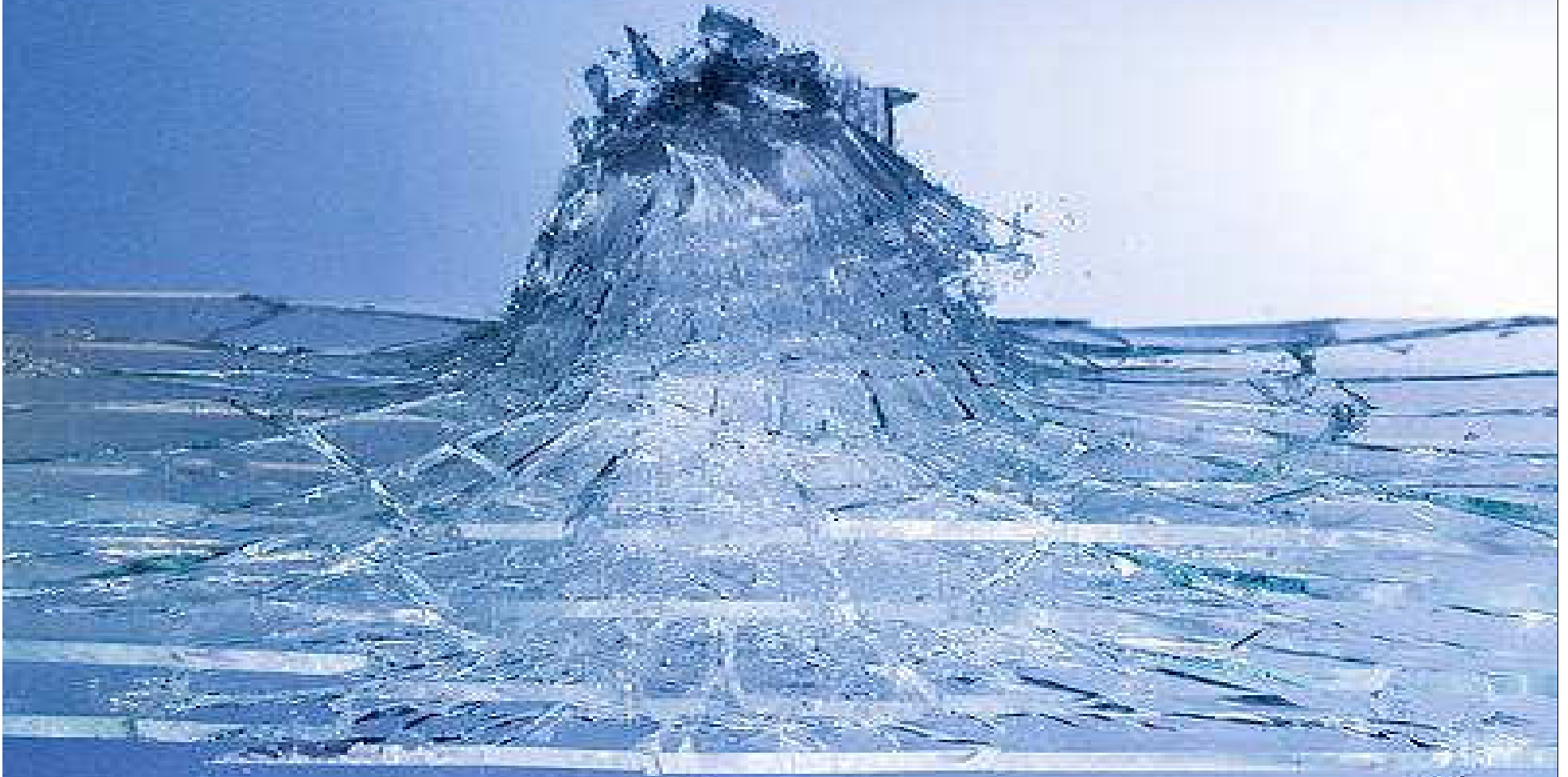


# **Breaking the Ice on How to Crack the Glass Ceiling**

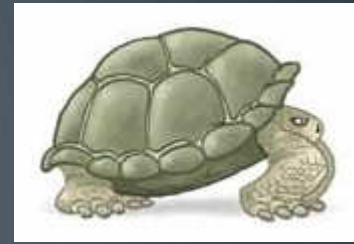


**Toni Schmader, Department of Psychology**

# Being of Two Minds

## *Reflective system* for controlled processing

- Conscious, explicit
- Effortful, requires motivation
- Takes more time



## *Reflexive system* for automatic processing

- Often unconscious, implicit
- Requires little effort
- Fast



- Different neural structures distinguish the two
  - Satpute & Lieberman (2006)

