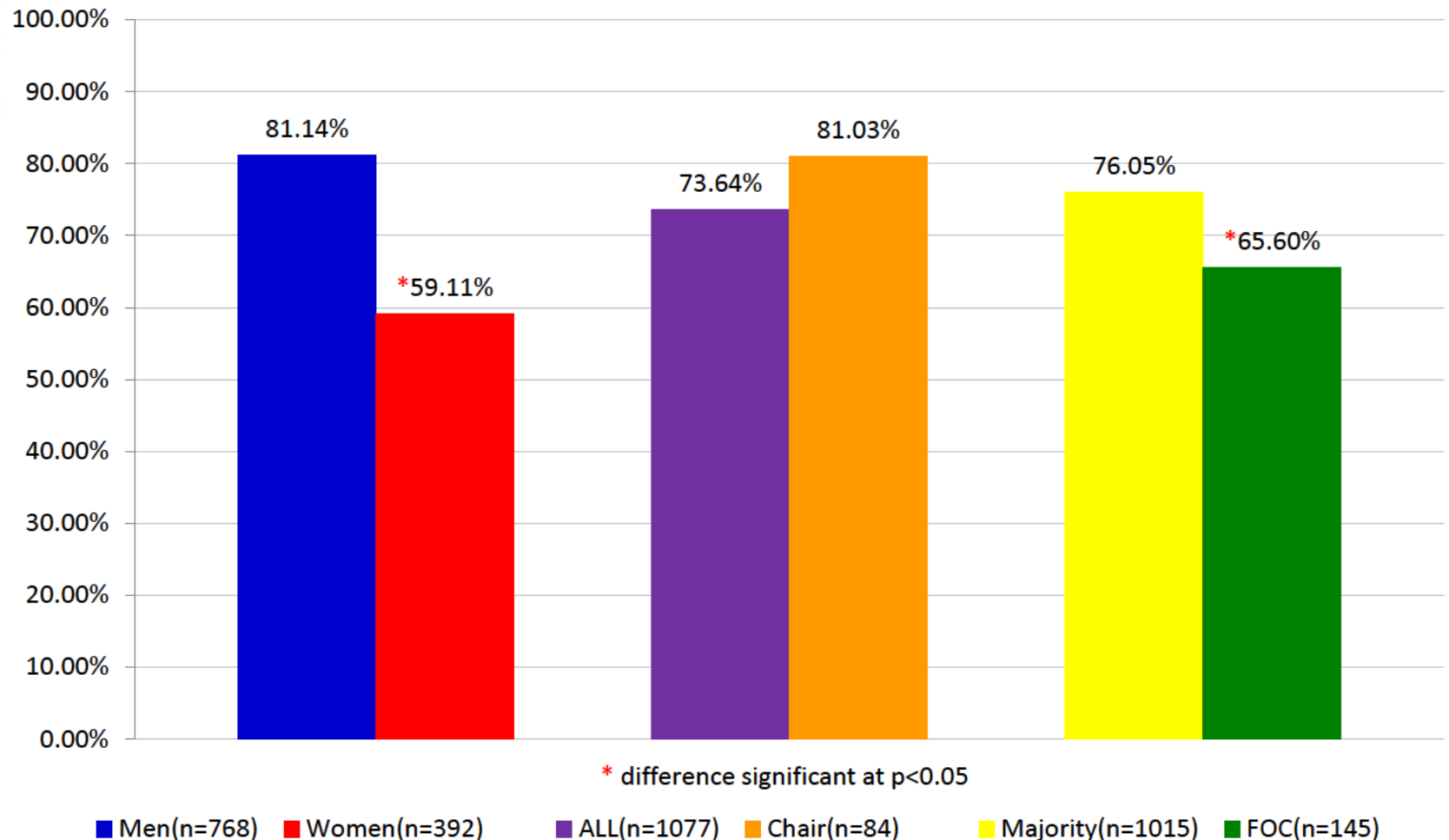


The overall climate for women in my department is positive/very positive

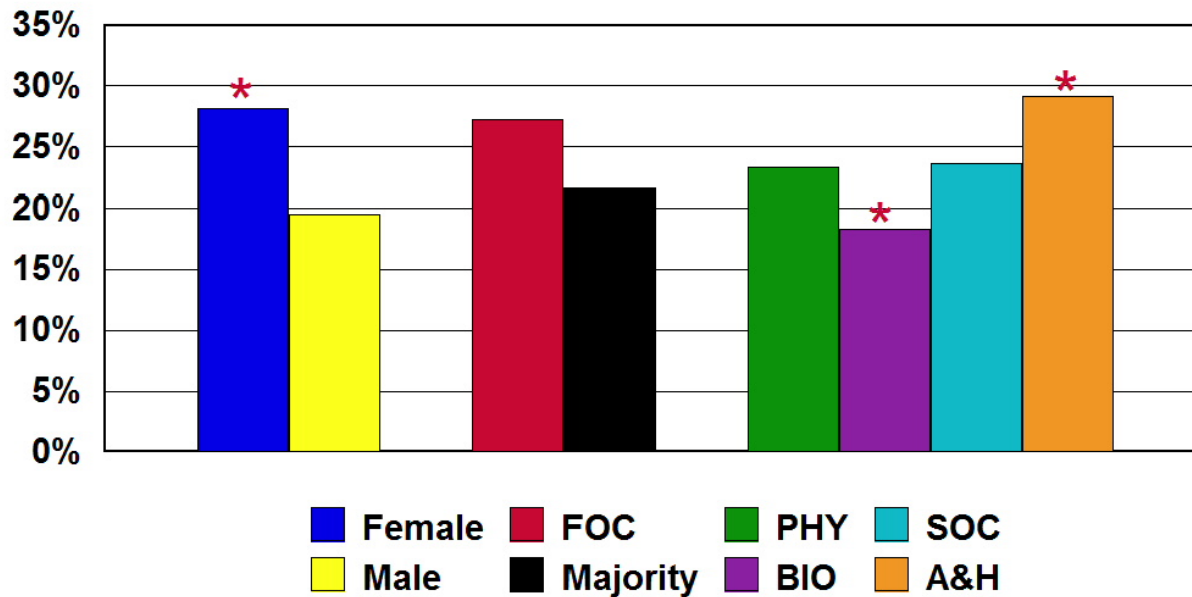




Climate for Faculty of Color in my department is positive/very positive



Very or Somewhat Likely to Leave UW-Madison in Next 3 Years



*difference significant at $p < 0.05$



Unconscious Bias & Climate

1. What is “unconscious bias”?
2. How might unconscious biases influence department/campus climate?
3. What can we do to minimize bias and improve climate?



What is unconscious bias?

- A substantial body of evidence demonstrates that most people – men and women – hold unconscious biases about groups of people.
- Depending on the discipline unconscious biases can also be referred to as:
 - Schemas
 - Stereotypes
 - Mental models
 - Cognitive shortcuts
 - Statistical discrimination
 - Implicit associations
 - Spontaneous trait inference

The tendency of our minds to judge individuals
by the characteristics(real or imagined)
of the groups to which they belong.



What is unconscious bias?

- Most of us routinely rely on unconscious assumptions even though we intend to be fair and believe that we are fair.
- Human brain works by categorizing people, objects and events around us -- this allows us to quickly and efficiently organize and retrieve information.



What is unconscious bias?

Shift in Conceptual Framework

Old Framework:

Bias/Prejudice is bad so if I think or act with bias, I am a bad person.

New Framework:

