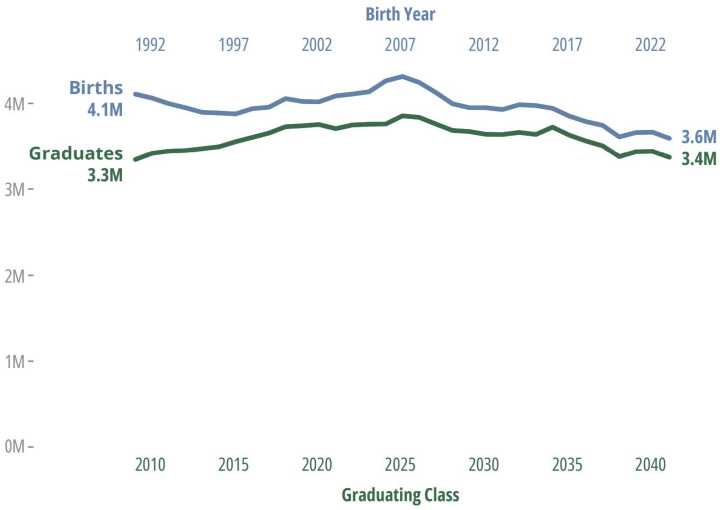
REMARKS OF THE SENATE CHAIR

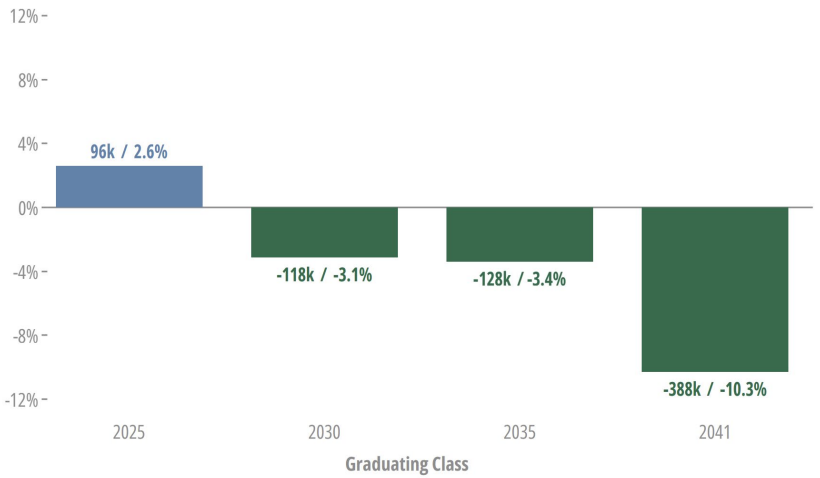
Enrollment Cliff: Declining Population of College-age Students

Figure 4. Births and projected high school graduates 18 years later



Sources: U.S. Centers for Disease Control and Prevention, "Births, provisional data for 2023" and WICHE analysis of state graduation data.

