ADVANCE at Brown

Recognizing Gender Bias in Letters of Recommendation

Friday, Oct. 9, 2009

Brown University

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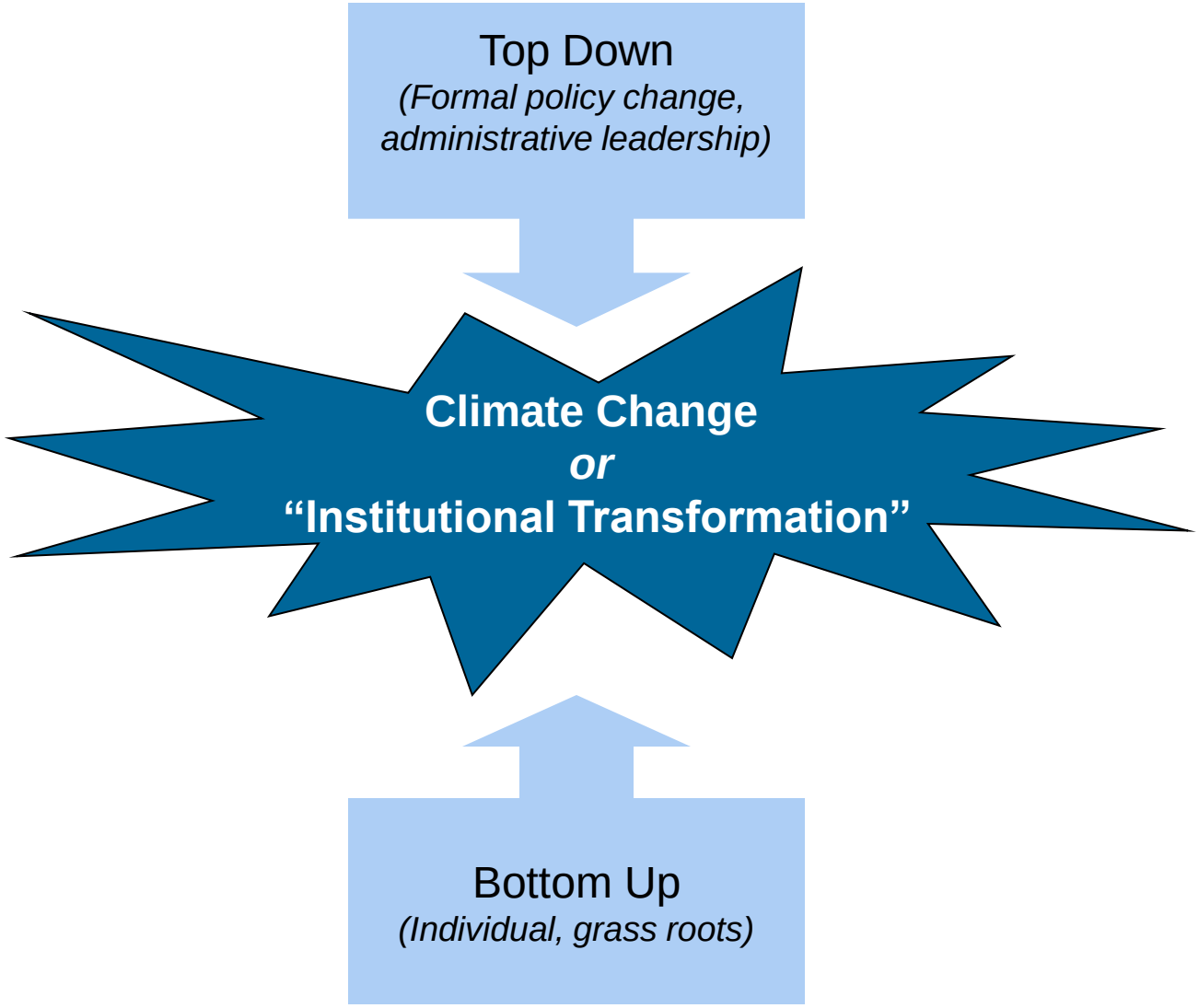
ADVANCE

