

# Equity in Graduate Education Virtual Journal Club

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## The intersectional privilege of white able-bodied heterosexual men in STEM.

By Erin A. Cech

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### Summary

One way that discussions and work toward equity may vary from diversity or inclusion is in attention to power and privilege. When we don't pay attention to these issues, people are more likely to experience a hostile or chilly climate day to day, career trajectories and opportunities are negatively impacted, and inequalities are reproduced. But what really is privilege and how does it work? This paper can help STEM community members become more attuned to how privilege operates and how they can interrupt it in support of more equitable learning and work environments. Using survey data from 25,324 STEM professionals in the STEM Inclusion Study, "this study examines whether, in the aggregate, [white, able-bodied, heterosexual men] WAHM experience intersectional privileges compared with members of other demographic groups along multiple dimensions of STEM workplace treatment" (p. 2).

### Key Concepts Defined

#### Privilege


"**Privilege** is not simply an absence of the disadvantages experienced by marginalized and minoritized persons.; it involves distinct opportunities, benefits, [and] social rewards that accompany this particular demographic status [White, able-bodied, heterosexual men] that cannot be accounted for by differences in human capital, job characteristics, work effort, or other factors" (p. 1-2).

#### Intersectionality

"The analytic tool of **intersectionality** considers how inequalities and privileges operating simultaneously along multiple axes of social status create an intersecting matrix of (dis)advantage... intersectionality is

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Summary written by Julie Posselt



indispensable for understanding how sexism, racism, ableism, and heteronormativity are entwined in ways that reinforce intractable patterns of inequality in STEM” (p. 1).

## Selected Findings


- First, Cech documents differences between [white, able-bodied, heterosexual men] WAHM and 31 other groups on key factors: professional respect, social inclusion, experiencing harassment, and annual salary. See page 9 of the paper for how these measures are operationalized.
  - For example, compared to white, able-bodied, heterosexual men, “members of all other 31 intersectional groups experience significantly less social inclusion in their STEM jobs on average than WAHM experience, net of differences by STEM field, sector, education level, and age. There is wide variation in each group’s average departure from WAHM’s inclusion experiences. The divergence from WAHM’s social inclusion experiences is smallest (but still significantly more negative) for heterosexual Asian men without disabilities, and largest for LGBTQ Black women with disabilities” (p. 3).
- Then, the author documents that the differences described above cannot be attributed to things that a meritocratic system might use to explain them: family responsibilities, work effort and attitudes, job and background characteristics, or human capital.
  - See Table 1 copied below for specific explanatory factors in each of these categories, and see Figure 7 copied below for the portions of the differences in inclusion, respect, harassment, and salary that they explain.
  - This analysis suggests that holding multiple, privileged statuses/ identities operates like **premiums**: “unearned benefits that accompany WAHM status that do not accrue to other groups of STEM professionals when they have identical traits like human capital, job characteristics, and work effort” (p. 6).<sup>1</sup>

## Discussion Questions

1. The author closes the paper with the following: “Equitable representation alone will not solve these differentials. Organizational and institutional efforts aimed at shoring up inequities and promoting more diverse representation will have limited success without addressing the cultural and structural systems of privilege in STEM” (p. 9).
  - How far do you think we can go in “addressing cultural and structural systems of privilege in STEM” by redressing misperceptions among faculty about processes and practices that provide “premiums” to white, able-bodied, heterosexual men in STEM?

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<sup>1</sup> “The present study uses data from a large national-level survey of 25,324 STEM professionals employed full time in the United States, collected as part of the STEM Inclusion Study [SIS; principal investigators (PIs): E.A.C. and T. Waidzunas]. The SIS dataset is composed of representative samples of the members of 21 STEM professional societies, including 8 national flagship societies in the physical, natural, and life sciences and mathematics; 6 interdisciplinary STEM societies; 5 national flagship disciplinary societies in engineering; and 2 STEM teaching-focused societies. The survey encompasses detailed demo-graphic measures, multiple dimensions of work experiences and rewards, and a robust set of job characteristics. Questions include previously validated items as well as novel measures that were pretested and validated for this survey. See Methods and Materials for details.” (p. 2)

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- How might offering equity-minded alternatives change graduate education processes or practices that we have become accustomed to?
  - What are the limits of this approach?
2. Respect, inclusion, and salary are resources. Leaders and members help determine their distribution. Think of a sphere of influence you have, whether a classroom, research group/lab, or other organization in which you have at least a little influence. Now choose either respect, inclusion, or salary.
- What is one thing you could do to ensure a more fair distribution of this resource (e.g., to erase the possibilities that experiencing respect in your research group is related to your combination of social identities)?
  - How would the formal or informal rules of your organization need to change? What uncomfortable things would you have to start talking about with your colleagues to enact change?
3. What is going on in what Cech calls a “premium” is effectively that people with privileges get more for positive behavior and experience weaker or no penalties for negative behavior. What might a person do in the moment to interrupt tendencies like we see in the following examples?
- White men are more likely to be affirmed for their contributions in discussions than women of color who say the same thing.
  - White men who assert themselves are perceived as strong whereas women of color who assert themselves in similar ways are perceived as bossy.
  - Black students are likely to be penalized for minor disciplinary issues that teachers dismiss for white students.

