

BEHIND THE MYTH OF MERITOCRACY: HOW STEM FIELDS PERPETUATE RACIAL AND GENDER DISPARITIES

Adia Harvey Wingfield

Mary Tileston Hemenway Professor of Arts & Sciences

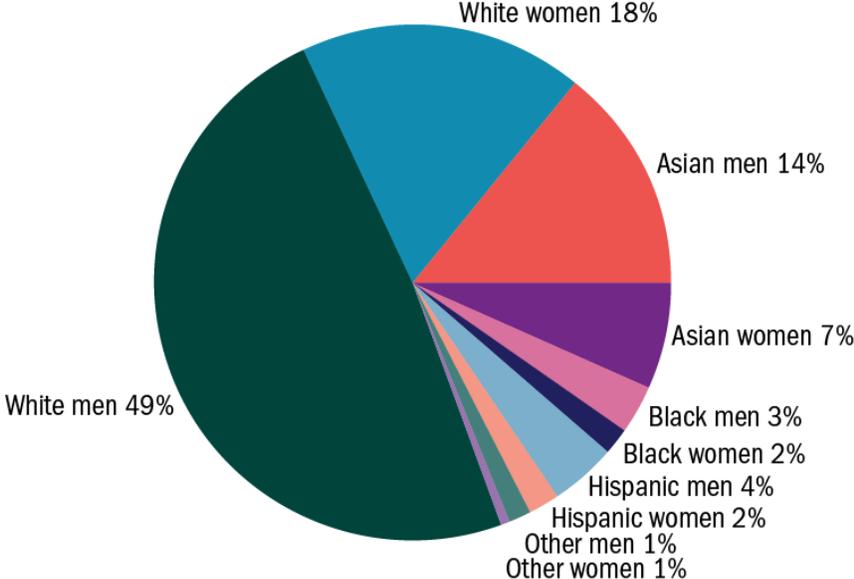
Professor of Sociology

Washington University in St. Louis



RACIAL AND GENDER REPRESENTATION OF STEM WORKERS

Scientists and engineers working in science and engineering occupations: 2015

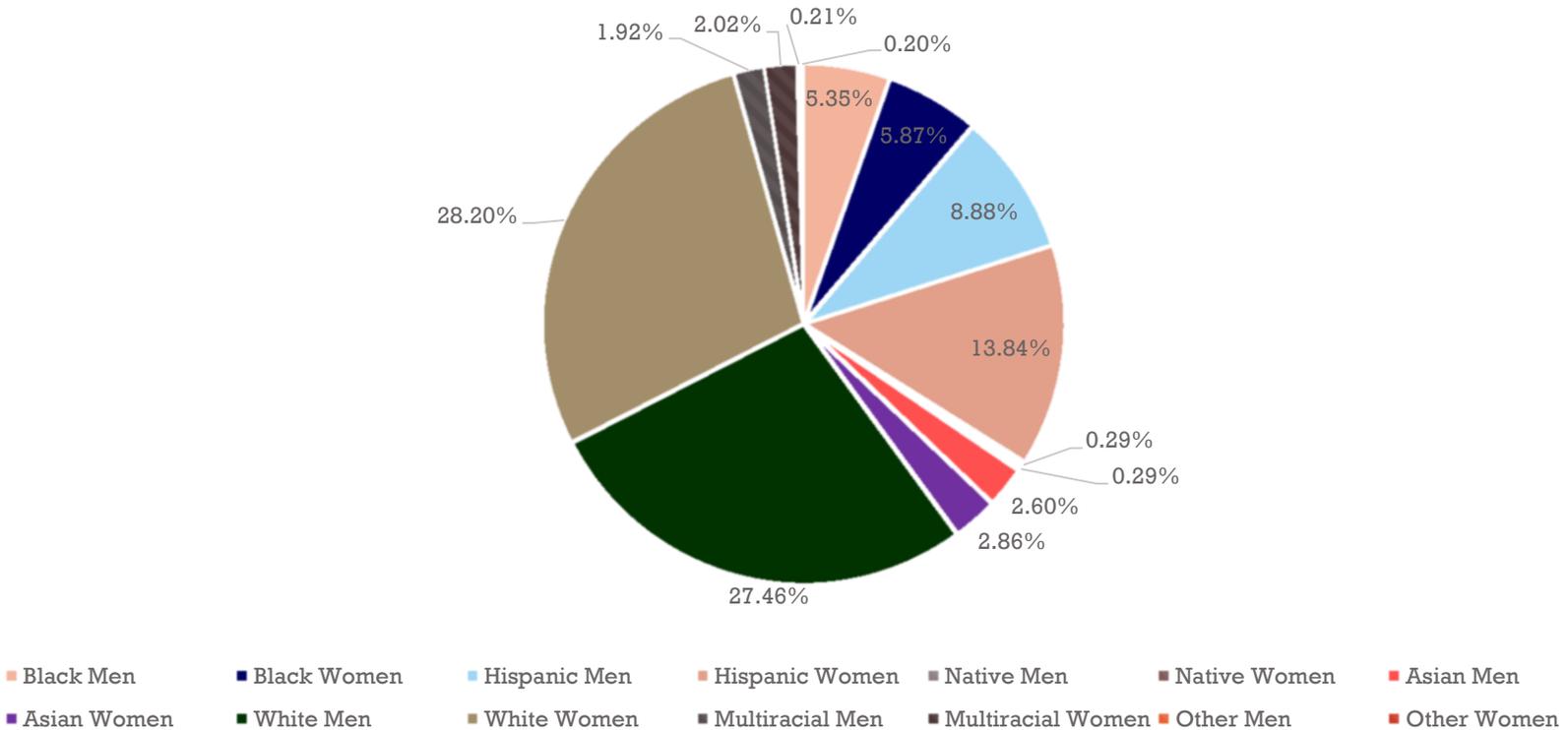


NOTES: Hispanic may be any race. Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and multiple race. *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017*



RACIAL AND GENDER DEMOGRAPHICS IN THE US

US Gender and Race/Ethnicity Populations



US RACIAL DEMOGRAPHICS 2019

- Non-Hispanic White women: 29%
- Non-Hispanic White men: 30%
- Hispanic women: 9%
- Hispanic men: 9%
- Black women: 7%
- Black men: 6%
- Asian American women: 3%
- Asian American men: 3%



RACIAL/GENDER DISPARITIES IN STEM

- Black, Latina/o workers are underrepresented in STEM fields
- Asian Americans and White men are overrepresented
- White women are underrepresented
- What explains these disparities?



UNDERLYING ASSUMPTIONS

- Women will prioritize family over work
- Black, Latino/a workers aren't as qualified
- “We can't find any, and when we do, they don't stay”
- STEM workplaces are meritocracies



REALITIES

- Biases in the hiring process (Chavez 2019)
- “Chilly climate” (Williams 2015)
- Harassment (Cech and Waidzunus 2011)
- Partial tokenism (Wingfield 2013)



BIAS IN THE HIRING PROCESS

- Often involves working with team(s)
- Designed to assess how well candidate fits the group
- Non-US born Asian workers often penalized
- Seen as “too foreign,” “too different” to assimilate
- Results in hiring discrimination
- Not based on skills but on cultural factors



CHILLY CLIMATE

- Women of all races describe feeling excluded in STEM
- Overlooked for important projects
- Must repeatedly prove competence
