Recognizing Gender Bias in Letters of Recommendation

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Brown University

Michele Cyr, M.D., Brown University
Barbara Silver, Ph.D., University of Rhode Island
ADVANCE

Recruitment, retention, engagement

Social, human capital  →  ROI

A rising tide lifts all boats.
How does change occur? The traditional model:

- **Top Down**
  - (Formal policy change, administrative leadership)

- **Bottom Up**
  - (Individual, grass roots)

**Climate Change**  
*or*  
**“Institutional Transformation”**
THE BARRIER TO CHANGE:
Implicit, invisible bias

Institutional

Interactional
the home of implicit bias

Individual
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](http://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 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 $\rightarrow$ stereotype threat $\rightarrow$ confirmation bias $\rightarrow$ self-fulfilling prophecy

(oops . . . scarcity of STEM women)
• 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
  - naming practices
  - doubt raisers
  - sex-linked terms
  - lacking basic features
  - semantic realms following possessives
  - stereotypical descriptors and nouns
  - grindstone and standout adjectives

“Exploring the Color of Glass: Letters of Recommendation for Female and Male Medical Faculty” (2003)
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 $> 1$; 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

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

NS
NS
NS
NS
p = .08
p = .05
NS
NS
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”