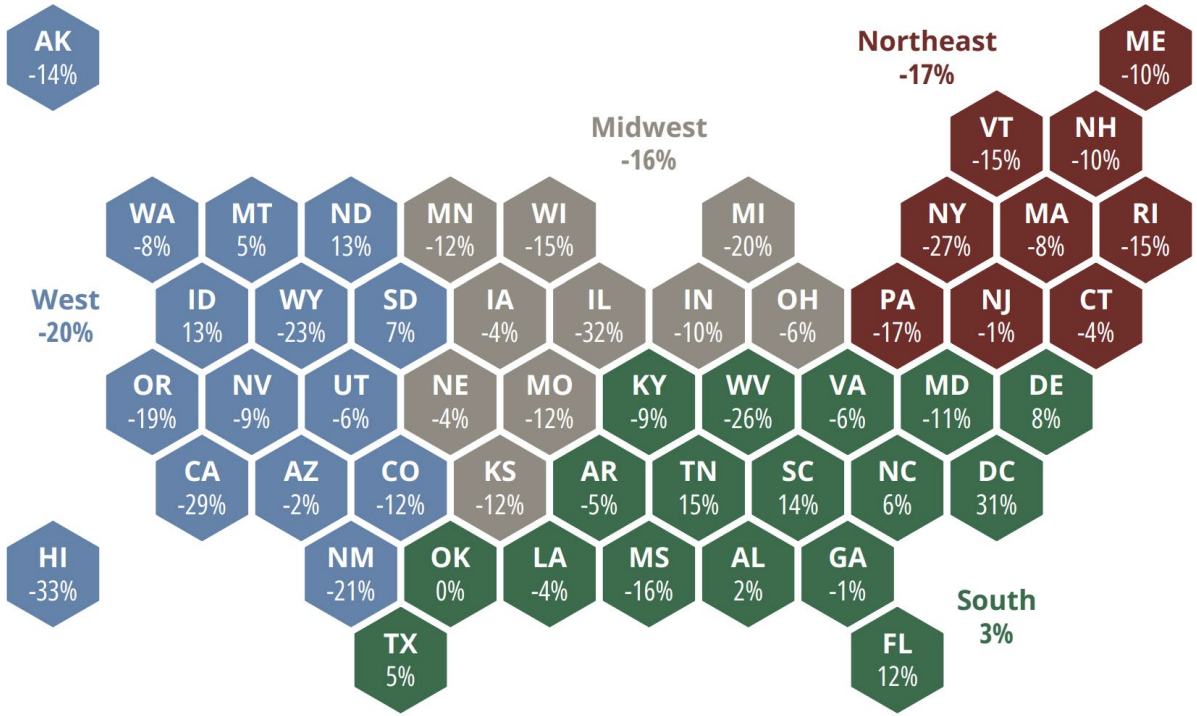
Figure 2. High school graduates, projected change from 2023



Knocking at the College Door, 2024

