

FALL 2022 PIE COFFEE HOUR AND TEACHING WORKSHOP SERIES



Hosted by Jennifer Adams
The Program for Instructional Excellence
The Graduate School
Florida State University

October 14, 2022

Gender Bias in Academic Letters of Recommendation



Presented by the Program for Instructional
Excellence at Florida State University

Objectives



Raise awareness about systemic gender bias mechanisms and structures in academia



Define gender bias in relation to academic letters of recommendation



Identify patterns of gender bias in the language of recommendation letters at Florida State University

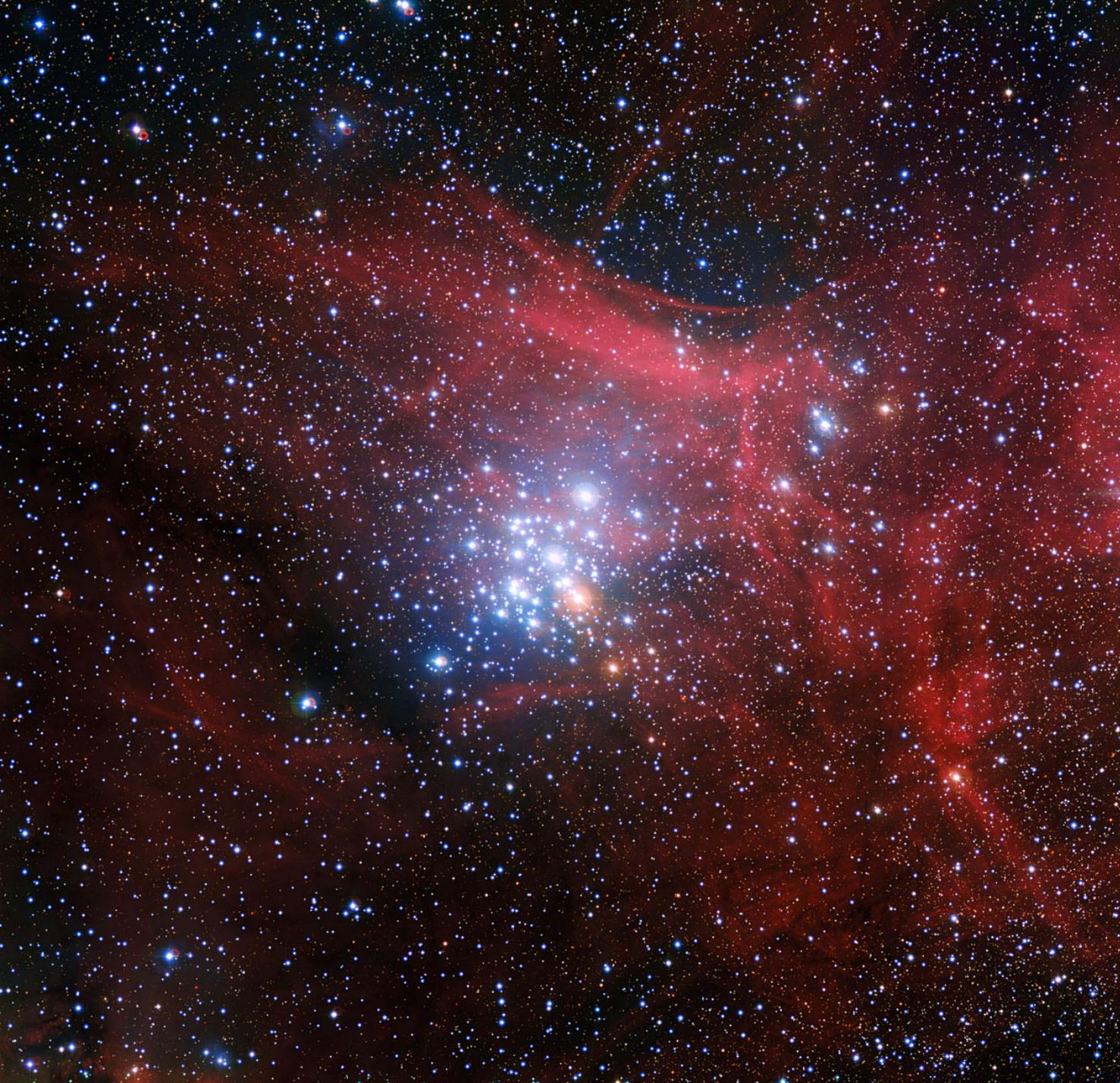


Recommend solutions to mitigate and eliminate gender bias in recommendations and to promote gender equality



Why are female-identifying grad students at FSU **10% more likely** than their male-identifying peers to be described as “intelligent” ...