# The Reflexive System Uses Implicit Associations

- Cognitive links between concepts that co-vary
- Bring one to mind, others are activated
- Activation can happen unconsciously
  - ...can be at odds with conscious goals
  - ...can influence attention, perception, judgment and behavior

# These Implicit Biases can be Measured

- The Implicit Association Test (IAT)

Greenwald, McGhee, & Schwartz (1998)

- Measures strength of association between concepts
- Based on premise that associated concepts will be easier to categorize together

- Find more IAT's at Project Implicit:

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

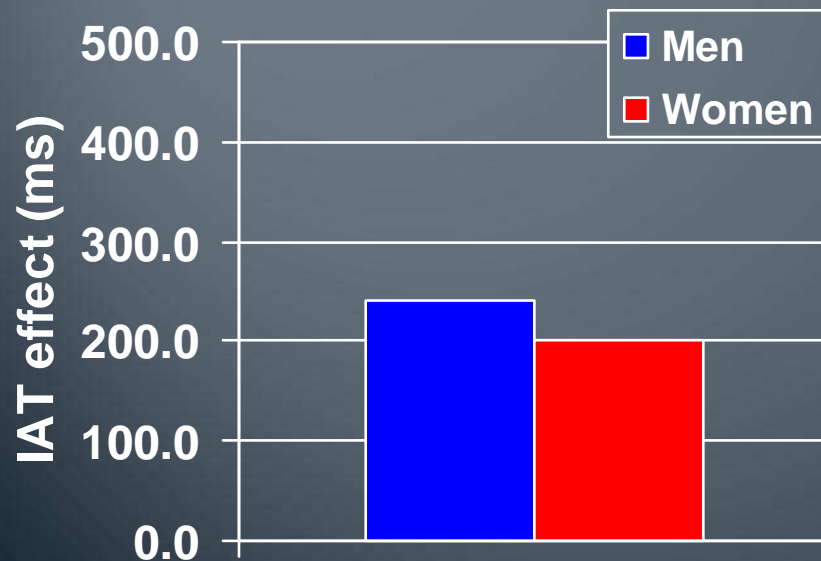


Microsoft  
PowerPoint Presentati

# Men and Women both Show Implicit Gender Biases

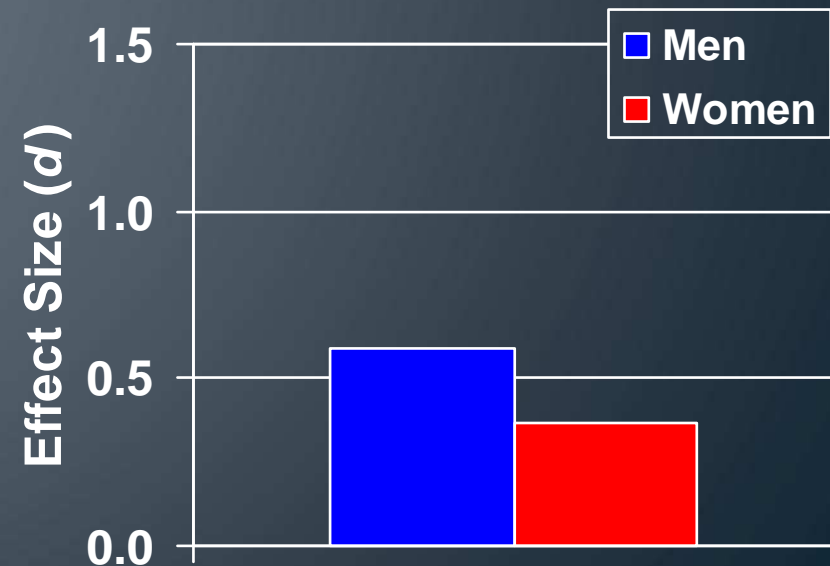
Association of  
math = male &  
arts = female

Nosek et al. (2002)