Prejudiced thoughts and actions are habits that we all have and breaking these habits requires more than good intentions.



How is the research on bias and prejudice conducted?

- Blind, randomized trials
 - Give each group of evaluators pictures, words, or applications with a racial or gender indicator
 - Compare evaluations
- Real life studies
 - Evaluate actual resumés/curriculum vitae, job performance, letters of recommendations, call backs for interviews, etc.



Examples of Blind Randomized Trials

- When shown photographs of people who are the same height, evaluators overestimated the heights of male subjects and underestimated the heights of female subjects. Biernat et al. (1991). *"Stereotypes and Standards of Judgment."* *J Pers & Soc Psychol* 60:485-499.
- When shown photographs of men with similar body types, evaluators rated the athletic ability of African American men higher than that of white men. Biernat and Manis, *"Shifting Standards and Stereotype-based Judgments," J Pers & Soc Psychol* 66 (1994): 5-20.



Examples of Blind Randomized Trials

- When asked to rate the quality of verbal skills indicated by a short text, evaluators rated the skills lower if they were told an African American wrote the text than if a they were told a white person wrote it, and rated verbal skills higher when told that a woman wrote it than when told a man wrote it.
Biernat and Manis, "Shifting Standards and Stereotype-based Judgments," *J Pers & Soc Psychol* 66 (1994): 5-20.



