



# STEREOTYPE THREAT

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# WHAT IS STEREOTYPE THREAT?

DEFINITION (FROM NIH > SOCIOCULTURAL FACTORS)

Stereotype threat is defined as a “socially premised psychological threat that arises when one is in a situation or doing something for which a negative stereotype about one’s group applies”<sup>1</sup>. According to stereotype threat, members of a marginalized group acknowledge that a negative stereotype exists in reference to their group, and they demonstrate apprehension about confirming the negative stereotype by engaging in particular activities.

[1] C. M. Steele and J. Aronson, "Stereotype threat and the intellectual test performance of African Americans", *J. Pers. Soc. Psychol.* **69**, 797 (1995).  
DOI: [10.1037//0022-3514.69.5.797](https://doi.org/10.1037//0022-3514.69.5.797)

# THE COMPLEXITY OF STEREOTYPE THREAT

- Stereotype threat is a complex phenomenon with multiple explanations<sup>1</sup>
  - Undermines achievement due to the anxiety it induces (e.g. increasing blood pressure, reducing working memory capacity)
  - Drives one to defend self-esteem by disengaging from the activity, class of activities, or more broadly the domain in question
- Simple awareness of a (negative) stereotype is sufficient to impact performance

[1] M. A. Beasley and M. J. Fisher, Soc. Psychol. Educ. **15**, 427 (2012).  
DOI: 10.1007/s11218-012-9185-3

# IMPACT OF STEREOTYPE THREAT IN PHYSICS

- Physics is a domain in which **stereotypes are well-known**
- It is also a domain with *low levels of female and minority representation*, which **heightens expectations of stereotypic evaluations** in group work scenarios
- These well-known stereotypes lead to group-based performance anxiety (e.g. “If I do poorly, it will play into the stereotype that already exists, I’ll let my ‘group’ down”)
- The fears/anxiety can inadvertently make the stereotype self-fulfilling

# THE (EVEN MORE) SUBTLE IMPACTS OF STEREOTYPE THREAT

- Outside of the impacts on talent pipelines, stereotype threats influence actions (or non-actions) every single day, in **all individuals**

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- “Brain cycles” are spent evaluating even trivial decisions
  - Clothing choices
  - Do I make the coffee?
  - Should I clean up the lab?
  - Do I need to hide emotional responses?
  - Should I speak up right now?

## SO WHAT CAN WE DO?

- The most complex aspect of stereotype threat is that it's not a result of stereotyping in a given situation – it's a result of the current state of the field
- To reduce stereotypes, need to have representation that counters it
- But the existence of the stereotypes that comes with a lack of representation hinders increasing representation
- Classic chicken and egg problem...



# SO WHAT CAN WE DO?

- Awareness is key – be aware and think about your colleagues viewpoints
- Try to fight stereotypes – links strongly to microaggressions
  - Off-hand or “joking” remarks often reinforce common stereotypes, even unintentionally



## A FEW REFERENCES TO CHECK OUT (TO GET YOU STARTED)

- C. M. STEELE AND J. ARONSON, "STEREOTYPE THREAT AND THE INTELLECTUAL TEST PERFORMANCE OF AFRICAN AMERICANS", J. PERS. SOC. PSYCHOL. **69**, 797 (1995). DOI: [10.1037//0022-3514.69.5.797](https://doi.org/10.1037//0022-3514.69.5.797)
- G. C. MARCHAND AND G. TAASOOBSHIRAZI, "STEREOTYPE THREAT AND WOMEN'S PERFORMANCE IN PHYSICS", INT. J. OF SCIENCE EDUC. **35**, 3050 (2012). [HTTPS://DOI.ORG/10.1080/09500693.2012.683461](https://doi.org/10.1080/09500693.2012.683461)
- S. VEDANTAM, "HOW STEREOTYPES CAN DRIVE WOMEN TO QUIT SCIENCE", NPR (2012). [HTTPS://WWW.NPR.ORG/2012/07/12/156664337/STEREOTYPE-THREAT-WHY-WOMEN-QUIT-SCIENCE-JOBS](https://www.npr.org/2012/07/12/156664337/STEREOTYPE-THREAT-WHY-WOMEN-QUIT-SCIENCE-JOBS)
- N. DASGUPTA, "HOW STEREOTYPES IMPACT WOMEN IN PHYSICS", PHYSICS **9**, 87 (2016). [HTTPS://PHYSICS.APS.ORG/ARTICLES/V9/87](https://physics.aps.org/articles/v9/87)

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Wendy Marie Ingram, PhD is the Founder and Executive Director of [Dragonfly Mental Health](#), a nonprofit organization dedicated to cultivating excellent mental health among academics worldwide. Wendy is dedicated to (1) understanding the underlying biology of mental illness through research, and (2) dismantling the stigma against these illnesses through advocacy and education.



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