↑ Recruitment, retention, engagement

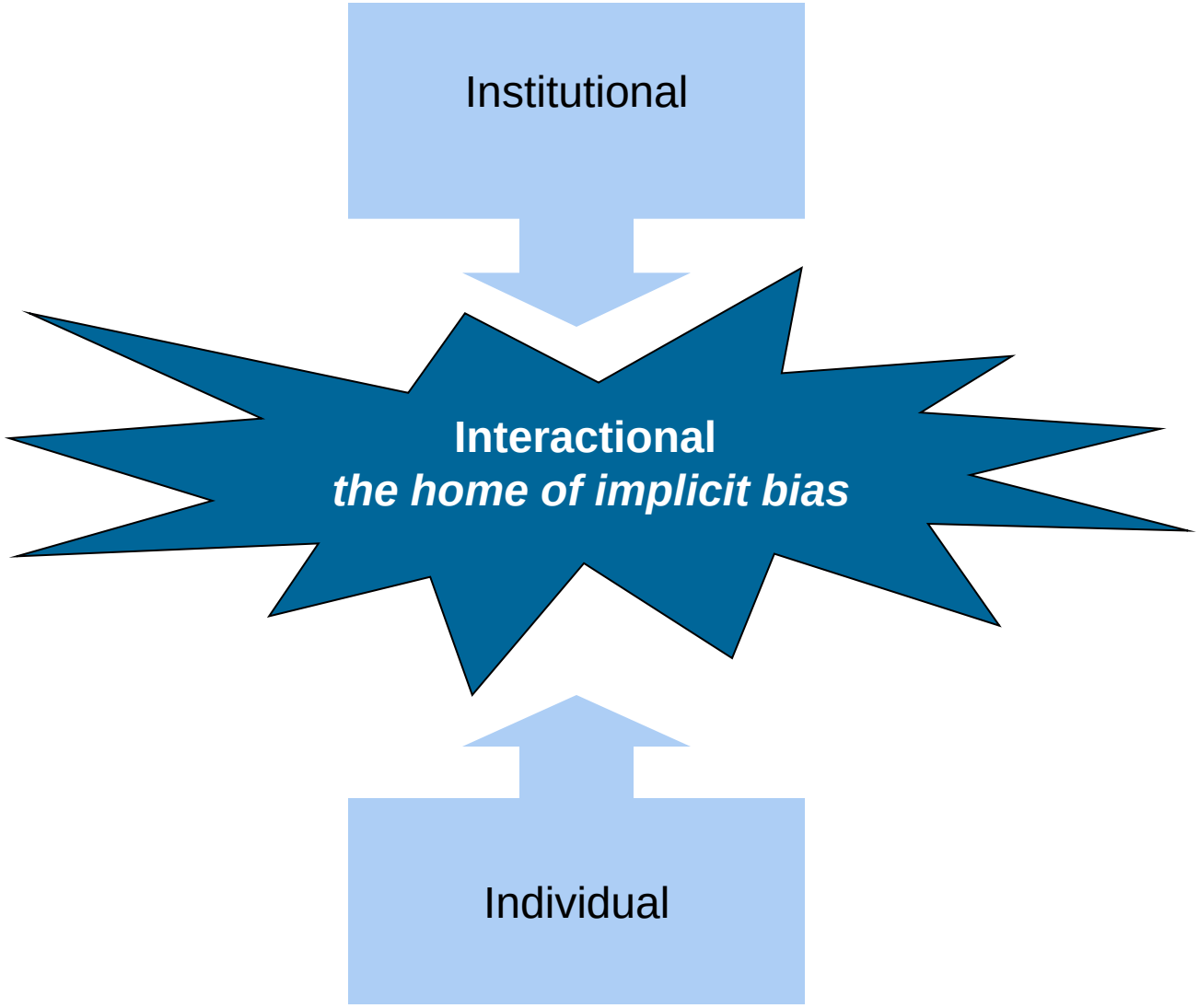
↑ Social, human capital → ROI

A rising tide lifts all boats.

How does change occur? The traditional model:



THE BARRIER TO CHANGE:
Implicit, invisible bias



Implicit bias

- Implicit Associations Test (Harvard, Benaji, Greenwald, etc.)
  - Insects = scratchy; tulip = dream
  - White = happy; black = ugly
  - Christian = good; Jew = tired
  - Men = powerful; women = weak

  www.implicit.harvard.edu

- Cognitive shortcuts (templates of knowledge) → *gender schemas*
  - *unconscious socialized ideas about what roles and behaviors are appropriate for a given person based on their social category (gender, minority status, etc.)*
  - *"she's leaving work to take care of her kids; he's leaving work to go to another meeting"*
  - *"she's quiet because she has nothing to say; he's quiet because he's thinking."*