Selected forms of bias

- **Expectancy Bias**

Expecting people to behave in accordance with stereotypes or assumptions about the social category to which they belong.

- **In-group preferences**

Being more comfortable interacting with people who share your group identity/identities.

- **Role Congruity/Incongruity**

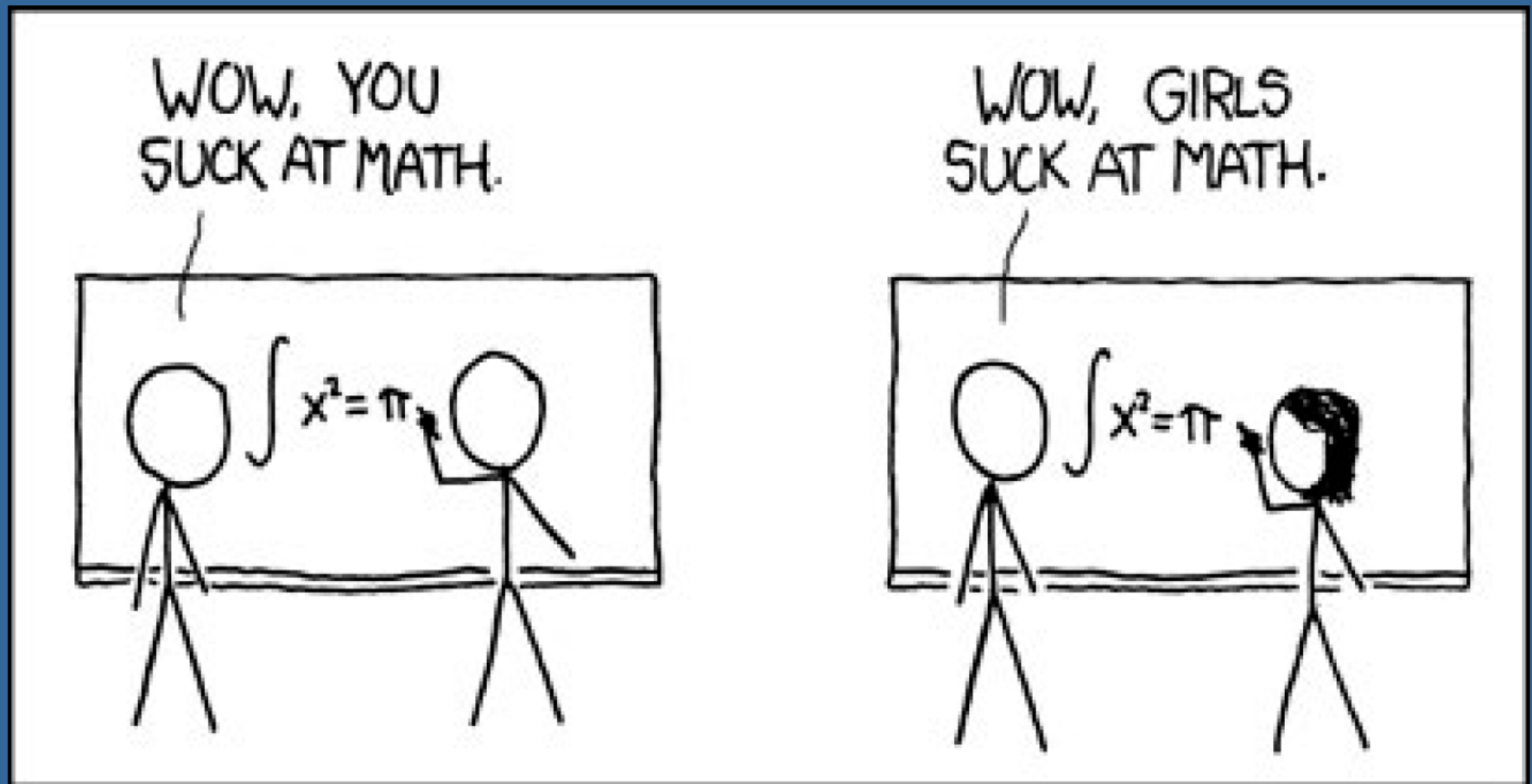
The fit (or lack of fit) between group stereotypes and occupations or occupational roles.

