



ANITA BORG INSTITUTE
FOR WOMEN AND TECHNOLOGY

Women and Technology
Reality, Perceived Reality and Changing Reality

Cindy Goral
December 4-5, 2007
For TechLeaders: Realizing Your Vision
at Google

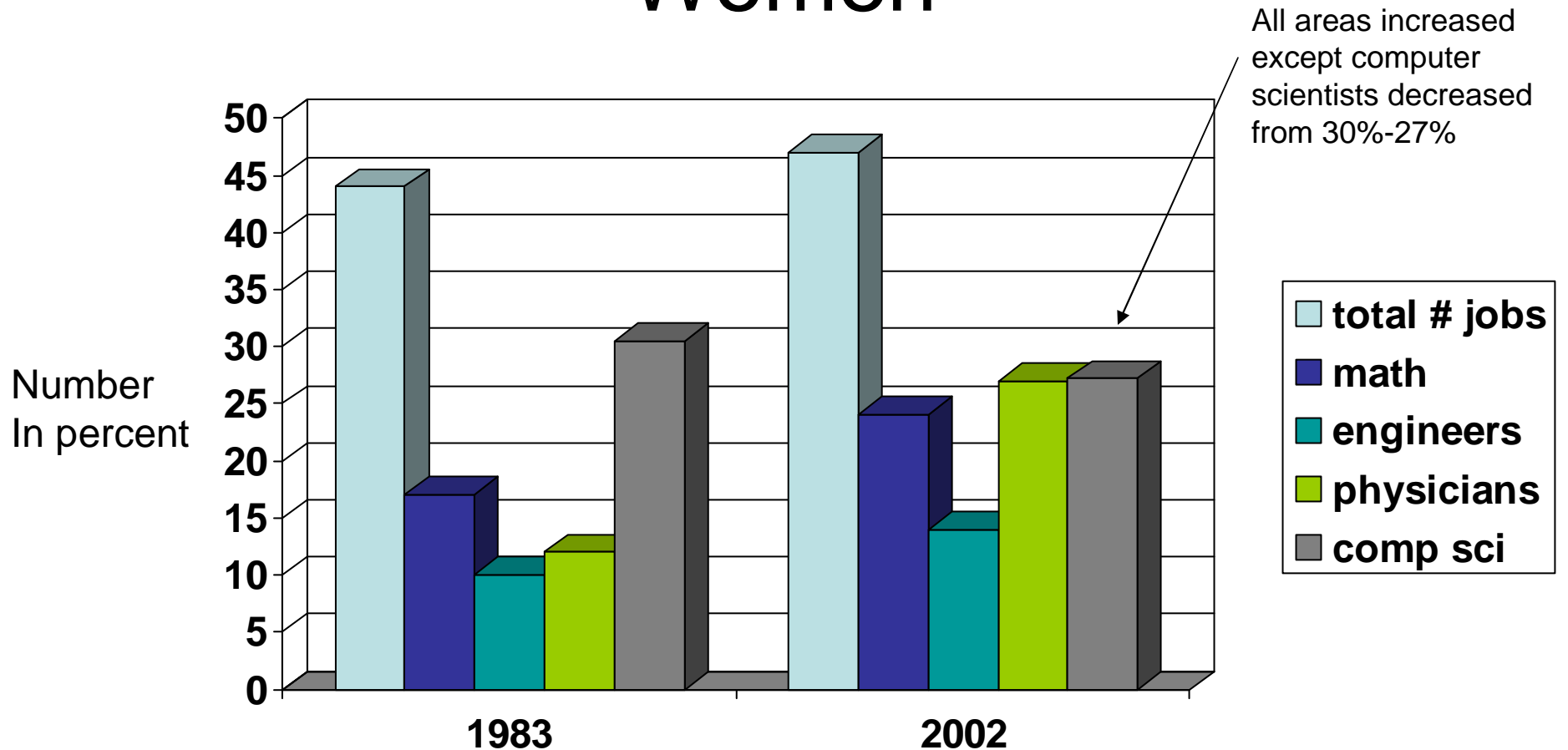


Reality or not?