We see what we expect; we make assumptions; we shift our criteria; we apply criteria unequally; we give “benefit of doubt” unequally

- Estimates of height from photographs (Biernat, Manis, & Nelson, 1991)
- Identify leader in group table setting (Porter & Geis, 1981)
- Choose candidate for job requiring education (Norton Vandello & Darley, 2004)
- Choose postdoc based on credentials (Wenneral & Wold, 1997)
- Rating men and women’s competence in male-dominated field (Heilman, Wallen, Fuchs, & Tamkins, 2004)

Impacts

- Unrecognized, invisible assumptions, built-in from early childhood, about gender roles impacts men's and women's careers in subtle, yet powerful ways
- Downward spiral feedback loop:

implicit bias → stereotype threat → confirmation bias → self-fulfilling prophecy

(oops . . .scarcity of STEM women)

"Exploring the Color of Glass: Letters of Recommendation for Female and Male Medical Faculty" (2003)

- 312 letters of recommendation written for 103 successful applicants for clinical and research positions at a medical school,1992-95
- 71% of letters for male applicants; 85% of recommenders male; 96% of gatekeepers male
- Letters analyzed for:

length
doubt raisers
lacking basic features
semantic realms following possessives
stereotypical descriptors and nouns
grindstone and standout adjectives
naming practices
sex-linked terms

Study Results
Trix & Penska, "Exploring the Color of Glass"

- Letters in support of male applicants were longer
  - Average length: for males, 253 words; for females, 227 words
  - Letters > 50 lines: 8% for males; 2% for females
  - Letters < 10 lines: 6% for males; 10% for females
- Letters of minimal reassurance:
  15% of letters for females; 6% of letters for males
- Use of Titles other than 'Dr.':
  12% of letters for males; 3% of letters for females
- Doubt raisers
  - 24% of letters for females had $\geq$ 1; 12% of letters for males
  - Average # per letter: 1.7 for females; 1.3 for males

Study Results
Trix & Penska, "Exploring the Color of Glass"

- Descriptors

  "successful" in 7% of letters for males; in 3% of letters for females

  "accomplishment" and "achievement": in 13% of letters for males; 3% females

  "compassionate" and "relates well to patients": in 4% of letters for males; 16% of letters for females

  Grindstone Adjectives

  in 23% of letters for males; in 34% of letters for females

  Standout Adjectives

  in 58% of letters for males; in 63% of letters for females

- Repetition: 62% of letters for males had multiple mentions of "research"; 35% of letters for females
- Possessives accompanied personal realm for females vs. professional and higher status realms for males:

  "her training," "her teaching," vs. "his research," "his skills"

A Linguistic Comparison of Letters of Recommendation for Male and Female Chemistry and Biochemistry Job Applicants

Schmader, T., Whitehead, J., & Wysocki (2007)

- Text analysis software examined 886 LoR (235 male, 42 female) for 2 tenure-track positions at large RI University
- Systematic differences (gender x dept) in length and use of language?
- Quantitative differences in accomplishments (pubs, fellowships, presentations, post-docs)?

Variables and Gender Findings

- Length of letter — **NS**
- Negative vs. positive language — **NS**
- Tentative vs. certainty language — **NS**
  - *likely, probably vs. absolutely, clearly*
- Achievement vs. communication skills references — **p = .08**
  - *Won, awarded, lead vs. good listener, team player*
- Standout adjectives — **p = .05**
  - *Superb, outstanding, remarkable, finest*
- Research vs. teaching related words — **NS**
  - *Data, test, study, scholarship, method, grant, vs. class, syllabus, course, citizen, student, mentor, advisor*
- Ability vs. grindstone words — **NS**
  - *Talent, skill, bright, expert, competent, aptitude vs. hardworking, conscientious, depend, diligent, effort, persist*

Other Findings

OBJECTIVE CRITERIA

- No gender differences
- Chem. → more pubs
- Biochem → more postdocs, fellowships

DEPT. LANGUAGE DIFFERENCES

- Chem → more teaching terms
- Biochem → more commun. words, negative feeling words, fewer positive feeling words

OTHER

- Pos. corr → standout adjectives and ability words
- Neg. corr → standout adjectives and grindstone words

(i.e., the more standout words used, the more ability words and the fewer grindstone words)

How does change occur? Recognize implicit bias!

Promote formal policy change and administrative support

Identify and prevent subtle interactional dynamics and traditional patterns of behavior that reinforce implicit biases

Solicit individual support:

"Put your money where your mouth is"