Trends in Segregation of Fields of Study at the Bachelors and Doctoral Level

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What I’ll cover

• Trends in # women (relative to men) getting Bachelor’s and Doctoral degrees
• Trends in segregation of fields of study
• Are women moving into traditionally male fields (e.g. natural science, business) more than previously?
• Are men moving into traditionally female fields more than previously?
Data

- From National Center for Educational Statistics
- # women and # men receiving Bachelor’s and Doctoral Degrees each year 1971-2002
- Classification of fields into 260 detailed categories
  - Some changes in in 1983—doesn’t affect the big fields focused on here
Number of Bachelor's Degrees Granted in the U.S.1971-2002 (Men, Women, Total)
Number of Doctoral Degrees
Granted in the U.S. 1971-2002
(Men, Women, Total)
Index of Dissimilarity Measuring Sex Segregation by Field for Doctoral and Bachelor Degrees Recipients, 1971-2002
Trends in % Female in Selected Large Doctoral Fields 1971-2002

Year

Prop. Female
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

All Fields Combined
Political Science
Trends in % Female in Selected Large Doctoral Fields 1971-2002

Year

Prop. Female


All Fields Combined
Political Science
Chemistry
Economics
Trends in % Female in Selected Large Doctoral Fields 1971-2002

**Fields:**
- Mathematics
- Chemistry
- Economics
- Political Science
- All Fields Combined

**Graph:**
- Y-axis: Proportion Female (0.0 to 0.8)
- X-axis: Year (1971 to 2001)
- Trends indicate increases in female representation across all fields.
Trends in % Female in Selected Large Doctoral Fields 1971-2002

Prop. Female

Year


Mathematics
Chemistry
Economics
Political Science
Theology
All Fields Combined
Trends in % Female in Selected Large Doctoral Fields 1971-2002

Year

Prop. Female
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

Mathematics
Chemistry
Physics
Economics
Political Science
Theology
All Fields Combined
Trends in % Female in Selected Large Doctoral Fields 1971-2002
Trends in % Female in Selected Large Doctoral Fields 1971-2002

- Curriculum/Instruction
- All Fields Combined


Prop. Female: 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8
Trends in % Female in Selected Large Doctoral Fields 1971-2002

Curriculum/Instruction
Clinical Psychology
All Fields Combined

Prop. Female

Year

Trends in % Female in Selected Large Doctoral Fields 1971-2002

Prop. Female

Year


Curriculum/Instruction
Clinical Psychology
Education
All Fields Combined
Trends in % Female in Selected Large Doctoral Fields 1971-2002

[Graph showing trends in percentage of female students in various fields from 1971 to 2002.]

- Curriculum/Instruction
- Clinical Psychology
- Other Education
- Psychology
- English
- All Fields Combined

Year

Prop. Female
Trends in % Female in Selected Large Doctoral Fields 1971-2002
Trends in % Female in Selected Large Doctoral Fields 1971-2002
Trends in % female

• Fields keep about the same rank order

• All increase % female as women enter doctorate education

• Increases look approximately proportionate
Proportion of All Men and All Women Who Received a Doctorate in Electrical Engineering

Number of female male of the field over total number of female male

# Men in Field/ # Men in All Fields
# Female in Field/ # Female in All Fields
Proportion of All Men and All Women Who Received a Doctorate in Physics

Yearly Proportion of Female and Male Doctorates in Physics

- **# Men in Field/ # Men in All Fields**
- **# Female in Field/ # Female in All Fields**
Proportion of All Men and All Women Who Received a Doctorate in Chemistry

Number of female / total number of female
Number of male / total number of male

Year

# Men in Field / # Men in All Fields
# Female in Field / # Female in All Fields
Proportion of All Men and All Women Who Received a Doctorate in Biochemistry
Proportion of All Men and All Women Who Received a Doctorate in Biology
Proportion of All Men and All Women Who Received a Doctorate in Economics