- The percentage of women in technology has increased in the last 20 years
- There are no jobs in IT/computer science
- There aren't as many women at the top in technology as non-technology fields
- The barriers to advancement are different for men and women
- There's nothing we can do about it



Percentage of Jobs Held by Women

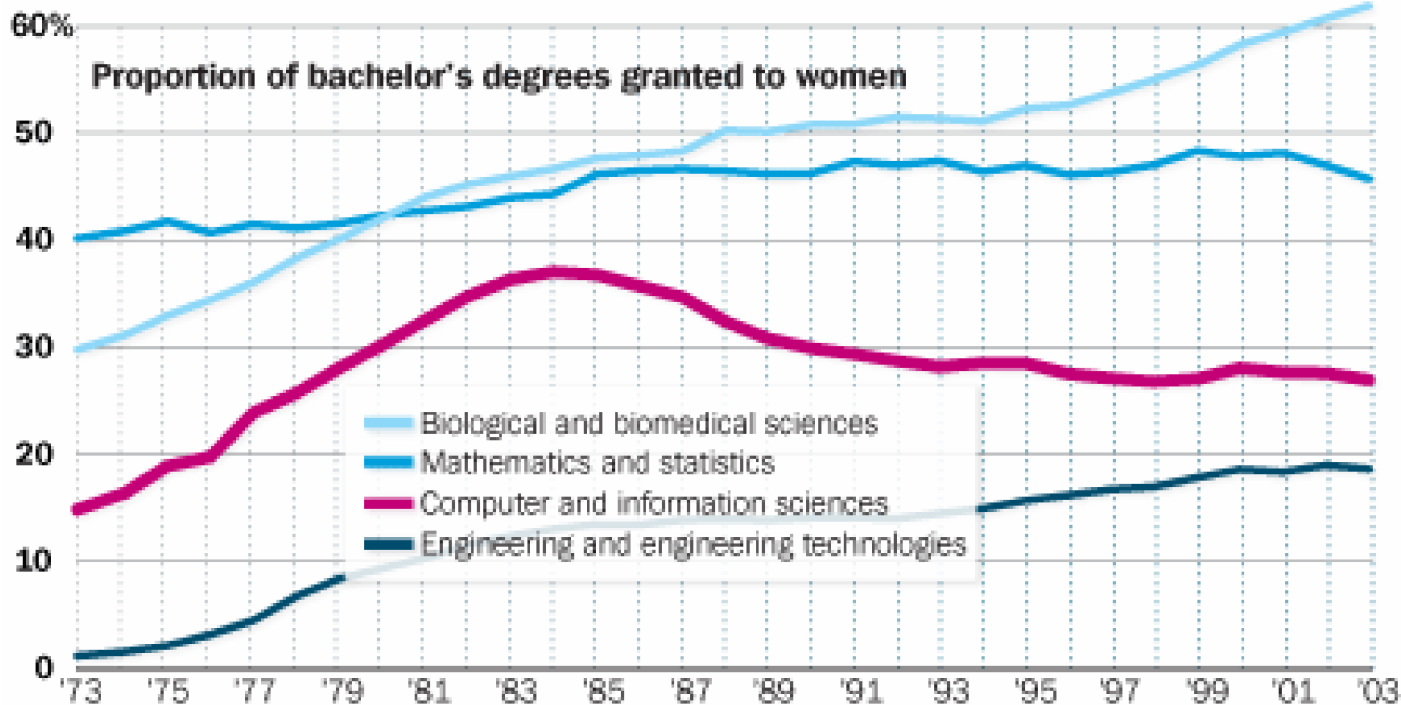


Source: Commission on Professional in Science and Technology

Source: AMA's "Physician Characteristics and Distribution in US." and Kaiser Family Foundation State Health Facts Online



