Implications of Gendered Language in Letters, Evaluations, and Search Committees on Women’s Careers

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Disclosures

- Dr. Rachel Simmons, Dr. Kitt Shaffer, Dr. Heather Miselis have nothing to disclose with regard to commercial interests
Goals for the session

• Review unconscious bias
• Learn to identify gender bias in letters of recommendation
• Understand how to avoid gender bias in your letters
• Discuss BU promotions committee letters
A Leadership Gap Exists Between Men and Women in Academic Medicine

AAMC State of Women in Academic Medicine 2014, updated
Plenty of moustaches but not enough women: cross sectional study of medical leaders

A la Souvarov  French Fork  Handlebar and Chin Puff  Van Dyke  Friendly Mutton Chops  Balbo
Plenty of moustaches but not enough women: cross sectional study of medical leaders

Mackenzie R
Wehner et al. BMJ
2015;351
Women are less likely than men to achieve full professor status

• Adjusted for age, years since residency, authorship, NIH funding, clinical trials

• Absolute adjusted difference between men and women was −3.8%

Hypothesized contributing factors for lack of advancement for women

- Smaller start up packages
- Lack of mentorship
- Lack of sponsorship
- Less likely to negotiate

- Implicit (unconscious) bias
- Stereotype threat
- Lack of role models
- Family pressures
Implicit Biases

• Attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner

• Investigate your bias with implicit association tests: https://implicit.harvard.edu/implicit/
We all have biases

• We all operate with a set of assumptions, based on our exposures and experiences

• Our mind processes a high volume of information outside of our awareness

• We then operate in the world...

• We believe that we are more rational than we actually are
Inconsistency between female gender stereotypes and leadership tasks

Female stereotypes: Women are communal, occupy subordinate roles, are uninterested in leadership, and lack competence as leaders.

Violations of female stereotypes: Women who are direct, assertive, and task-oriented are unlikable and interpersonally hostile.

Female leaders in small minority groups enhance effects of gender

Daily exposure to women in subordinate roles reinforces gender stereotypes

Mental models of leaders as men

Overt sexism, gender discrimination and harassment

Female Faculty Member

What does the data show about letters and evaluations for women and men in academia?
## Words matter

<table>
<thead>
<tr>
<th>Communal</th>
<th>Agentic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caring</td>
<td>Ambitious</td>
</tr>
<tr>
<td>Compassionate</td>
<td>Confident</td>
</tr>
<tr>
<td>Helpful</td>
<td>Assertive</td>
</tr>
<tr>
<td>Kind</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grindstone</th>
<th>Stand out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardworking</td>
<td>Outstanding</td>
</tr>
<tr>
<td>Conscientious</td>
<td>Superb</td>
</tr>
<tr>
<td>Organized</td>
<td>Best</td>
</tr>
<tr>
<td>Dedicated</td>
<td></td>
</tr>
</tbody>
</table>
Gendered language in letters for academic positions

- Reviewed 624 letters of recommendation
- 194 applicants for eight junior faculty positions
- Single university
- Performed language content analysis
- Controlled for publications, teaching experience, and honors

Gendered language in letters for academic positions

Women were more likely to be described with communal terms:
- Helpful
- Kind
- Sympathetic
- Sensitive
- Nurturing
- Agreeable
- Interpersonal
- Warm
- Caring

Men were more likely to be described with agentic terms:
- Assertive
- Confident
- Aggressive
- Ambitious
- Dominant
- Forceful
- Independent
- Outspoken
- Intellectual

Gendered language in letters for academic positions

Women were more likely to be described with communal terms:
• Helpful
• Kind

Men were more likely to be described with agentic terms:
• Assertive
• Confident

Communal characteristics were found to be negatively related to hireability

Agreeable
• Interpersonal
• Warm
• Caring

Forceful
• Independent
• Outspoken
• Intellectual

Letters of recommendation for medical faculty showed gender differences

- Evaluated 312 letters for 103 faculty positions
- One US medical school
- 85% of recommenders were male
- 96% of gatekeepers were male

Letters for women faculty candidates were more likely to...