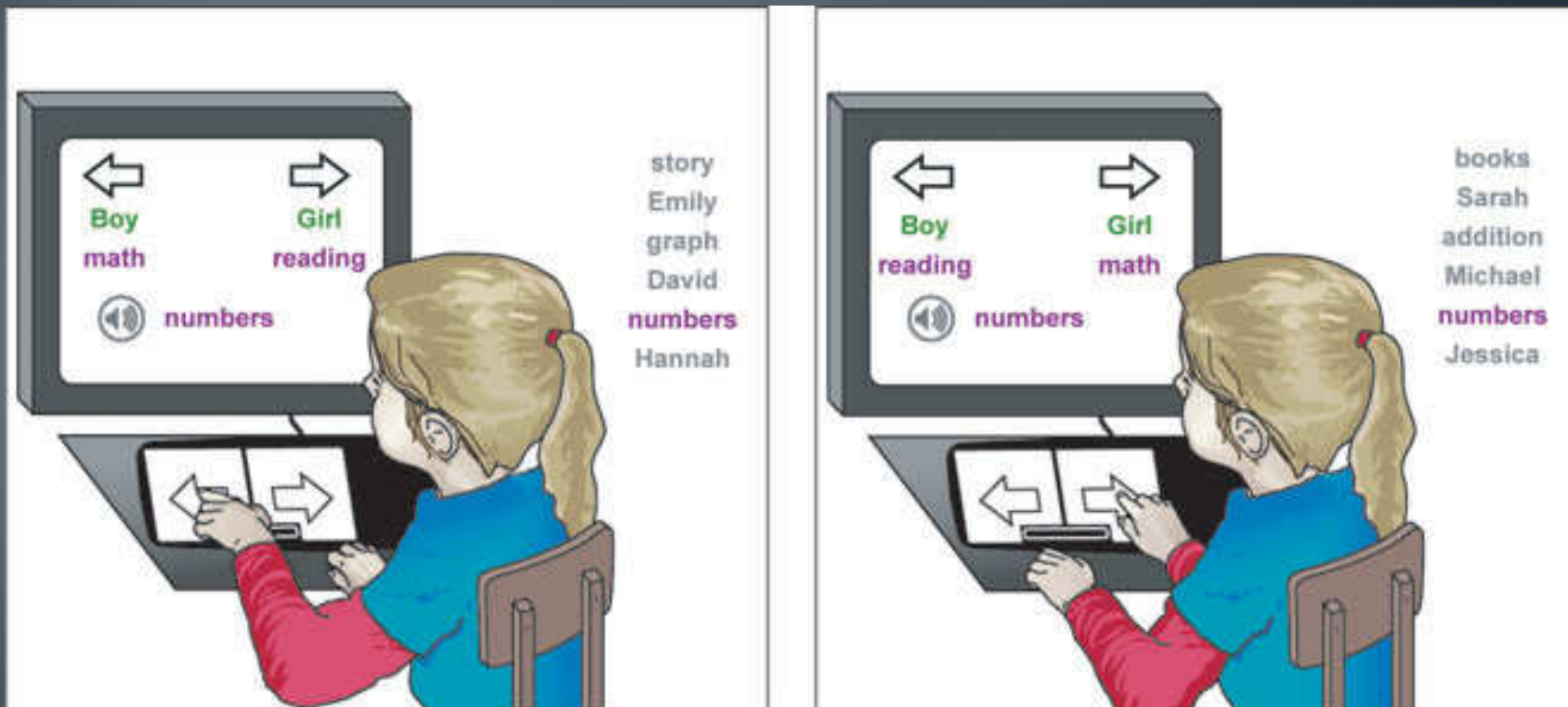


Association of  
men = independent &  