Declining High School Graduates in U.S.

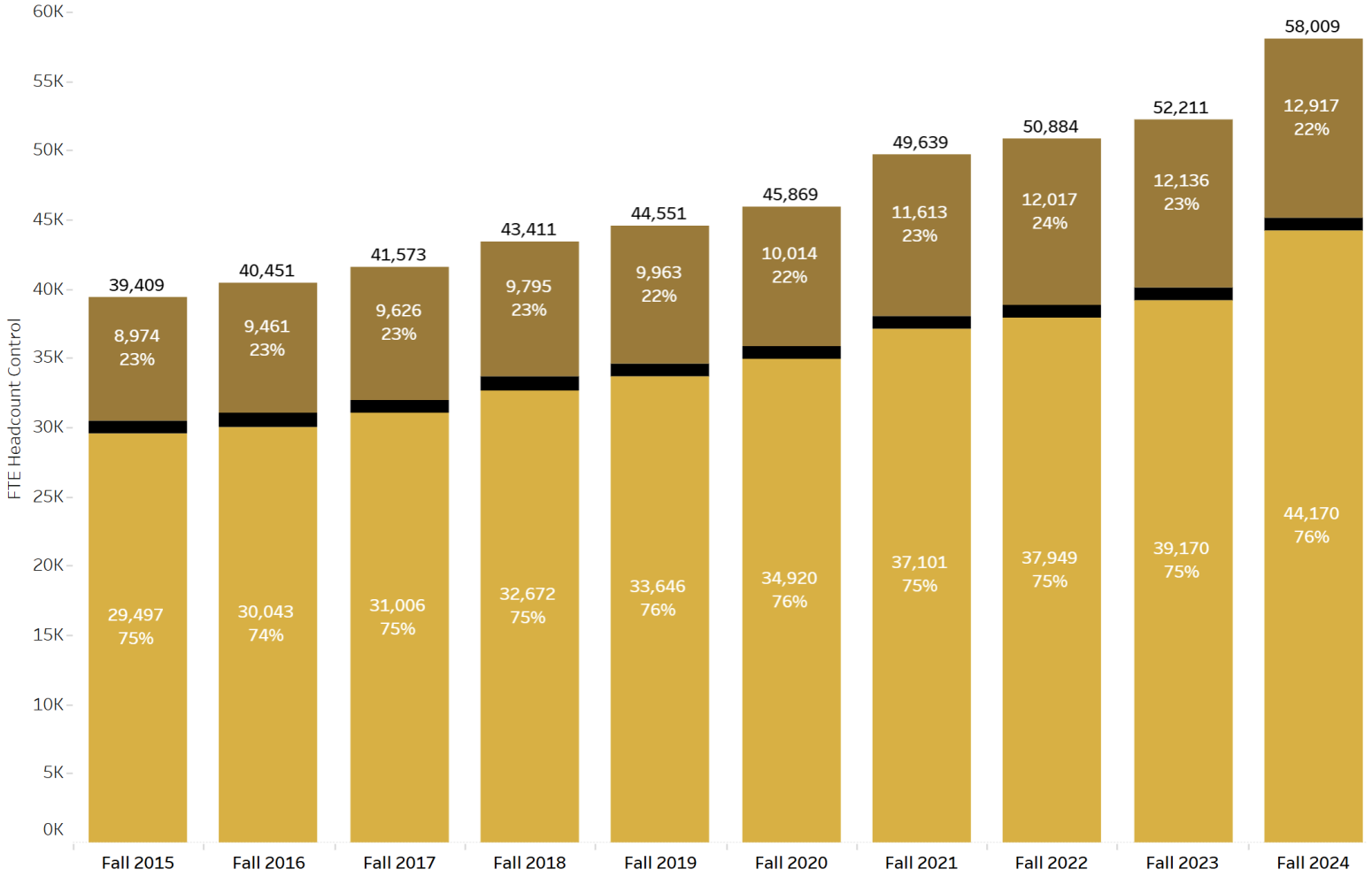
Figure 17. Projected percent change in high school graduates, 2023 to 2041