## Implications for Practice

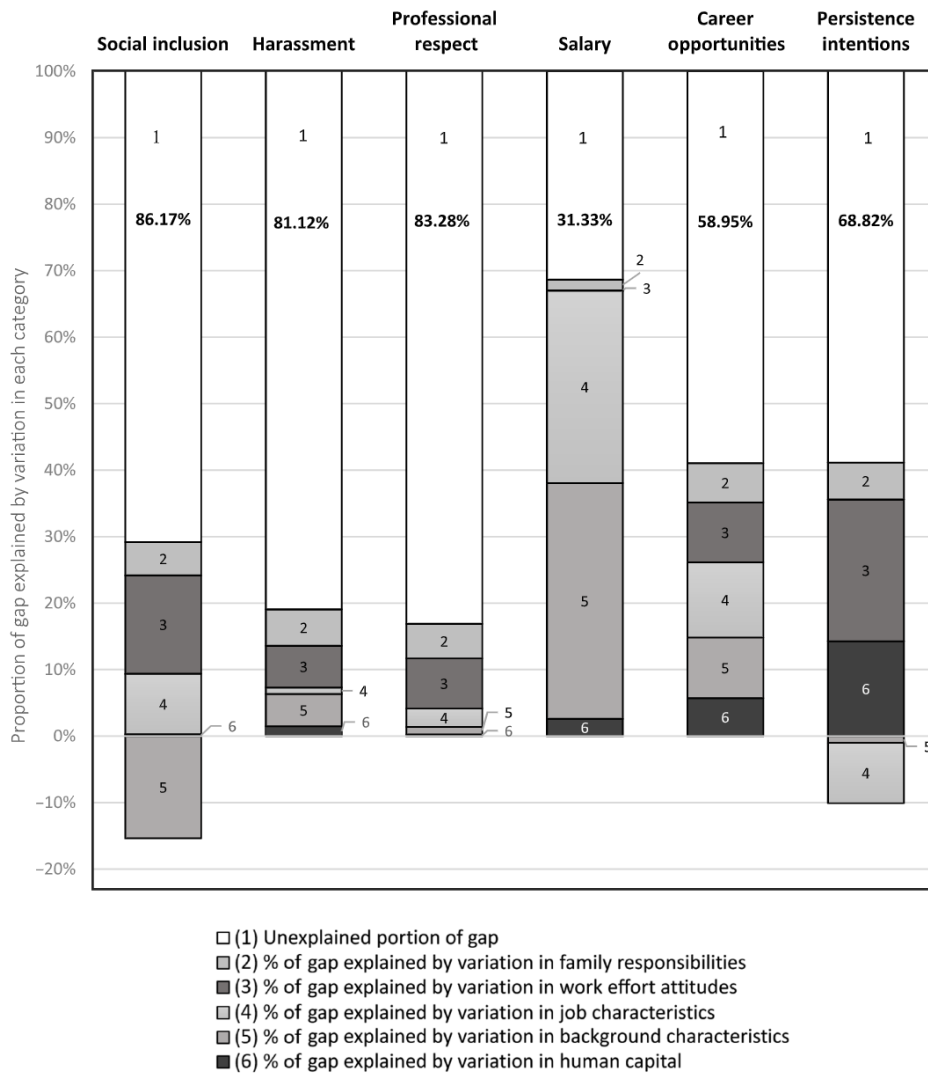
As we work to advance equity in graduate education, we must pay attention to the “premiums” or unearned benefits that routine processes and practices (e.g. admissions, mentoring, hiring) provide to individuals that have privileged statuses/identities. Additionally, the findings in this study challenge us to explore how individuals' multiple identities interact and shape how individuals from minoritized groups are treated, and experience STEM academic learning and work environments. Below we have provided some reflection questions that are designed to encourage courageous conversations about STEM learning and working environments.

- Who does this process/practice serve (historically and presently)?
- Whose experience/needs/social identities does this process/practice center?
- Who is allowed to show up as their authentic self in this space/relationship?
  - How is this communicated to students, faculty, or staff?
  - How are we assessing whether our working learning environment is inclusive for individuals from marginalized groups?
- How might I transform (change) this process/practice to advance racial/gender equity in doctoral education?

## Supplemental Resources

**Table 1. Explanatory predictors by category included in Blinder-Oaxaca decomposition models.** See Materials and Methods section for measurement details on each item.

<b>Category</b>	<b>Explanatory factors</b>
Human capital	STEM field (life sciences, physical sciences, mathematics, computer science, engineering, other)
	Highest degree
	Tenure in employing organization
Background characteristics	Age
	Whether born in the United States
	Parents' highest level of education
Job characteristics	Employment sector (industry, university or college, government, nonprofit, primary or secondary education, and other)
	Employer size
	Extent that respondent's job is related to their highest degree
	Primary job responsibility—core technical versus noncore technical
	Supervisory responsibilities
	Whether they primarily work in teams
	Whether their work is an important part of their identity
Work effort and attitudes	Average hours worked per week
	Willing to put in extra effort beyond what is required of job
	Personally care about fate of organization
	Whether their work is an important part of their identity
Family responsibilities	Has young or school-aged children
	Has primary responsibility for childcare
	Has eldercare responsibilities



**Fig. 7. Unexplained and explained portions of the difference between WAHM and non-WAHM STEM professionals on each work experience measure, produced by Blinder-Oaxaca decomposition.** Shaded segments represent the portion of the difference between WAHM and non-WAHM STEM professionals explained by variation in human capital, background characteristics, job characteristics, work effort and attitudes, and family responsibilities (shaded segments), and the unshaded segments and accompanying percentages represent the portion that remains unexplained by variation in these factors.  $N = 25,324$ . See table S2 for full decomposition models.