women = communal

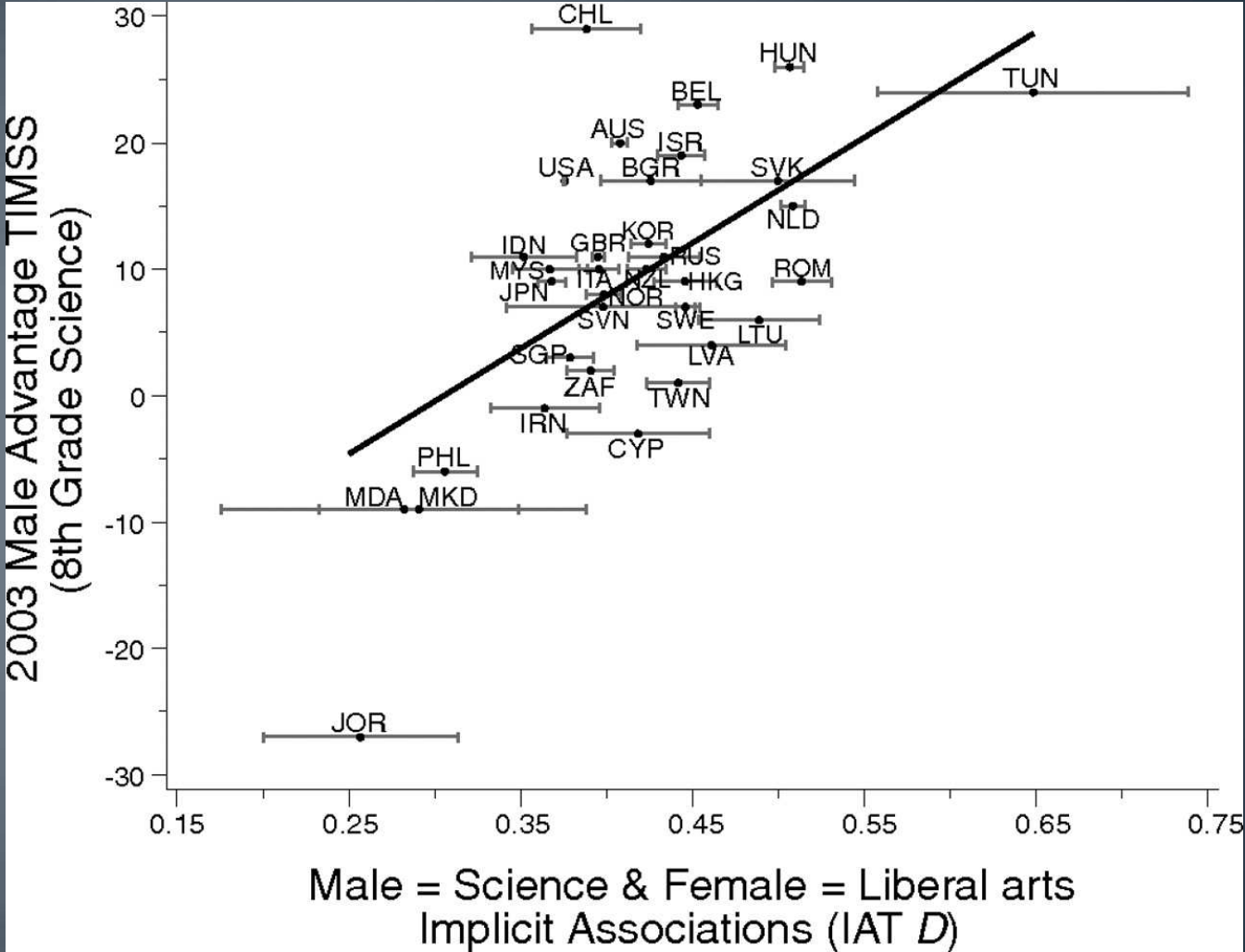
Rudman & Glick (2001)