Notes: Total high school graduates include public and private schools. In these projections, the U.S. includes the 50 states and the District of Columbia. Future work will explore projected trends for the U.S. Territories and Freely Associated States.

Knocking at the College Door, 2024

Purdue Enrollment 2015-2024



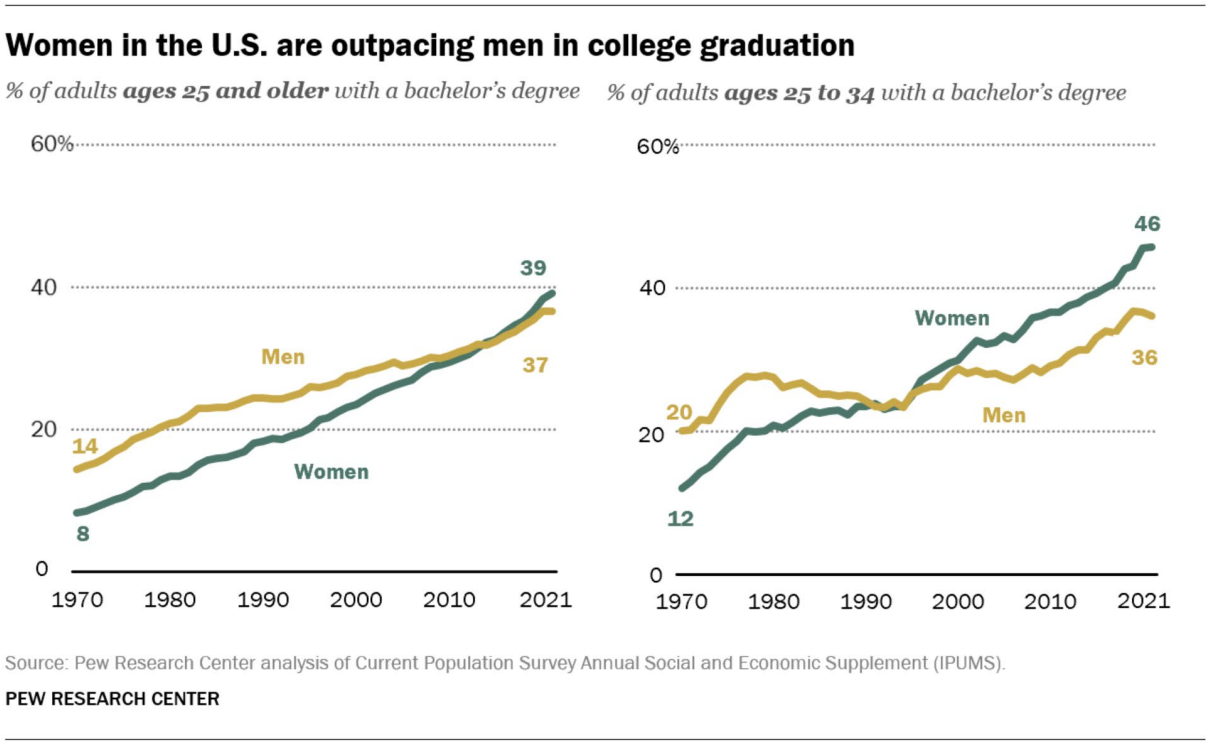
Filters: Color by: Student Level, Measure by: Headcount, Semester: Fall, Campus: West Lafayette, College: All, Department: Login required for detail, Major: Login required for detail, Program: Login required for detail, Program Modality: All, Student Level: All, Gender: All, Race/Ethnicity: All, Underrepresented Minority: All, Residency:All, Federal FT/PT Status: All