...but are **22%**
less likely to be
described as
"stellar" or having
"star quality"?

How do we explain why female-identifying grad students at FSU are **17% more likely** to be recognized as **"confident"** than their male-identifying peers...



...but 31% less likely to be described as "reliable"?

reliable

adjective

- 1 *reliable evidence*: **DEPENDABLE**, good, well founded, well grounded, authentic, definitive, attested, valid, genuine, from the horse's mouth, sound, true; *British* copper-bottomed. **ANTONYMS** unreliable
- 2 *a reliable friend*: **TRUSTWORTHY**, dependable, good, true, faithful, devoted, steady, steadfast, **staunch**, unswerving, **unwavering**, constant, **loyal**, **trusty**, **dedicated**, committed, unfailing, infallible, certain, sure; **truthful**, **honest**. **ANTONYMS** unreliable, untrustworthy
- 3 *the new bikes have reliable V-brakes*: **DEPENDABLE**, **SAFE**, fail-safe, tried and tested, well built, well engineered, good. **ANTONYMS** unreliable
- 4 *a reliable firm*: **REPUTABLE**, dependable, trustworthy, **honest**, **responsible**, established, proven, stable, sound, solid, secure, safe, safe as houses. **ANTONYMS** unreliable, dodgy

How might gender bias be at play in these differences?

1. What is gender bias?



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Activity: Thinking about gender bias

Access [Padlet](#) to briefly respond to the following questions:

1. In your own words, how might you define or describe gender bias?
2. Who (or what) might be affected or impacted by gender bias, directly or indirectly?



Gender bias definitions

“Making decisions based on gender that result in favoring one gender over the other which often results in contexts that are favoring men and/or boys over women and/or girls.”



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➤ "Gender bias refers to a person receiving different treatment based on the person's real or perceived gender identity."



➤ “Gender bias” is used synonymously with
“discrimination on the basis of sex.” (Sahm vs. Miami
University)





- "No person in the United States shall, on the basis of sex, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

Source: United States Federal Courts. The 14th Amendment and the Evolution of Title IX

“ON THE BASIS OF SEX,” COLLEGES AND UNIVERSITIES CANNOT...

- (1) Treat one person differently from another in determining whether such person satisfies any requirement or condition for the provision of such aid, benefit, or service;
- (2) Provide different aid, benefits, or services or provide aid, benefits, or services in a different manner;
- (3) Deny any person any such aid, benefit, or service;
- (4) Subject any person to separate or different rules of behavior, sanctions, or other treatment;
- (5) Discriminate against any person in the application of any rules of appearance;
- (8) Otherwise limit any person in the enjoyment of any right, privilege, advantage, or opportunity.



2. Why does gender equality matter?

UN SDG GOAL 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS



Gender inequality in the academy

1. **STRUCTURAL AND INSTITUTIONAL BARRIERS:** Professors act as “gatekeepers” of “conventional merit,” which often excludes women and minorities (Posselt, 2014).
2. **BIASED HIRING PRACTICES:** “Women were described as more communal and less agentic than men... communal characteristics have a negative relationship with hiring decisions in academia that are based on letters of recommendation” (Madera et al, 2009)
3. **UNDERREPRESENTATION:** “Women occupy only 24% of STEM postdoctoral positions at federally funded R&D centres, despite being awarded 41% of STEM doctoral degrees” (Dutt et al, 2016).
4. “Women make up more than half of the labor force in the United States and earn almost 60 percent of advanced degrees, yet they bring home less pay and fill fewer seats in the C-suite than men, particularly in male-dominated professions like finance and technology” (Coffman, 2018).
5. **BURDEN OF DEPARTMENTAL LABOR:** “Women faculty perform significantly more service than men, controlling for rank, race/ethnicity, and field or department” (Guarino & Borden, 2017).



3. Background & methodology

Why gender bias in letters of recommendation?