• Mention social factors like family\textsuperscript{1,2}
• Be shorter
• Raise doubts
• Offer only minimal assurance
• Contain less standout adjectives
• Contain more grindstone adjectives
• Mention research only once

<table>
<thead>
<tr>
<th>Attributes\textsuperscript{2}</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>227 words</td>
<td>253 words</td>
</tr>
<tr>
<td>Standout adj</td>
<td>1.5/letter</td>
<td>2/letter</td>
</tr>
<tr>
<td>Grindstone adj</td>
<td>34%</td>
<td>23%</td>
</tr>
<tr>
<td>Doubt raised</td>
<td>24%</td>
<td>12%</td>
</tr>
<tr>
<td>Minimal assurance</td>
<td>15%</td>
<td>6%</td>
</tr>
</tbody>
</table>

\textsuperscript{1}Madera et al. Journal of Applied Psychology 2009; 94(6): 1591-1599
\textsuperscript{2}Trix and Psenka. Discourse & Society 2003; 14(2): 191-220
Possessiveness in letters demonstrated gender differences

Differences in MSPE language for gender and racial groups

- MSPEs from 6,000 students analyzed
- 4 themes were analyzed: standout traits, ability, grindstone habits, compassion
- Examined racial and gender differences
- Unique software performed the analysis

Ross DA et al. PLOS ONE 2017; 12(8): e0181659
Descriptive words more frequently used to describe women

<table>
<thead>
<tr>
<th>Words</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bright</td>
<td>58%</td>
<td>52%</td>
</tr>
<tr>
<td>Organized</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td>Caring*</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>Empathy*</td>
<td>43%</td>
<td>33%</td>
</tr>
<tr>
<td>Compassionate*</td>
<td>58%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Ross DA et al. PLOS ONE 2017; 12(8): e0181659
White applicants were frequently described with standout keywords

• Deans more likely to describe white applicants with “standout” keywords such as “exceptional,” “best,” and “outstanding”

• Deans were more likely to describe black applicants as “competent”

• Differences remained after controlling for step 1

Ross DA et al. PLOS ONE 2017; 12(8): e0181659
Student evaluation narrative comments showed differences by gender and URG status

- Secondary analysis of narrative comments from two large medical schools
- Data collected from 2006 to 2016
- Natural language processing
- Reviewed nearly 88,000 evaluations

Implementation of the NAS allowed for analysis of gender differences in EM milestones and feedback.
EM resident milestones differ by gender as PGY3

Daya et al JAMA Intern Med. 2017;177(5):651-657
PGY-3 EM women received less consistent feedback in narrative comments

• Qualitative analysis of evaluations from 1 program
• Found more discordant feedback for women
• Especially regarding autonomy and assertiveness

Mueller et al. Journal of Graduate Medical Education. 2017; 9(5): 577-585
PGY-3 EM women received less consistent feedback in narrative comments

- “[Emma is] progressing well, very thoughtful, reliable, appropriate confidence and autonomy.” (Harrison, attending; emphasis added)

- “I would encourage Emma to be more assertive. During critical resuscitations, she should let those working around her know that she is the team leader.” (Adam, attending; emphasis added)

- “[Emma] argues a lot with the attending, is very confident in her diagnosis, and has a hard time entertaining other possibilities.” (Hillary, attending; emphasis added)
Achieving balance
Tips for Avoiding Gender Bias in Letters

• We are all susceptible
• Include research and publications and competence
• Go beyond minimal assurance
• Highlight accomplishments and not effort
• Use titles and surname consistently
• Avoid referencing personal life
• Pay attention to adjectives
• Raise doubt only if necessary
• Set aside enough time
Online bias calculators

• http://slowe.github.io/genderbias/
Gender-bias calculator

This calculator is derived from the version made by Thomas Forth which was, in turn, inspired by this AWIS blog post on gender biases in recommendation letters. The blog post and the scientific paper it is based on also explain why this gender bias is important. Thanks to Dr. Karen James for the inspiration. Privacy note: no content you test here will leave your browser as all the calculation is done in this page.

Try an example!

Write or paste your recommendation letter here. Words that are more often associated with women will be added to the female list. Words that are more often associated with men will be added to the male list.

Female-associated words  |  Male-associated words

Force recalculate!

Problems or suggestions? Add an issue on Github, suggest more examples, improve the code.
Approved Promotions, gender/race
AY 2013/14

- Professor
- Associate
- Asst Prom
- Asst Init
- Instructor

- URM
- Male
- Female
Overall for AY 2013/14

- Tabled (for new letters) total: 1
- Denied: 4% (10 total)
- Approved: 233
- Total: 233

N = 233

URM
Male
Female
Retrospective review of all LOR 2013

• 34 letters reviewed
• Gender (writer and applicant)—88% of letters from males
• Rank (writer and proposed for applicant)
• Field of applicant (medical, surgical, basic sci, other)
• Location of writer (BMC, external, international)
Analysis of letters

- Run through gender bias calculator
- Adjectives and descriptors listed separately
- Word count
- Indication of how applicant was referred to in letter
  - 12 used first name (5 were for female applicants)
  - Among first name usage, all but one for rank of Instructor or Assistant Professor
All male applicants (71%)
All female applicants

- Rated female
- Rated male
- Rated neutral
Summary

• We all have unconscious bias

• Assessments and letters of recommendation can exhibit bias

• Carefully review your letters and evaluations

• We must address bias evident in letters and evaluations as they are used in assessment, hiring, promotion, recruitment