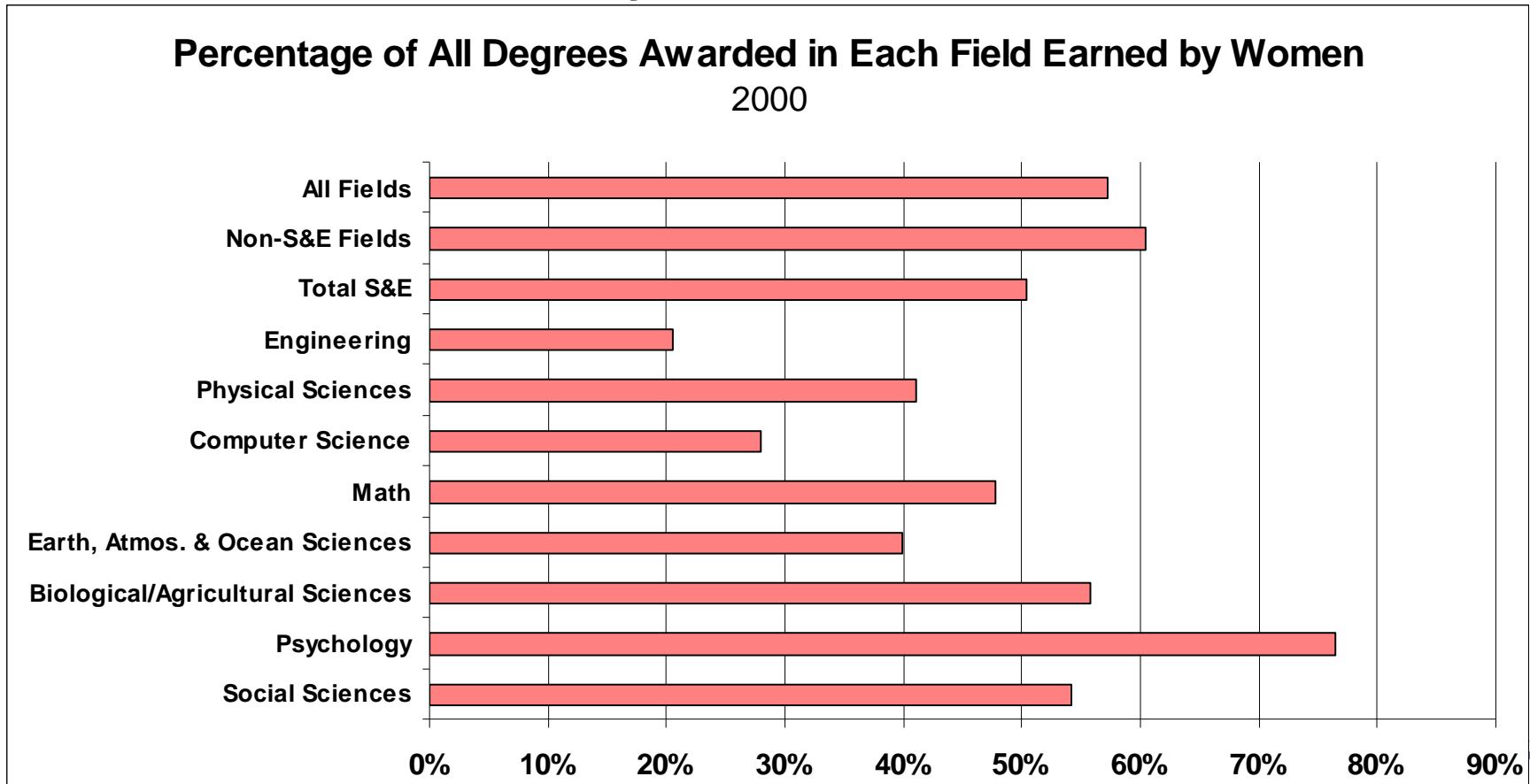
Women in Computing Declining



A report from the National Center for Education Statistics shows that the proportion of women in computer and information sciences has dwindled in the past 20 years, especially compared with other fields in mathematics and sciences. The center's statistics lump computer science with information science, which tends to have a larger percentage of women.



Share of Bachelor's Degrees in Each Field Earned by Women, 2000



The numbers in Computer Science

- % women who earn bachelor's degrees in Comp Science: 28%
- % women who go on to get PhD: 16.5%
- % women who hold professional positions in IT industry: 29%
- % female corporate officers within high-tech industry: 11%



Reality or not?

- The percentage of women in technology has increased in the last 20 years
 - TRUE, except for Computer Science, where it has declined & numbers still far less than 50% in some areas