- “The Outstanding Teaching Assistant Awards (OTAA) are designed to encourage and reward excellence in teaching and to recognize the contributions that graduate students make to the teaching and learning mission of Florida State University.”
- Nominees submit a teaching portfolio
- Faculty submit letters of support
- **2020-2021**: PIE Teaching Associate portfolio readers detected instances of **gender-biased language** in some letters of recommendation



GENDER AND LANGUAGE

- Grammatical gender
- Gender-discriminatory language
- Gender-biased language
- Gender-sensitive language



GRAMMATICAL GENDER

Associated with:

- 15% gap in female labor force participation relative to men
- Lower rates of primary and secondary school completion
- Increase in discriminatory attitudes

Pronom Sujet	Adjectifs Possessifs			Adjetivos posesivos	
	Singulier		Pluriel	Singular	Plural
	+ nom masculin ou voyelle	+ nom féminin			
<i>Je</i>	<i>Mon</i>	<i>Ma</i>	<i>Mes</i>	<i>Mi</i>	<i>Mis</i>
<i>Tu</i>	<i>Ton</i>	<i>Ta</i>	<i>Tes</i>	<i>Tu</i>	<i>Tus</i>
<i>Il</i>	<i>Son</i>	<i>Sa</i>	<i>Ses</i>	<i>Su</i>	<i>Sus</i>
<i>Elle</i>	<i>Son</i>	<i>Sa</i>	<i>Ses</i>	<i>Su</i>	<i>Sus</i>
<i>Nous</i>	<i>Notre</i>	<i>Notre</i>	<i>Nos</i>	<i>Nuestro/a</i>	<i>Nuestros/a</i>
<i>Vous</i>	<i>Votre</i>	<i>Votre</i>	<i>Vos</i>	<i>Vuestro/a</i>	<i>Vuestros/a</i>
<i>Ils</i>	<i>Leur</i>	<i>Leur</i>	<i>Leurs</i>	<i>Su</i>	<i>Sus</i>
<i>Elles</i>	<i>Leur</i>	<i>Leur</i>	<i>Leurs</i>	<i>Su</i>	<i>Sus</i>

GENDER-DISCRIMINATORY LANGUAGE

- Includes words, phrases and/or other linguistic features that foster stereotypes, or demean or ignore women or men.

“Ambassadors and their wives are invited to attend an after-dinner reception.”



GENDER-BIASED LANGUAGE

- Implicitly or explicitly favors one gender over another and is a form of gender-discriminatory language.

“Every day, each citizen must ask himself how he can fulfill his civic duties.”