# These Biases Develop Early



# Implicit Biases Correlate with Gender Differences in Behavior

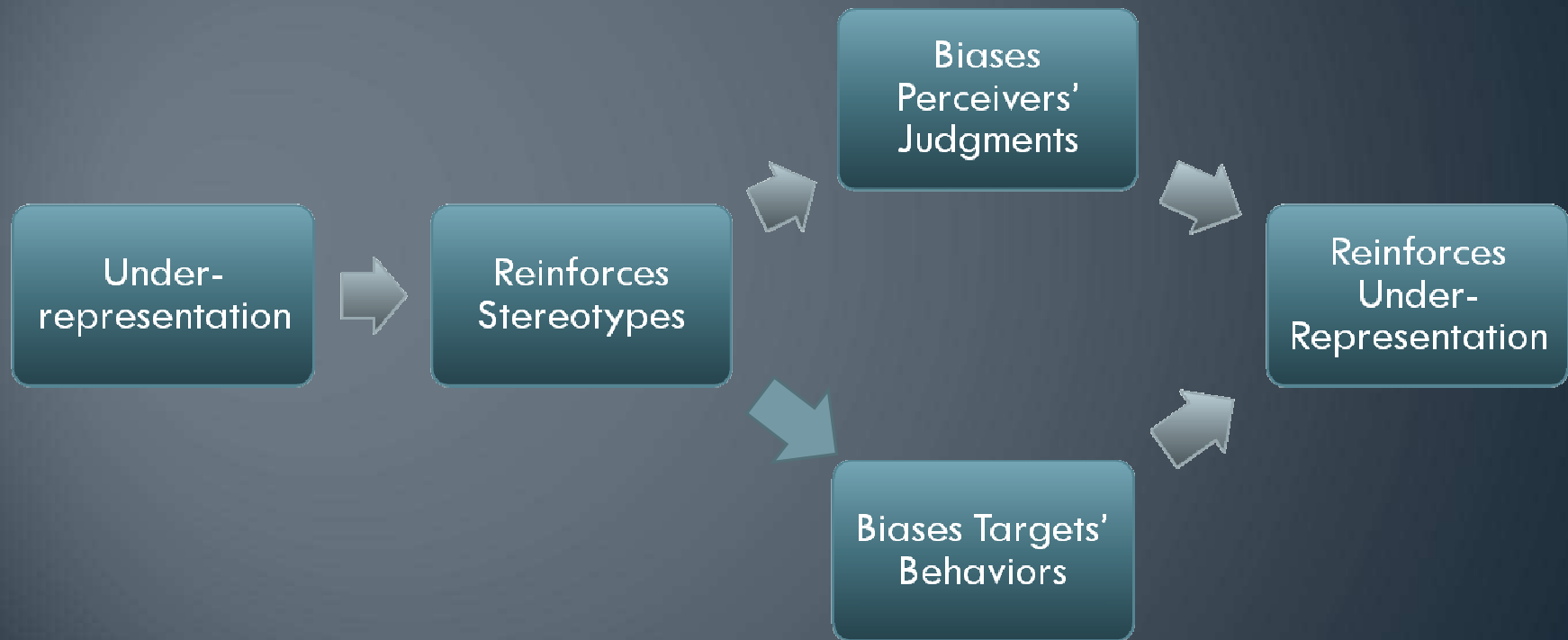