- Black and Latina women often mistaken for cleaning staff
- Stereotypes of Asian American women help with students
- Do not translate into more opportunities for advancement
- Constant pressure to manage emotions and conceal anger
- Yet women in STEM often reluctant to attribute to gender bias



HARASSMENT

- Sexual and gender based
- LGBTQ students in STEM isolated, face pressure to hide their identities
- Women of all races encounter sexual harassment
- For women of color, this is also shaped by racial stereotypes



PARTIAL TOKENISM

- Tokens are numerical minorities who have a hard time assimilating
- For Black men, token experience is more complicated
- Hypervisible because of race
- Gender allows them more opportunities to forge connections with colleagues
- Still engage in very careful self-presentation to avoid stereotypes
- Often isolated due to low numbers of other black men in their fields
- Can create unwelcoming environment, compromise opportunities for advancement in STEM



SOLUTIONS FROM THE PRIVATE SECTOR

- Targeted recruitment
- In a 5 year period, increased women in management by 10%
- Increased black men managers by 8%, black women by 9%
- Formal mentoring programs
- Increased numbers of managers from underrepresented groups by 9-24% (varies depending on group)



SOLUTIONS FROM THE PRIVATE SECTOR (CTD)

- Training managers about sexual harassment
- Increased Latinas in management by 2%, Black and Asian women by 5%, White women by 6%
- Diversity task forces/managers
- Increased numbers of managers from underrepresented groups by 9-30%



CONCLUSIONS

- Particular dynamics of STEM fields can make it harder for women/workers of color to advance
- Belief in meritocracy can obscure non-meritocratic processes
- Biases in hiring
- Harassment
- Chilly climate
- Partial tokenization
- Solutions involve prioritizing mentorship, diversity in recruitment, and training managers to be allies



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