- **Presumed competence/incompetence**

Making judgments about the competence or incompetence of individuals on the basis of stereotypes about the group to which they belong.

Selected forms of bias

Presumed competence/incompetence



Source: xkcd.com: <http://xkcd.com/385/>



Influence of Unconscious Bias on Evaluation

Evaluation of Resumés

Bertrand and Mullainathan, "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination," *American Economic Review* 94 (2004): 991-1013.

- Resumes sent to a variety of employers advertising openings in local newspapers in Chicago and Boston
- Randomly assigned “white-sounding” or “African American-sounding” names to resumes
- Applicants with “white-sounding” names were more 50% more likely to be called back to interview for positions.
- For “white-sounding” names, applicants with better qualifications were 27% more likely to be called back. For “African American-sounding” names, applicants with better qualifications were only 8%* more likely to be called back. (*Not statistically significant.)



Influence of Unconscious Bias on Evaluation – in Academia

Evaluation of Curriculum Vitae

Steinpreis et al., "The Impact of Gender on the Review of the Curricula Vitae of Job Applicants and Tenure Candidates: A National Empirical Study." *Sex Roles* 41 (1999): 509 -528.

- Curriculum vitae of an actual applicant evaluated by 238 academic psychologists (118 male, 120 female)
 - One cv – at time of job application (jr-level)
 - One cv – at time of early tenure (sr-level)
- Randomly assigned a male or female name to each cv



Examples of Real Life Studies

Evaluation of Curriculum Vitae (Cont.)

Steinpreis et al., *Sex Roles* 41 (1999): 509-528.

- For entry-level cv: Academic psychologists were more likely to hire male applicants and gave men higher ratings for
 - Teaching
 - Research
 - Service Experience
- For tenure-level cv: Academic psychologists were equally likely to tenure men and women candidates, **but** were four-times more likely to include cautionary comments on cv's with a female name.



Other Examples

■ Bias in Letters of Recommendation

- Madera et al., "Gender and letters of recommendation for academia: Agentic and communal differences," *The Journal of Applied Psychology*, 94;6 (2009), 1591-1599.
- Schmader and Wysocki, "A linguistic comparison of letters of recommendation for male and female chemistry and biochemistry job applicants," *Sex Roles*, 57 (2007): 509-514.
- Trix and Psenka, "Exploring the Color of Glass: Letters of Recommendation for Female and Male Medical Faculty." *Discourse & Soc* 14 (2003) 191-220.

■ Bias in publication of journal articles

- Budden et al., "Double-blind review favours increased representation of female authors," *TRENDS in Ecology and Evolution*, 23;1 (2008), 4-6.

■ Bias in grant review

- Ginther, et al., "Race, ethnicity, and NIH research awards, *Science*, 333;6045 (2011): 1015-1019.
- Ley and Hamilton, "The gender gap in NIH grant applications," *Science*, 322;5907 (2008): 1472-1474.



Other Examples

■ Bias & Leadership

- Phelan, et al., "Competent yet out in the cold: Shifting Criteria for Hiring reflect backlash toward agentic women," *Psychol. Women Q*, 32;4 2008): 406-413;
- Heilman, et al., "Penalties for success: Reactions to women who succeed at male gender-typed tasks," *Journal of Applied Psychology*, 89;3 2004): 416-427.
- Mervis, "A glass ceiling for Asian scientists," *Science* 28 (2005): 608-609

■ Motherhood Bias

- Correll, Benard, and Paik, "Getting a job: Is there a motherhood penalty?" *The American Journal of Sociology*, 112;5 2007): 1297-1338.

■ Sexual Orientation

- Hebl et al., "Formal and interpersonal discrimination: A field study of bias toward homosexual applicants," *Personality & Social Psychology Bulletin*, 28;6 2002): 815-825.
- Tilcsik, "Pride and prejudice: Employment discrimination against openly gay men in the united states," *American Journal of Sociology*, 117;2 (2011): 586-626.



Unconscious Bias in the Search Process

Case Study Discussion



Selected forms of bias

■ Stereotype Threat

Members of negatively stereotyped groups may underperform when reminded of their group membership

Claude Steele and colleagues – many articles

■ Ambient Belonging

Subtle cues that cause individuals to feel that they belong or do not belong in a particular environment.