Graduate Professional Undergraduate

How does Purdue respond to the enrollment cliff?

- Remove barriers
- Increase support, advising and other programming designed to increase the success and retention of currently enrolled students
- Admit and enroll students who want to go to college and are more likely to finish

Who goes to college? Who graduates?

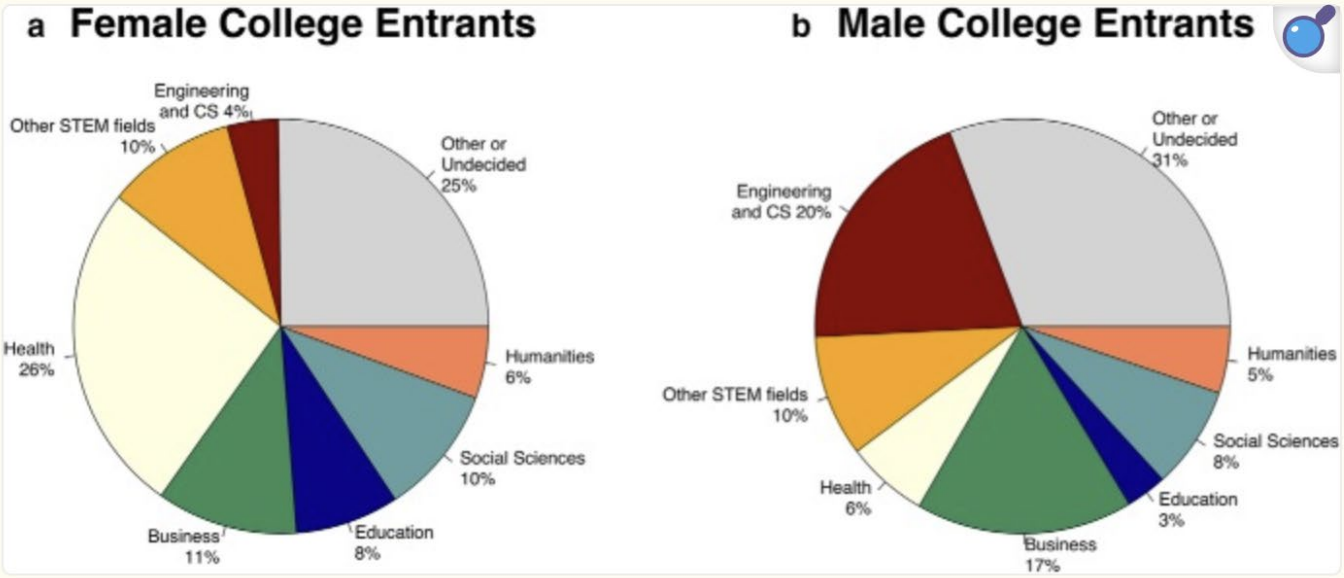


Source: PEW Research Center

Purdue Enrollment: Gender Differences

- 2024: Purdue undergraduates 44, 166
  - Male undergraduates: 25, 904 (58.7%)
  - Female undergraduates: 18, 262 (41.3%)
- Big 10
  - By gender, there are 323,711 female students (50.61%) and 315,875 male students (49.39%) at B1G schools. The female to male ratio is 1 to 0.98.

Gender Differences in College Majors



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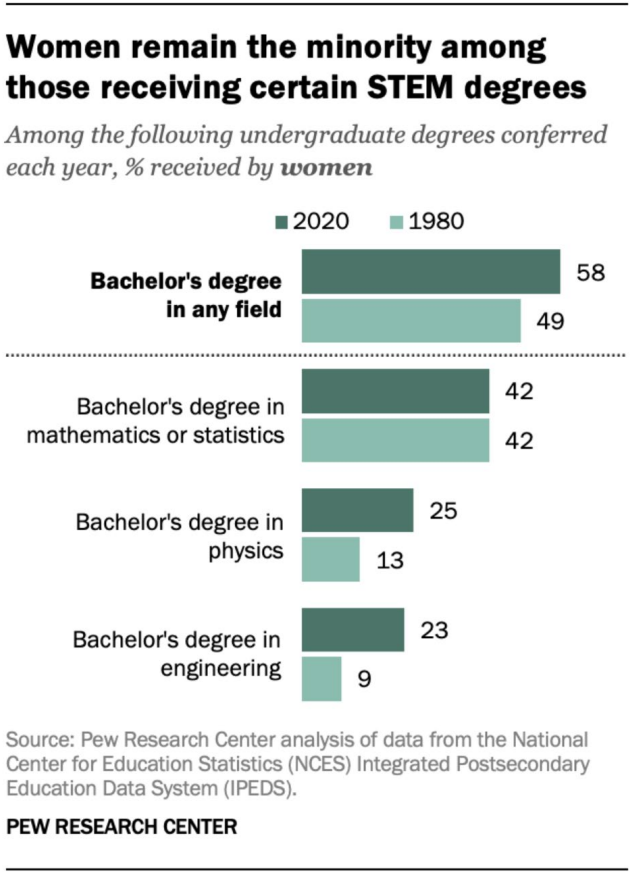
Gender gap in intent to major in STEM and non-STEM fields among U.S. college entrants: ***a***, female; ***b***, male. Data from National Center for Education Statistics High School Longitudinal Study (Radford et al., 2018, their Table 10). For compiled raw data and code, see https://osf.io/n9jca/.