Nosek B A et al. PNAS 2009;106:10593-10597

©2009 by National Academy of Sciences

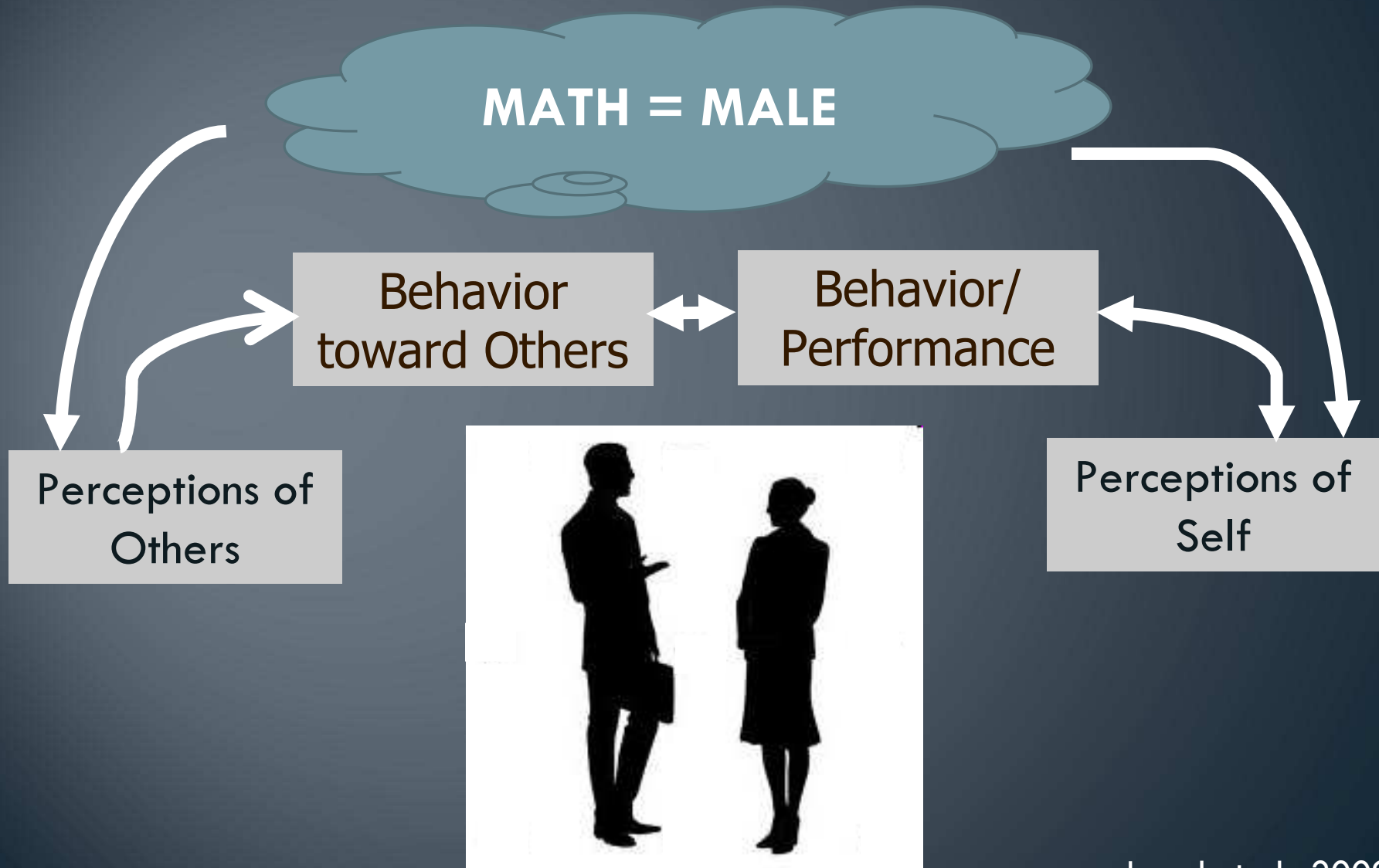


# Cycle of Stereotyping