Classroom Environments

Stereotypical room

Star Trek
poster

Sci Fi books



Coke cans

Chervan, Plaut, Davies & Steele, *Journal of Personality & Social Psychology*, 2009

Images used with permission of Dr. Sapna Chervan

Classroom Environments

Non-stereotypical room

Nature poster

Neutral books



Water bottles



Selected forms of bias

Microaggressions

“... brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color.”

Derald Wing Sue, *Racial Microaggressions in Everyday Life* (2010)



Minimizing Bias and Assumptions

What Not to Do:

- Suppress bias and assumptions from one's mind (or try to)
 - Studies demonstrating Stereotype Rebound effect
 - Nira Liberman and Jens Förster, "Expression After Suppression: A Motivational Explanation of Postsuppression Rebound," *Journal of Personality & Social Psychology* 79 (2000): 190-203
 - C. N. Macrae, Galen V. Bodenhausen, Alan B. Milne, and Jolanda Jetten, "Out of Mind but Back in Sight: Stereotypes on the Rebound." *Journal of Personality & Social Psychology* 67 (1994): 808-817
- Relying solely on a presumably "objective" ranking or rating system to reduce bias
 - Wenneräs and Wold, "Nepotism and Sexism in Peer Review" *Nature*



Minimizing Bias and Assumptions

■ Question your objectivity

- Replace your self-image as an objective person with recognition and acceptance that you are subject to the influence of bias and assumptions

Uhlmann and Cohen, "I think it, therefore it is true: Effects of self-perceived objectivity on hiring discrimination," *Organizational Behavior and Human Decision Processes*, 104;2 (2007): 207-223

■ Stereotype Replacement

- Reflect on your own judgments and interactions and assess whether bias/assumptions played a role
- Recognize stereotypical portrayals in society or your environment
- Challenge the fairness of the judgment or portrayal and replace it with a non-stereotypical response



Minimizing Bias and Assumptions

■ Counter-Stereotype Imaging

- Regulate your responses/judgments by imagining counter-stereotype examples
- Recognize or increase the visibility of counter-stereotype examples in your domain.
 - Eg: Photographs on walls in classrooms and hallways – do they reflect the diversity; Examples used in text books and classrooms – do they reflect the diverse interests of students.
 - Departmental seminars/conferences – are invited speakers from diverse groups within the field.
 - Leadership positions within the department
 - Awards & recognition



Minimizing Bias and Assumptions

- Individuating (instead of generalizing)
 - Avoid making a snap decision based on a stereotype

e.g., Make gender, race, ethnicity less salient than being a scientist, physician, or engineer
 - Obtain more information on specific qualifications, record of performance, personality, and other attributes of an individual before making assumptions/judgments.
 - Practice making situational attributions rather than dispositional attributions

(He's late because the bus broke down vs. he's late because he's disorganized/lazy/unmotivated.)



Minimizing Bias and Assumptions

■ Perspective Taking

- Adopt the perspective (in the first-person) of a member of a stigmatized group

For example, imagine what it would be like to...

- *Have your abilities repeatedly called into question*
- *Not be offered opportunities because of assumptions about what fields you will like*
- *Not receive the same rewards and recognitions as similarly deserving peers*



Minimizing Bias and Assumptions

- Increase opportunities for contact with members of underrepresented groups
 - Greet and engage professionally with members of underrepresented groups presenting at or attending academic conferences
 - Pursue opportunities for collaboration
 - Engage in outreach work with minority communities
 - Mentor and advocate for students and colleagues from underrepresented groups.



Breaking the Bias Habit

- Not necessarily easy
- With effort (awareness, motivation, and a sustained commitment), prejudice is a habit that can be broken
 - Can expect that you may slip up
 - Stay committed
- Strategies we provided are powerful tools to combat implicit biases
 - Implicit responses can be brought into line with explicit beliefs



Creating a Welcoming & Inclusive Department Climate

- Treat all individuals w/ respect consideration & politeness
 - Establish a policy
 - Promote policy by personal example
- Hold department members accountable for violations
- Actively promote an inclusive communities
- Recognize and value the work of department members
- Communicate openly, honestly, and effectively



Creating a Welcoming & Inclusive Department Climate

- Promote professional development
- Encourage Balance between work and family or personal responsibilities
- Recognize and respect perspectives and experiences of others
- Respond to illegal behaviors and complaints about demeaning, sexualizing, or condescending language and behavior