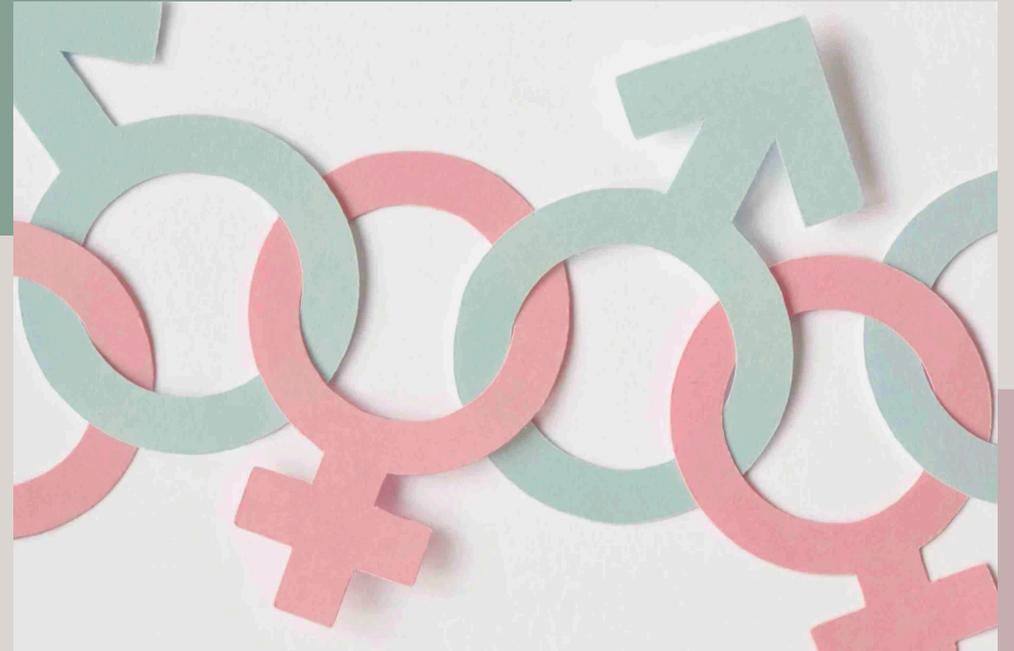
Background

- Optional standardized test scores: More weight and perceived value increasingly placed on letters of recommendation for undergrad and graduate admissions.
- Holistic admissions practices as responses to social movements to dismantle inequality and gender-based discrimination.
- Systemic biases influence the content of LORs by reinforcing traditional gender norms and expectations (Akos & Kretchmar, 2016; Khan et al., 2021; University of Arizona Commission on the Status of Women, 2016).



Purpose

- How might gender bias impact the language of letters of recommendation?
- PIE's UROP researchers sought to evaluate the systemic effects of gender bias on the quality and integrity of LORs across the disciplines at FSU by identifying rhetorical and qualitative disparities between LORs for male and female applicants.



Methodology

- A sample of 54 redacted letters of recommendation were analyzed from the 2020-2021 OTAA application cycle.
- 32 of the LORs were written on behalf of female applicants, and 22 were written on behalf of male applicants.
- Parent categories, based on current gender bias research, were used to organize and score the descriptive and qualitative content of each letter.

- Relational adjectives
- Confidence
- Intelligence
- Reliability
- Star quality



- Voluntary work
- Grindstone adjectives
- Superlatives
- Numeral adjectives

4. Key findings



Gender Bias in Academic Letters of Recommendation



Maria Aleman, Ana Gitli, Jack Nichols, and Jennifer Adams

Program for Instructional Excellence (PIE), Florida State University, Tallahassee, FL

Introduction

In recent years, collegiate institutions have favored the use of holistic admissions review processes at the undergraduate and postgraduate levels. As a result, letters of recommendation (LORs) have become increasingly vital components of students' applications. These institutional changes are reflective of current social movements (such as #MeToo) which aim to dismantle gender-based discrimination across professional spheres. Some studies suggest that systemic biases can influence the content of LORs by reinforcing traditional gender norms and expectations (Akos & Kretchmar, 2016; Khan et al., 2021; University of Arizona Commission on the Status of Women, 2016). This investigation has sought to evaluate the systemic effects of gender bias on the quality and integrity of LORs across academic disciplines at Florida State University. This research focused specifically on LORs received by the Program for Instructional Excellence (PIE) as part of their annual Outstanding Teaching Assistant Awards (OTAA) for graduate students. Ultimately, this investigation hoped to establish more equitable recommendation guidelines by identifying rhetorical and qualitative disparities between LORs for male and female applicants.

Methodology



- In this study, a sample of 54 letters of recommendation (LORs) were analyzed from the 2020-2021 OTAA application cycle.
- 32 of the LORs were written on behalf of female applicants, and 22 were written on behalf of male applicants.

- Parent categories were used to organize and score the descriptive and qualitative content of each letter.
- A review of current gender bias research was conducted to identify the following parent categories:

- Relational adjectives
- Confidence
- Intelligence
- Reliability
- Star quality
- Voluntary work
- Grindstone adjectives
- Superlatives
- Numeral adjectives

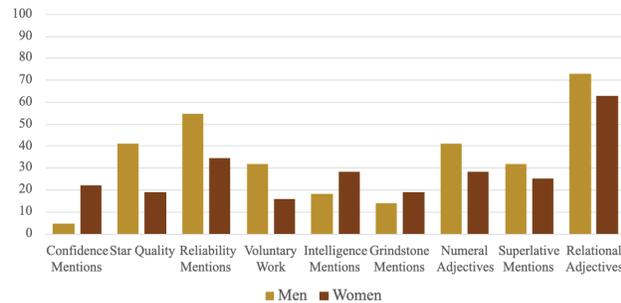
- Microsoft Excel was used to divide the LORs by gender and to calculate the relative frequencies of each parent category.
- Frequency values were then compared in order to identify disparities in LORs written for male and female applicants.

Results

Our preliminary results are summarized in the following frequency tables for male applicants (left) and female applicants (right). The subsequent bar graph compares the relative frequency of certain characteristics in LORs for men (gold) and women (garnet).

