**Undergraduate Gender Diversity and the Direction of Scientific Research**
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**Motivation**
Can diversity lead to greater research focus on populations underrepresented in science?

- Research topics of scientists have important welfare implications:
  - Lack of research focus on women’s health linked to greater rates of misdiagnoses for common health conditions
  - Previous studies on the role of diversity in science have focused exclusively on who is conducting research
  - **However, exposure to diversity** may also inspire scientists, regardless of demographic identity, to pursue new topics

This paper: We study how an increase in female representation in the academic environment can lead to more research on gender by both male and female faculty

**Historical Context**
Between 1960-1990, 76 male-only institutions transitioned to coeducation

- Prominent institutions such as Princeton, Yale, Amherst, Williams
  - **Financial decision** due to increase in secular demand for coeducation

**Data**
1. University Data
   - Coeducation College Database (Goldin and Katz 2011): Year when school went coed, “has classes for men and women together”
   - HEGIS/IPEDS: enrollment, degrees awarded, faculty
   - Digitized historical course catalog data with class descriptions

2. Publications Data: Microsoft Academic Graph (MAG)
   - 1M publications in our sample 1950-2005
   - Titles, fields, abstracts, researchers’ name and affiliations
   - Gender identified using name-matching algorithms

**Gender-Related Research**
Keyword-based text classification approach:

- Define paper as gender-related if a gender-related word (e.g., “female”, “woman”) appears at least once in title or abstract
  - Key advantage: transparent, applied broadly to all fields
  - Focus on social sciences, humanities, biology and medicine
  - Robust to alternative words list and ML classification model

**Empirical Strategy: Generalized DiD**

\[
E(y_{it}|X_{it}) = \exp(\sum_{r=1}^{r-1} \beta_i \text{YearRelativeCoed} + \delta_i + \gamma_d + \gamma_{it})
\]

- Restricted to only turn-coed universities
- \(y_{it}\): number of gender-related papers in year \(t\) measured at the school-subfield \(i\)
- \(\beta_i\): school-subfield FE, \(\delta_i\): year FE, \(\gamma_d\): field-by-year FE
- Conditional Poisson model using QMLE

**Results**
Three to six years after turning coed:

- 21pp↑ female student share
  - 18% increase in total students
  - Suggests schools enlarged student body rather than substituting female for male students

- 42%↑ in gender-related publications
  - Concentrated in schools with more female students
  - No effects on total faculty or productivity
  - Suggests a shift in research focus towards gender-related topics

**What Explains Greater Focus on Gender-Related Research?**

1. **Composition Effect**: Changes in who conducts research at the university
   - Increase in share of female assistant professors
   - Increase in researchers with prior interests in gender topics

2. **Treatment Effect**: Direct impacts on scientists’ research focus
   - Exploiting within researchers variation for incumbent researchers
   - 54%↑ gender-related papers, 28%↑ share of gender-related research
   - Notably, 88% of incumbent researchers are male

**How did Coeducation Change Research Interests? Interaction with Diverse Students and Peers**

1. **Classroom interaction**
   - Digitized historical course catalogue
   - Increase in course offerings related to gender

2. **Interaction with students in research settings**
   - Case study in psychology, field that traditionally enrolls undergraduate students as lab participants
   - In psychology, effects driven by experimental research

3. **Interaction with peer researchers**
   - Increase in gender-related research of male incumbent researchers comes partly from collaborations with new female researchers

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