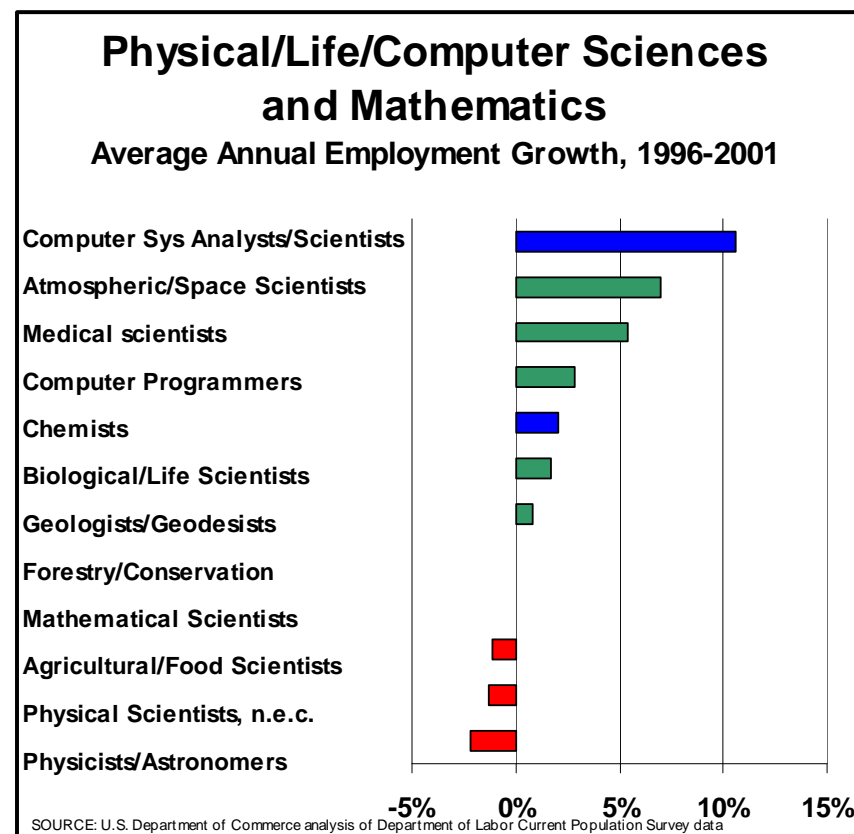
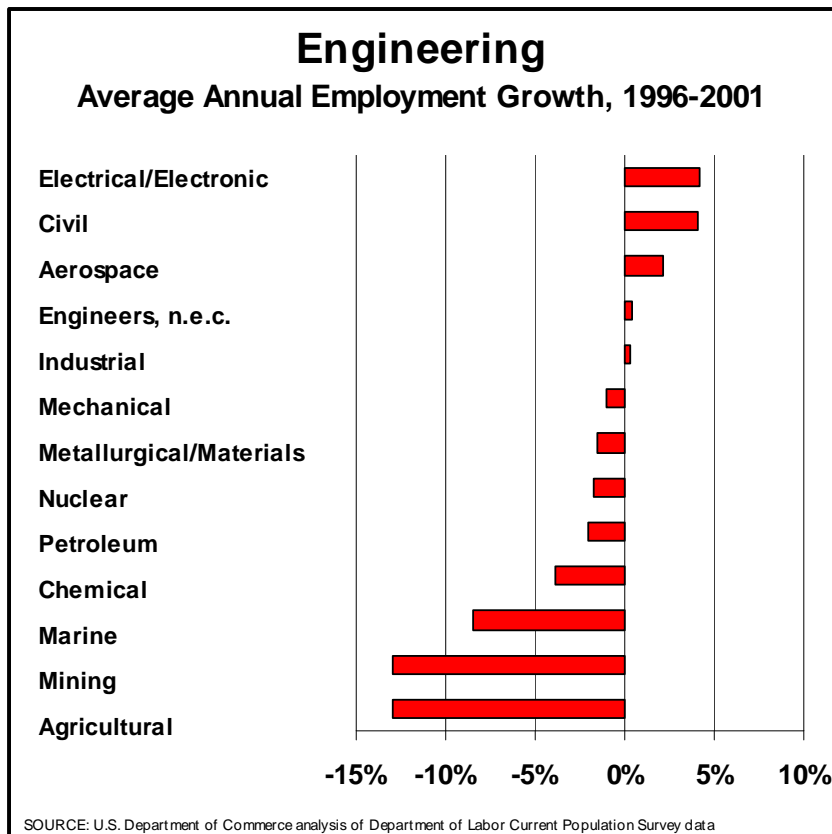