Male Characteristics	Percentage (n=22)	Female Characteristics	Percentage (n=32)
PhD student	95%	PhD student	81%
Master's student	5%	Master's student	19%
Formal titles/surnames	14%	Formal titles/surnames	13%
Personality mentioned	45%	Personality mentioned	41%
Research mentioned	18%	Research mentioned	19%
Relational adjectives	73%	Relational adjectives	63%
Confidence	5%	Confidence	22%
Subject mastery	45%	Subject mastery	47%
Pedagogical skill	77%	Pedagogical skill	69%
Intelligence	18%	Intelligence	28%
Reliability	55%	Reliability	34%
Irrelevancies	32%	Irrelevancies	25%
Motivation/Passion	41%	Motivation/Passion	44%
Humor	10%	Humor	6%
Star quality	41%	Star quality	19%
Voluntary work	32%	Voluntary work	16%
Student evaluations	55%	Student evaluations	53%
Doubt raisers	27%	Doubt raisers	28%
Grindstone adjectives	14%	Grindstone adjectives	19%
Superlatives	32%	Superlatives	25%
Numeral adjectives	41%	Numeral adjectives	28%

Characteristic Differences



(Additional frequency tables, data sets, and analyses)

Discussion and Conclusion

Preliminary research found qualitative differences between LORs for male and female candidates. Male candidates were 21% more likely to be described as "reliable" than were female candidates. Letters written on behalf of male candidates were also 7% more likely to contain "superlative" adjectives and acknowledgements. Such descriptions amplify male applicants' professional abilities, thus potentially placing male students in positions of greater respect and authority than females.

Despite these biases, research also uncovered a greater number of male applicants described using traditionally "feminine" terminology: 73% of male applicants were described as "relational" or "caring" by their recommenders, compared to 63% of female applicants. These findings indicate that certain terms have started to lose their historically gendered connotations.

Female candidates were four times more likely than males to be described as "confident." These disparities emblemize 'confidence culture,' which encourages women to be self-responsible individuals who must construct their own confidence and ambition in a fundamentally patriarchal society (Gil & Orgad, 2017). "Confidence" has become a mitigating characteristic for female professionals who hope to enter traditionally sexist and male-dominated sectors. Our research suggests that recommenders might use confident descriptors in LORs as corrective measures, i.e., to allay the effects of systemic misogyny on female applicants. Given the lack of confident descriptors applied to male recommendees, our research suggests that "confidence" may still be perceived as an intrinsically masculine characteristic.

Ultimately, our research findings could be used to create a standardized educational resource (such as an infographic or training workshop) that faculty members can use to prevent gender bias in their LORs. Further research is still necessary to make LORs more equitable for students of marginalized identities and backgrounds. Given the persistence of intersectional oppression, future studies of LORs need to investigate the effects of other identity-based factors, such as race, ethnicity, class, and sexual orientation. Future researchers should consider surveying recommenders and applicants to distinguish between instances of "implicit" and "explicit" bias. We recommend researchers investigate larger sample sizes of LORs to increase the diversity of data sets and accuracy of their analyses.

References

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Gill, R., & Orgad, S. (2017). Confidence culture and the remaking of feminism. *New Formations*, 91(91), 16-34. <https://doi.org/10.3898/newf91.01.2017>

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University of Arizona Commission on the Status of Women. (2016). Avoiding gender bias in reference writing. University of Arizona. https://csw.arizona.edu/sites/default/files/avoiding_gender_bias_in_letter_of_reference_writing.pdf

Spring 2022 UROP Research Symposium Poster

Research team: Maria Aleman, Ana Gitli, and Jack Nichols

Additional frequency tables, data sets, and visualizations:



Results

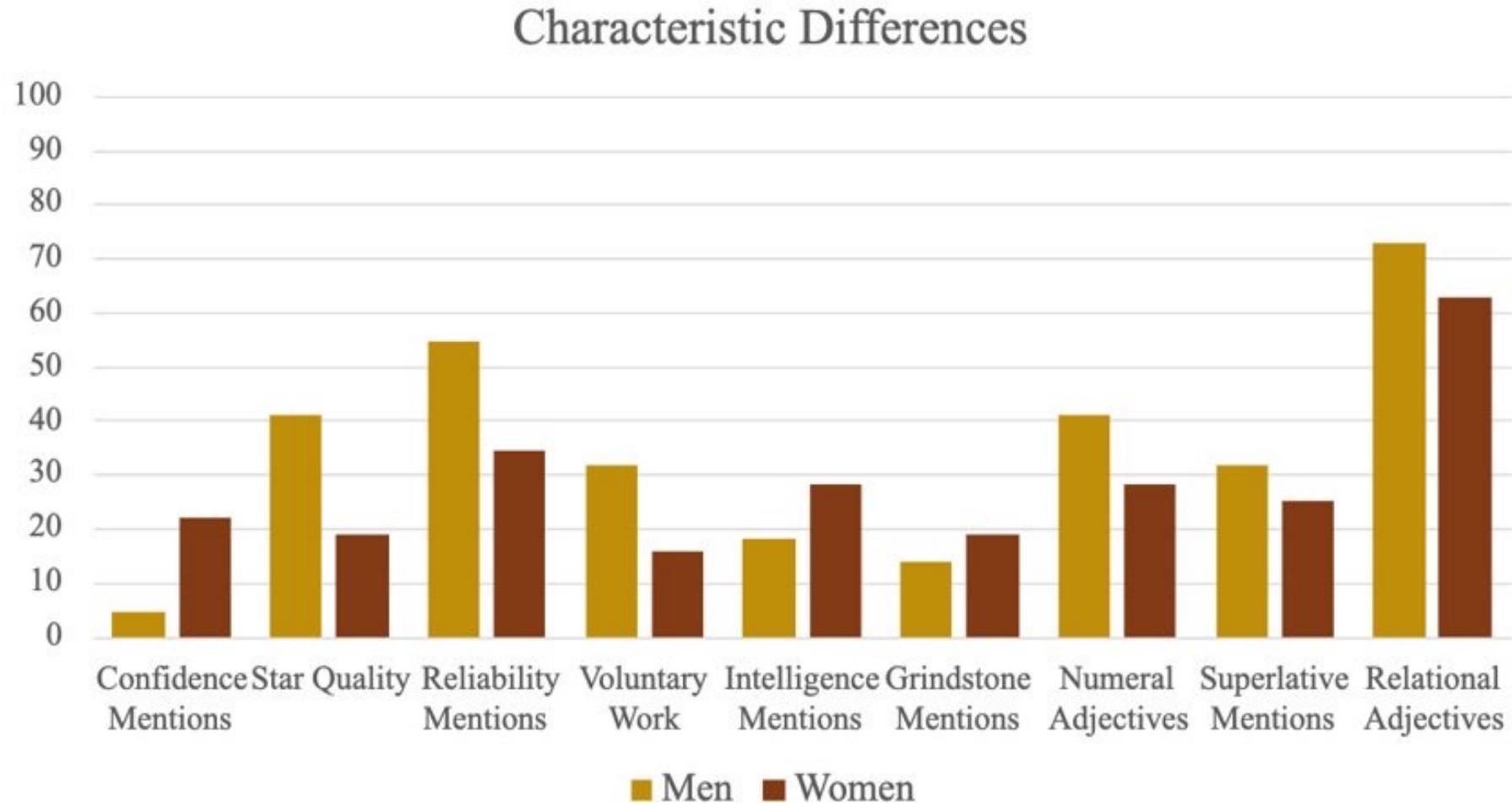
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Intelligence	18%
Reliability	55%
Irrelevancies	32%
Motivation/Passion	41%
Humor	10%
Star quality	41%
Voluntary work	32%
Student evaluations	55%
Doubt raisers	27%
Grindstone adjectives	14%
Superlatives	32%
Numeral adjectives	41%

Female Characteristics	Percentage (n=32)
PhD student	81%
Master's student	19%
Formal titles/surnames	13%
Personality mentioned	41%
Research mentioned	19%
Relational adjectives	63%
Confidence	22%
Subject mastery	47%
Pedagogical skill	69%
Intelligence	28%
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Gender and characteristic differences



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ACTIVITY: DATA ANALYSIS

Take a few minutes to look at the data. What do you notice? What do you find surprising or curious? When you're ready, post your observation to the ["Observations: Gender Bias Results" Padlet](#).

Here are a few more questions to help you get started:

- What connections or patterns can you see emerging?
- What aligns with—or runs counter to—your expectations?
- What questions does the data provoke?
- What would you like to learn more about?
- Which results seem contradictory or paradoxical?