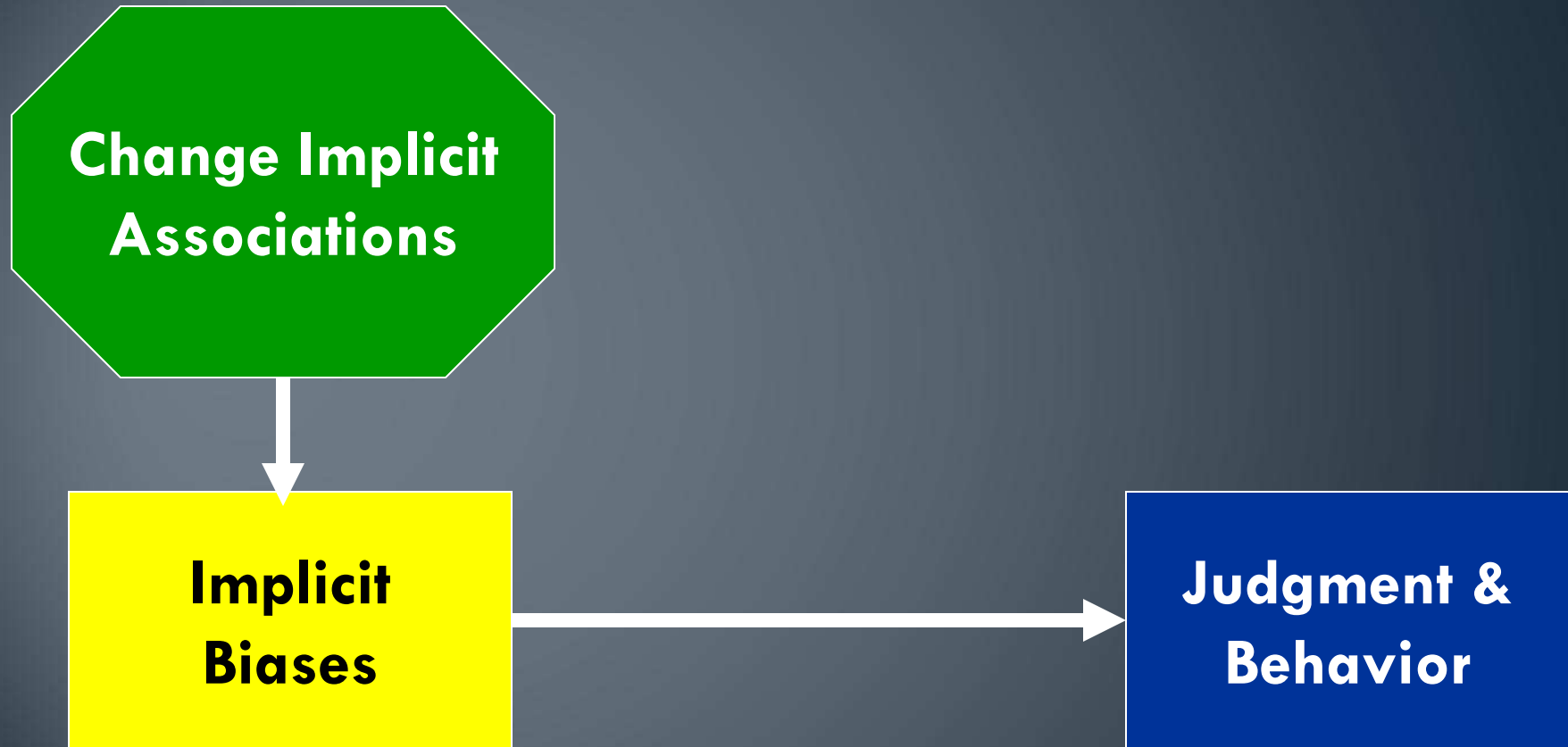




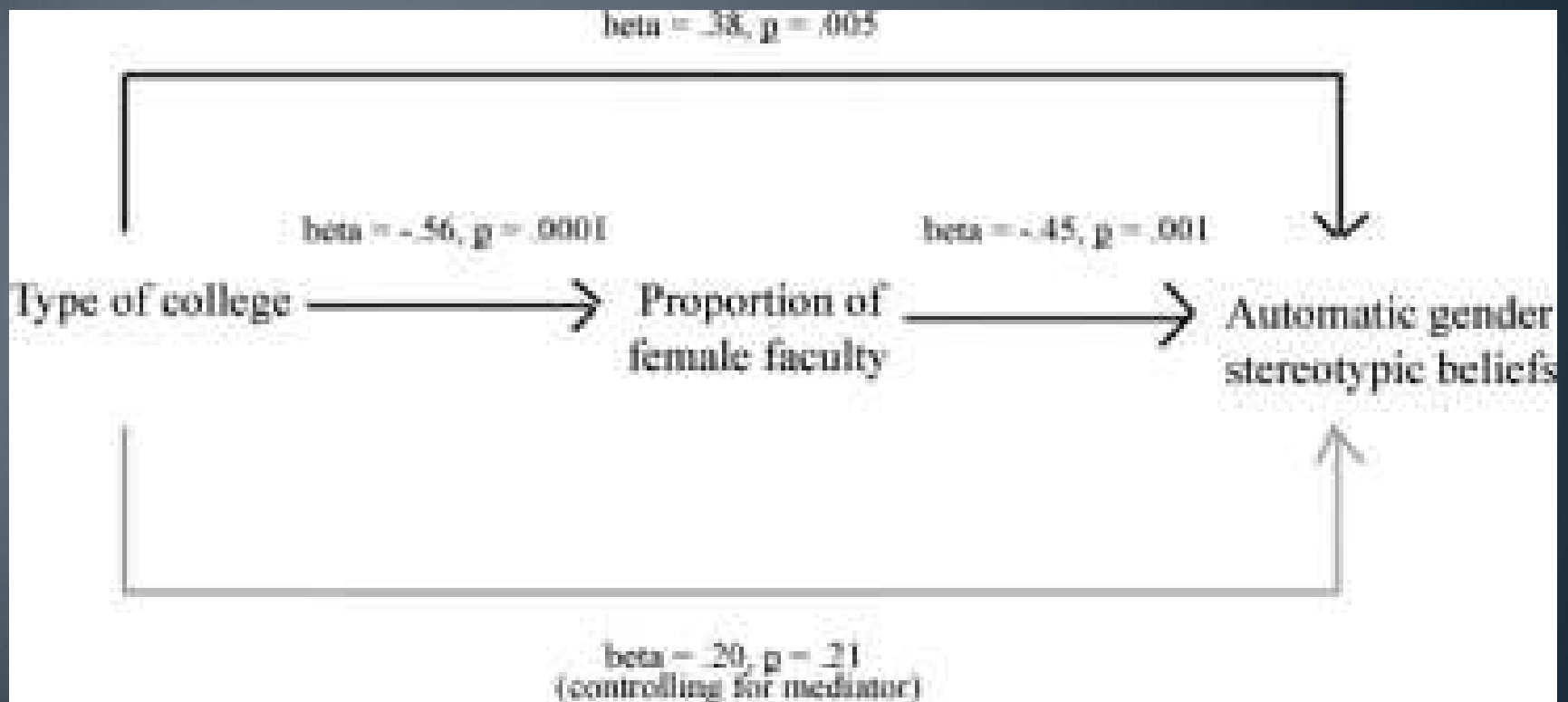
# When cued by the Context, Implicit Associations can Cloud Judgment