![Graph showing the proportion of men and women who received a doctorate in economics from 1971 to 2001. The x-axis represents the year, and the y-axis represents the proportion of males and females in the field over the total number of males and females. The graph indicates a general increase in the proportion of women in the field over time, with fluctuations from year to year.](image-url)
Proportion of All Men and All Women Who Received a Doctorate in Political Science
Proportion of All Men and All Women Who Received a Doctorate in Sociology

Year


Number of female male of the field over total number of female male

0.035

0.03

0.025

0.02

0.015

0.01

0.005

0

# Men in Field/ # Men in All Fields

# Female in Field/ # Female in All Fields

# Men in Field/ # Men in All Fields

# Female in Field/ # Female in All Fields
Proportion of All Men and All Women Who Received a Doctorate in Psychology

![Proportion of All Men and All Women Who Received a Doctorate in Psychology](image_url)
Proportion of All Men and All Women Who Received a Doctorate in English

Number of female male of the field over total number of female male

Year

# Men in Field/ # Men in All Fields  # Female in Field/ # Female in All Fields
Proportion of All Men and All Women Who Received a Doctorate in Education

Year
- 1971
- 1973
- 1975
- 1977
- 1979
- 1981
- 1983
- 1985
- 1987
- 1989
- 1991
- 1993
- 1995
- 1997
- 1999
- 2001

Proportion of Men
- # Men in Field / # Men in All Fields

Proportion of Women
- # Female in Field / # Female in All Fields
Proportion of All Men and All Women Who Received a Doctorate in Educational Administration
Proportion of All Men and All Women Who Received a Doctorate in Clinical Psychology

Number of female male of the field over total number of female male

Year:


Legend:

- # Men in Field/ # Men in All Fields
- # Female in Field/ # Female in All Fields
Generalizations about Doctorates

- Enormous increase in women getting doctorates relative to men
- All fields increased their % female
- Often attractiveness of a field to men relative to women changes little
- Some evidence (not shown) that feminization deters men from entering fields
• Let’s look at Bachelor’s Degrees
Trends in % Female in Selected Bachelor’s Degree Fields, 1971 to 2002
Proportion of All Men and All Women Who Majored in Electrical Engineering

Proportion Men or Women

# Men in Field / # Men in All Fields
# Women in Field / # Women in All Fields

Year

Proportion of All Men and All Women Who Majored in Chemistry
Proportion of All Men and All Women Who Majored in Physics
Proportion of All Men and All Women Who Majored in Economics
Proportion of All Men and All Women Who Majored in Political Science

Year

Proportion Men or Women

- #Men/TotMen
- #Women/TotWomen
Proportion of All Men and All Women Who Majored in Business
Proportion of All Men and All Women Who Majored in English
Proportion of All Men and All Women Who Majored in Sociology
Proportion of All Men and All Women Who Majored in Elementary Education
Proportion of All Men and All Women Who Majored in Psychology

Year

Proportion Men or Women

#Men/TotMen #Women/TotWomen
Generalizations about Bachelors’ Degrees

• Modest increase in women’s college degrees so now more women than men get college degrees
• Women dramatically increase choices of “male” fields of business, marketing, accounting, especially before 1985
• Men decrease choices of “male” sciences (physics, chemistry) while women hold steady
• No nontrivial movement of men into “female” fields, but women moved out (elementary ed, English, Sociology)
• Slowdown in desegregation in 1990s
The Index of Dissimilarity Measuring Degree of Sex Segregation by Field for Doctoral and Bachelor Degrees Recipients: 1971-2002
"That's all folks!"
• Extra slides not to use in presentation, but for future use or to answer questions
Proportion of All Men and All Women Who Received a Doctorate in Curriculum Instruction
Proportion of All Men and All Women Who Received a Doctorate in Theology

Number of female male of the field over total number of female male


Legend:
- # Men in Field/ # Men in All Fields
- # Female in Field/ # Female in All Fields
Proportion of All Men and All Women Who Received a Doctorate in History

Number of female male of the field over total number of female male

# Men in Field/ # Men in All Fields  # Female in Field/ # Female in All Fields

year