Women in STEM



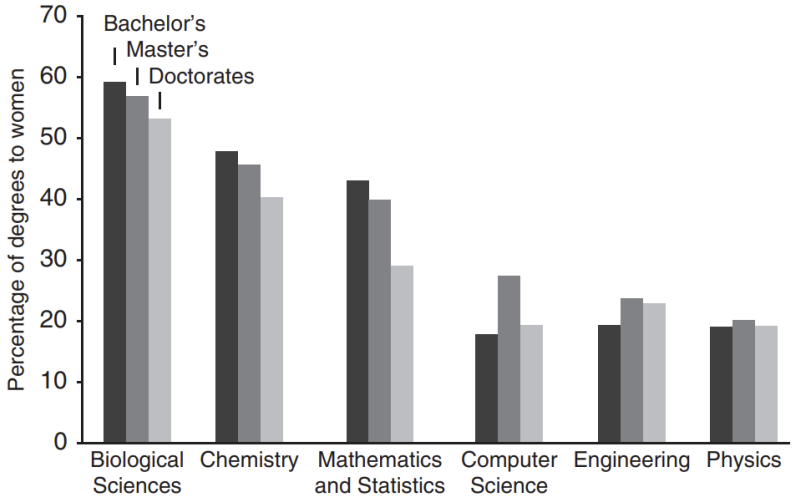


Figure 4. Percentage of bachelor's, master's, and doctoral degrees awarded to women in STEM fields in 2013. SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Integrated Science and Engineering Resources Data System (WebCASPAR), https://webcaspar.nsf.gov.

STEM Stereotypes Begin Early in Life

The Development of Children's Gender Stereotypes About STEM and Verbal Abilities: A Preregistered Meta-Analytic Review of 98 Studies

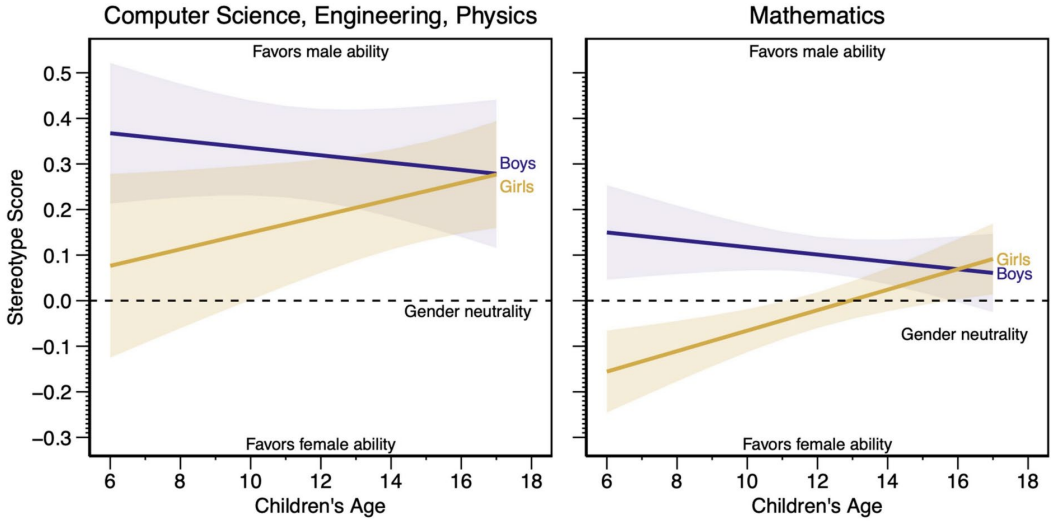
David I. Miller[1], Jillian E. Lauer[2], Courtney Tanenbaum[1], and Lauren Burr[1]
[1] Human Services Division, American Institutes for Research
[2] Faculty of Education, Cambridge University

Public Significance Statement

This quantitative review of nearly 100 studies shows that, by age 6, children already think that boys are better than girls at computer science and engineering. With age, girls increasingly believe in male superiority in these technical fields—a stereotype that could potentially limit girls' future aspirations. In contrast, children hold far more gender-neutral beliefs about math ability. Children also think that girls are much better in verbal domains like reading and writing, which could contribute to boys' underachievement in those domains.