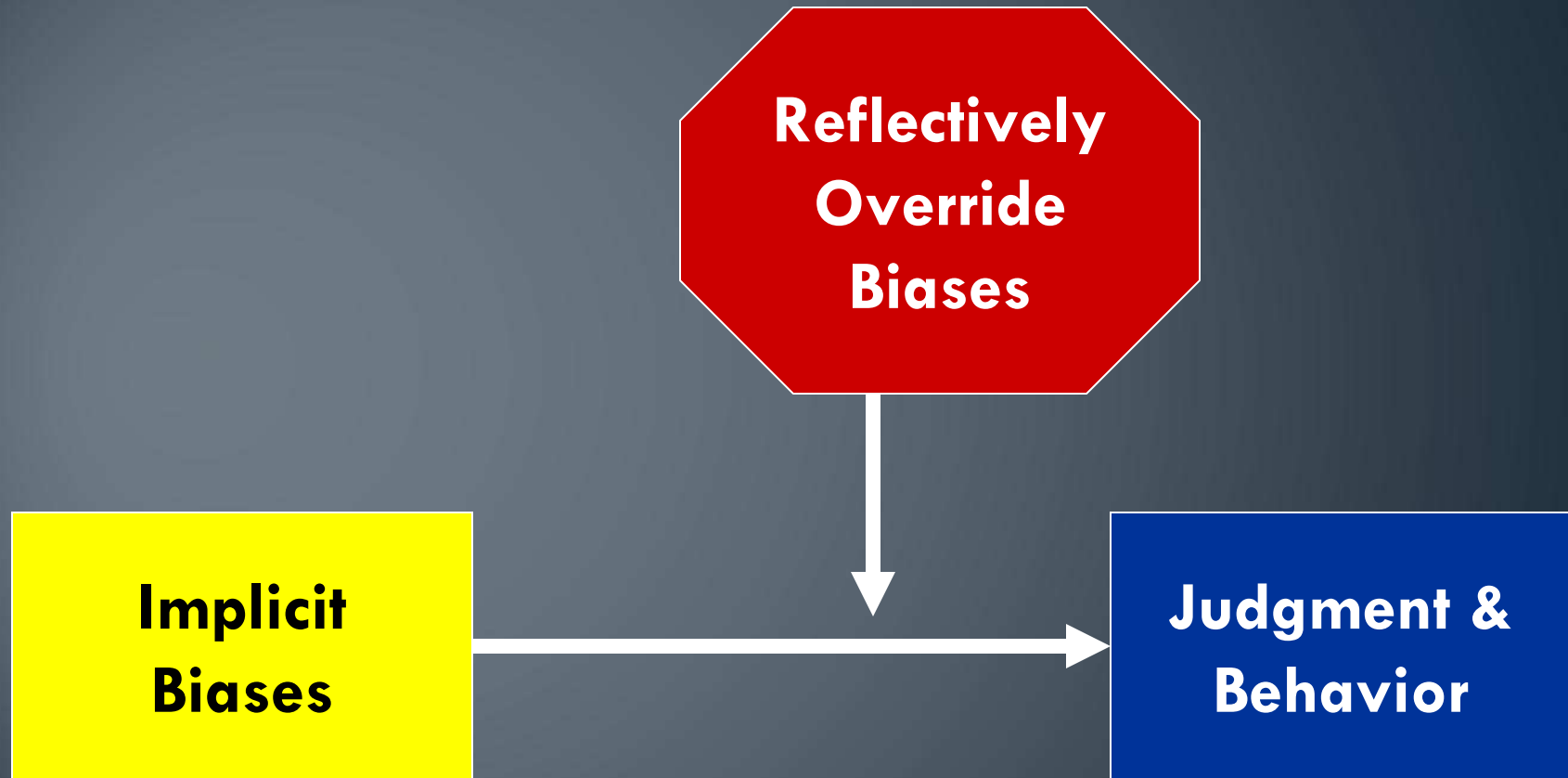
# A Two Strategy Solution



# Students who have more female faculty become less likely to associate male=leader



# A Two Strategy Solution



# Take-Away Points

- Implicit bias is distinct from conscious motivation
- We all have these biases due to cultural exposure
- They can be changed with education, exposure, and establishment of situations that minimize their effects