Discussion: Gender & Relational Adjectives

- Male students were 21% more likely to be described as "reliable" than were female students.
- Letters written on behalf of male students were 7% more likely to contain "superlative" adjectives and acknowledgements.
- Such descriptions work to amplify male students' professional ability traits, thus potentially placing male students in positions of greater respect and authority than female students.

- 73% of male students were described as "relational" or "caring" by their recommenders, compared to 63% of female students.
- These findings might indicate that certain terms have started to *lose* their historically-gendered connotations.



Discussion: Gender & Confidence

- Female students were four times more likely than males to be described as "confident."
- These gender disparities in confidence could emblemize 'confidence culture'.
- **Confidence culture** encourages women to be self-responsible individuals who must construct their own confidence and ambition in a fundamentally patriarchal society (Gil & Orgad, 2017; Gil & Orgad, 2022).
- Dictums to self-construct "confidence," however, belie and distract from systemic, discriminatory social structures that oppress women and minorities.

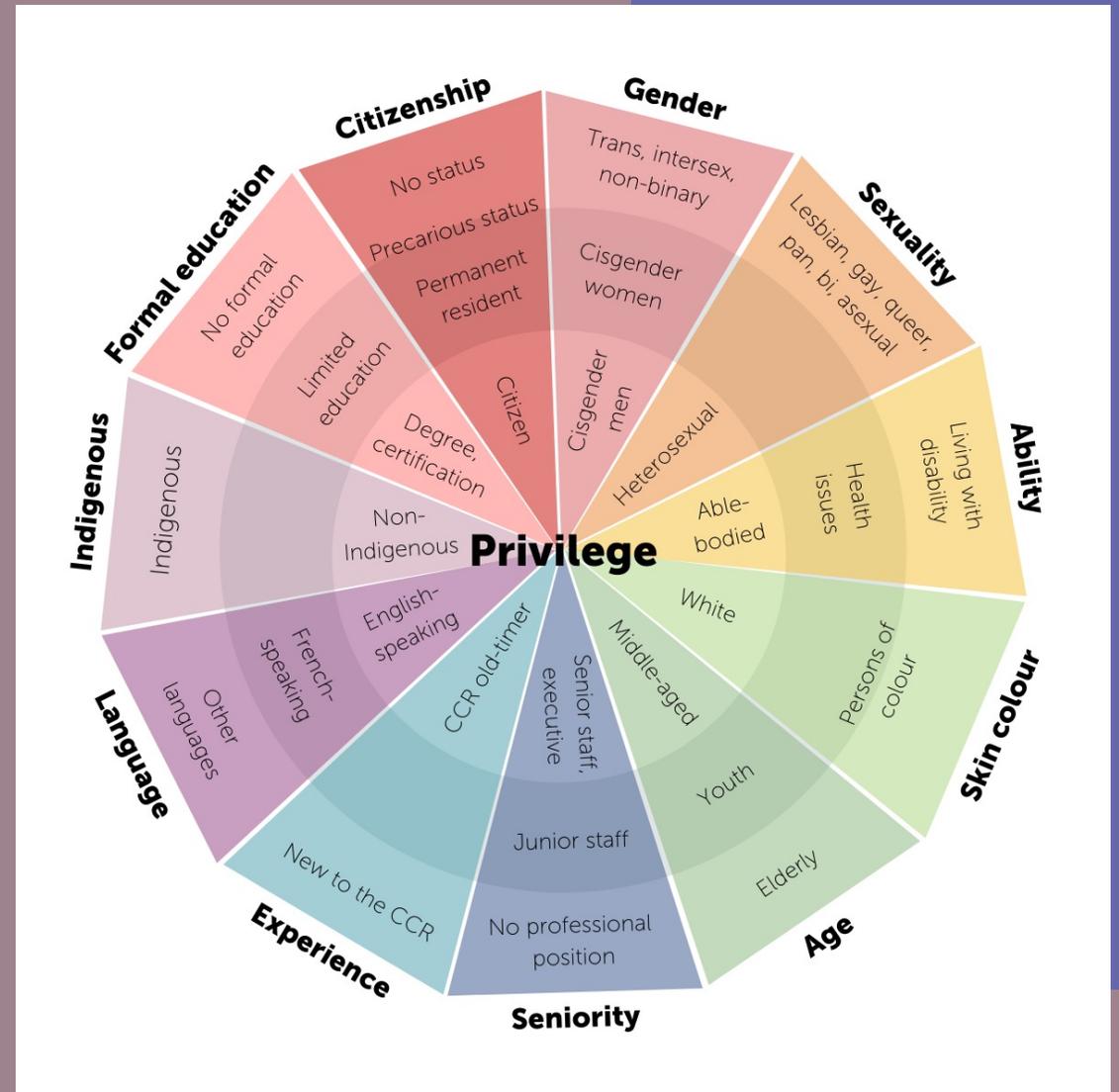
- Recommenders might use confidence-related descriptors in LORs as corrective measures, or to allay the effects of systemic misogyny on female students.
- Given the lack of confidence descriptors applied to male students in the sample, our research suggests that confidence may still be perceived as an intrinsically and stereotypically "masculine" characteristic.