Figure 7

Moderation by Age and Gender, Separately by STEM Domain



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Women in STEM: Barriers

- A masculine culture signals to women a lower sense of belonging than to men

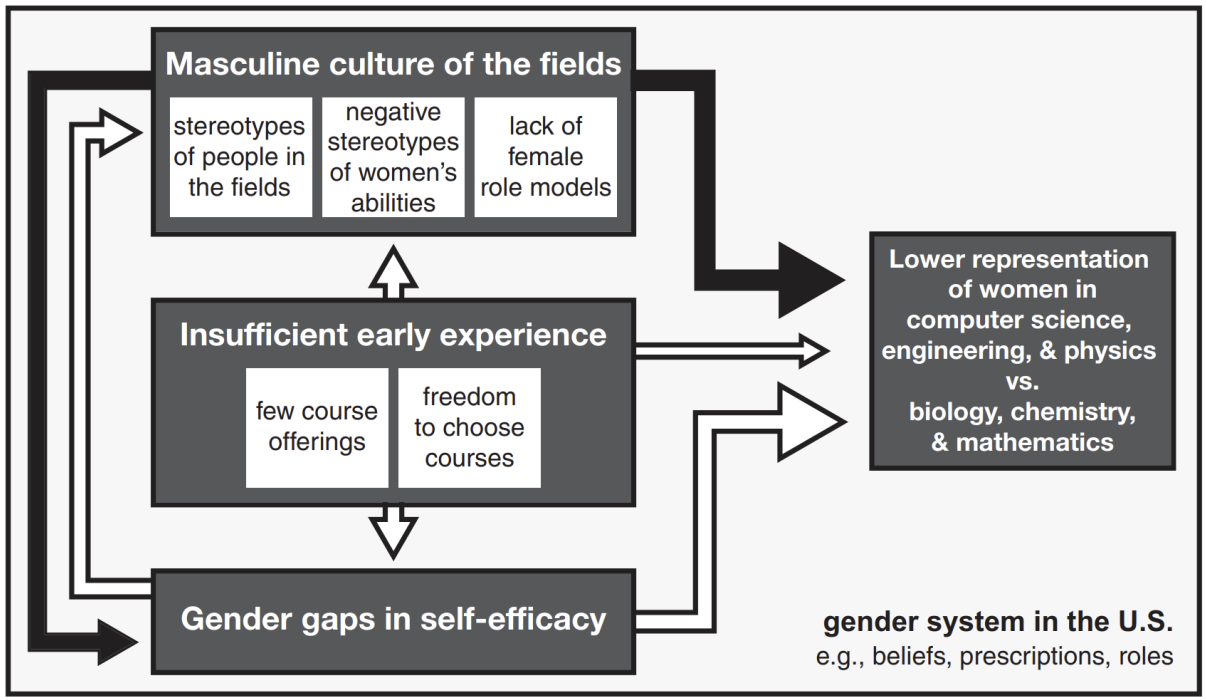

Figure 5. Masculine culture, insufficient early experience, and gender gaps in self-efficacy come together to explain women's lower representation in computer science, engineering, and physics than biology, chemistry, and mathematics. Solid arrows indicate the presence of experimental evidence.

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0033-2909/17/$12.00 http://dx.doi.org/10.1037/bul0000052

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Why Are Some STEM Fields More Gender Balanced Than Others?

Sapna Cheryan and Sianna A. Ziegler
University of Washington

Amanda K. Montoya
The Ohio State University

Lily Jiang
University of Washington

Increasing Women in all STEM Fields: Recommendations for Purdue

- Reduce barriers to majoring in STEM fields
  - More students admitted as “exploratory”
  - Equalize university core curriculum across colleges
  - Bring small community feel to larger departments
- Increase outreach to high schools in Indiana and neighboring states
  - Social media outreach to highlight the work and accomplishments of female faculty and students at Purdue
- Encourage all STEM faculty to be allies, mentors, and role models to female students at all levels of matriculation
  - Make the topic relevant to female-oriented interests
- Increase the number of female faculty and female graduate students who can serve as mentors to the Purdue undergraduates of the future
  - High levels of gender diversity in STEM classrooms or workplaces reduces identity threat concerns of women (Hall et al., 2018; Inzlicht & Ben-Zeev, 2000; Murphy et al., 2007) but only if it is sincere (Kroper et al., 2020)

Summary

- Attending to reducing barriers to entry and graduation for women in STEM disciplines can ensure that Purdue is well positioned to handle the challenges of the enrollment cliff AND to be a leader in the higher education of women in the rest of the 21st century

THANK YOU!

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