5. Recommendations

Future Research

- Making the recommendation process equitable for students of marginalized identities and backgrounds.
- Investigating the effects of identity-based factors on bias in academic letters of recommendation.
- Understanding and contextualizing how social identities shape experience to understand who may have power and privilege, and who may be oppressed in the recommendation process.



Source: Canadian Council for Refugees. "Power wheel - the closer we are to the center, the more power we have."

Equity is when every student has what they need to succeed.



RECOMMENDATIONS FOR WRITING EQUITABLE LETTERS

AVOID:

- **Doubt raisers or negative language** (“Although Meghan is not yet published as widely as some of her peers...”)
- **Irrelevancies** (“She’s a fantastic tennis player”; “Ask her about her Animal Crossing channel”; “Paola is an excellent amateur baker—I can surely attest to that.”)
- **Grindstone adjectives**: (“Melissa is such a diligent worker, she skips lunch to help my students with problem sets!” “Anna is such a dedicated scholar, she often sleeps in the library!”; “Marisol is *always* the first one in the building, the last one to leave, and spends the most time writing feedback to students.”)
- **Short letters**. Letters for men are, on average, 16% longer than letters for women.

RECOMMENDATIONS FOR WRITING EQUITABLE LETTERS

DO:

- **Keep it professional.** Avoid divulging personal information about the applicant.
- **Use titles and preferred pronouns.** “Dr. Hanjani was an asset to their department.”
- **Mention research and publications.**
- **Use metrics and numeral adjectives** to quantify accomplishments. (“Dr. Hanjani has taught 6 upper-level classes...”)
- **Use gender-sensitive language.** Gender equality is made manifest through language. Gender equality in language is attained when women and men – and those who do not conform to the binary gender system – are addressed through language as persons of equal value, dignity, integrity and respect.
- **Keep writing!** Include detailed anecdotes, describe accomplishments, and relay your strongest endorsements.
- **Be mindful.** Your words have the power to shape someone’s future. As we like to say at PIE, with great power comes great responsibility!

RECOMMENDATIONS FOR SEEKING EQUITABLE LETTERS

To make hiring equitable, we *all* need recommenders who can speak confidently and without bias about our personal characteristics, performance, experience, strengths, capabilities, and professional promise. Here are a few tips for seeking equitable letters of recommendation:

- **Keep and update a “brag sheet”** in addition to your CV and resume. Think of this as your own historical annual review document. Use metrics and numeral adjectives to quantify and list your activities, performance, and accomplishments to date.
- **Ask early.** Give recommenders plenty of time to write their letters.
- **Cultivate relationships and have conversations**—with your professors, peers, and other students.
- **Research.** Does the potential recommender advise a diverse group of students? Have their students been successful on the job market over time?
- **Check your gut.** Do you feel this professor can fairly and enthusiastically apprise a committee of your personal characteristics, performance, experience, strengths, capabilities and professional promise?
- **Follow up.** Thank your recommenders, keep them updated, and ask for their advice.

Thank you for joining us today at PIE! We appreciate you, and celebrate all of the amazing work you do for your students at FSU.



Follow us on Instagram and Twitter to stay updated on our events and services. Have a teaching question? Drop in to our weekly Open House hours—accessible via our TA Community Support Site on Canvas—and connect with one of our experienced and welcoming PIE Teaching Associates. Questions? Reach out to us at pie-info@fsu.edu