Jobs in IT

- ACM report “The Globalization and Offshoring of Software “ March 2006
 - Report had input from experts with the Indiana University School of Informatics . Conclusion: Globalization of, and offshoring within, the software industry will continue and, in fact, increase. This increase will be fueled by information technology itself as well as government action and economic factors and will result in more global competition in both lower-end software skills and higher-end endeavors such as research. Current data and economic theory suggest that despite offshoring, career opportunities in IT will remain strong in the countries where they have been strong in the past even as they grow in the countries that are targets of offshoring. The future, however, is one in which the individual will be situated in a more global competition. The brightness of the future for individuals, companies, or countries is centered on their ability to invest in building the foundations that foster innovation and invention.
- CRA Conference Feb. 2004, John Sargent of US Dept of Commerce predicts strong job growth in IT industry
 - Predictions illustrated in next few slides

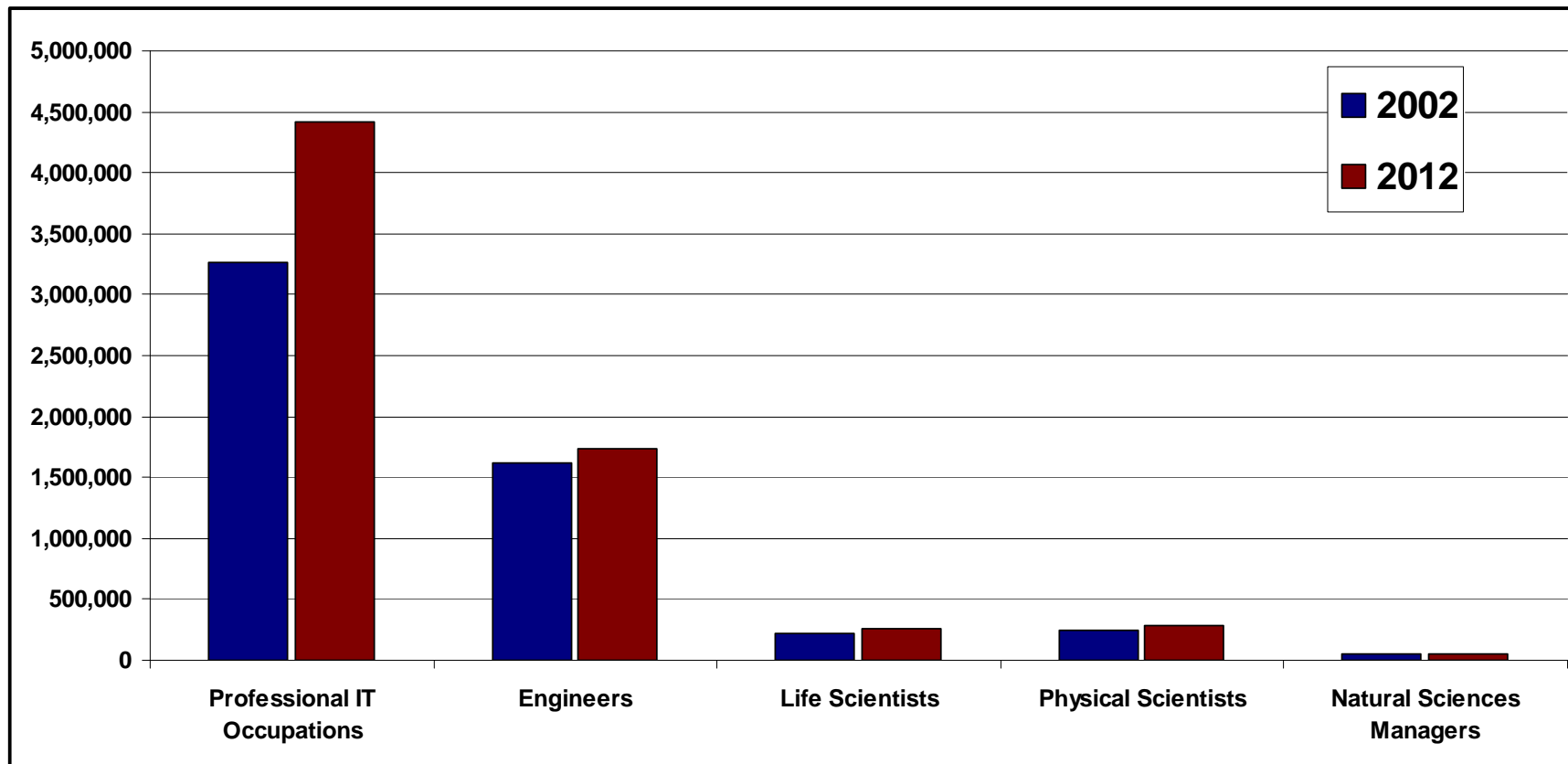


Recent Occupational Growth Rates



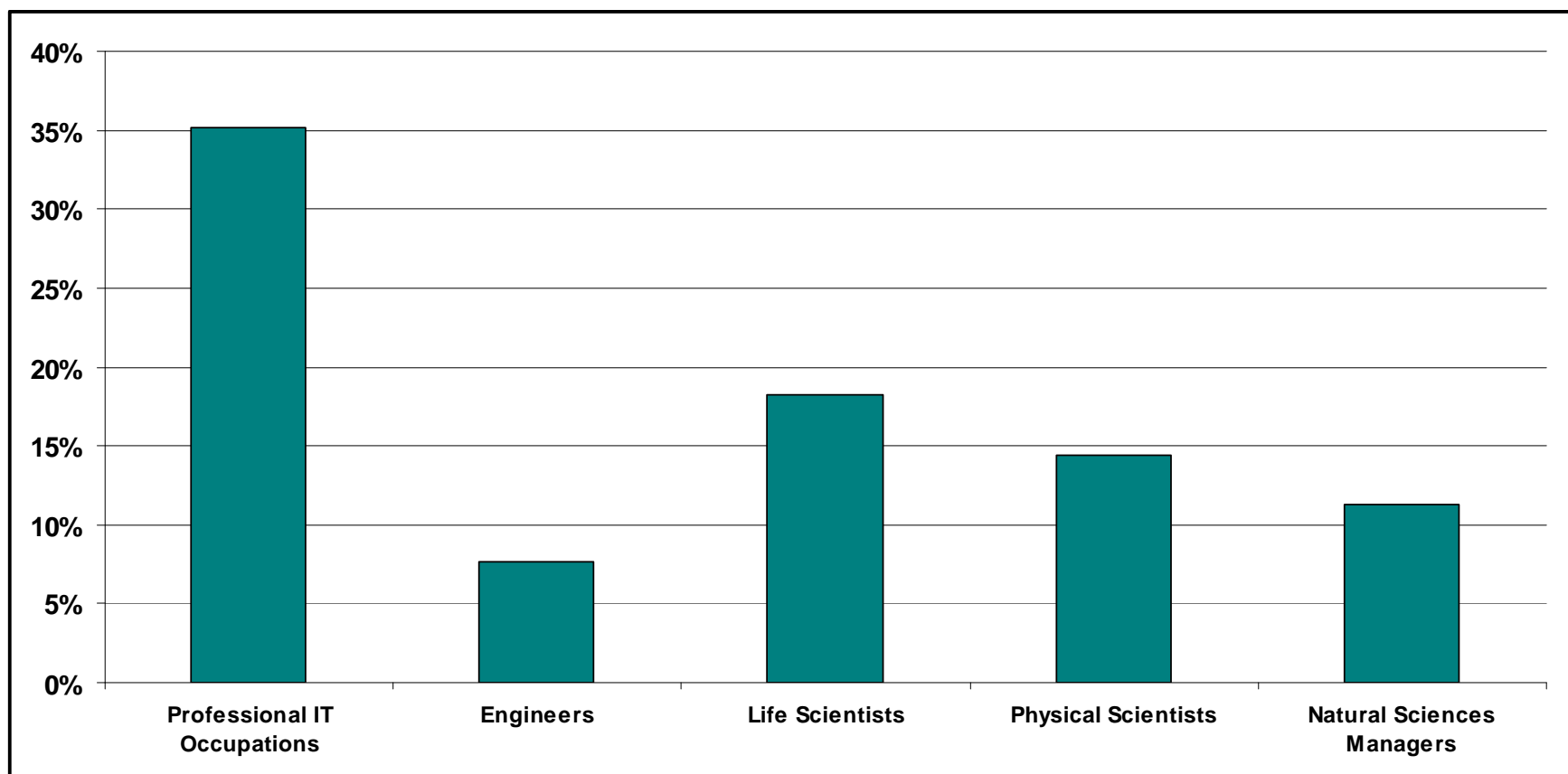
IT, Science and Engineering Occupational Projections, 2002-2012

1,500,000 – number of computer and information related jobs expected to be added to US workforce by 2012
Percent of these jobs of which US universities will graduate qualified candidates 50%



IT, Science and Engineering Occupational Projections, 2002-2012

Employment Growth: Rate

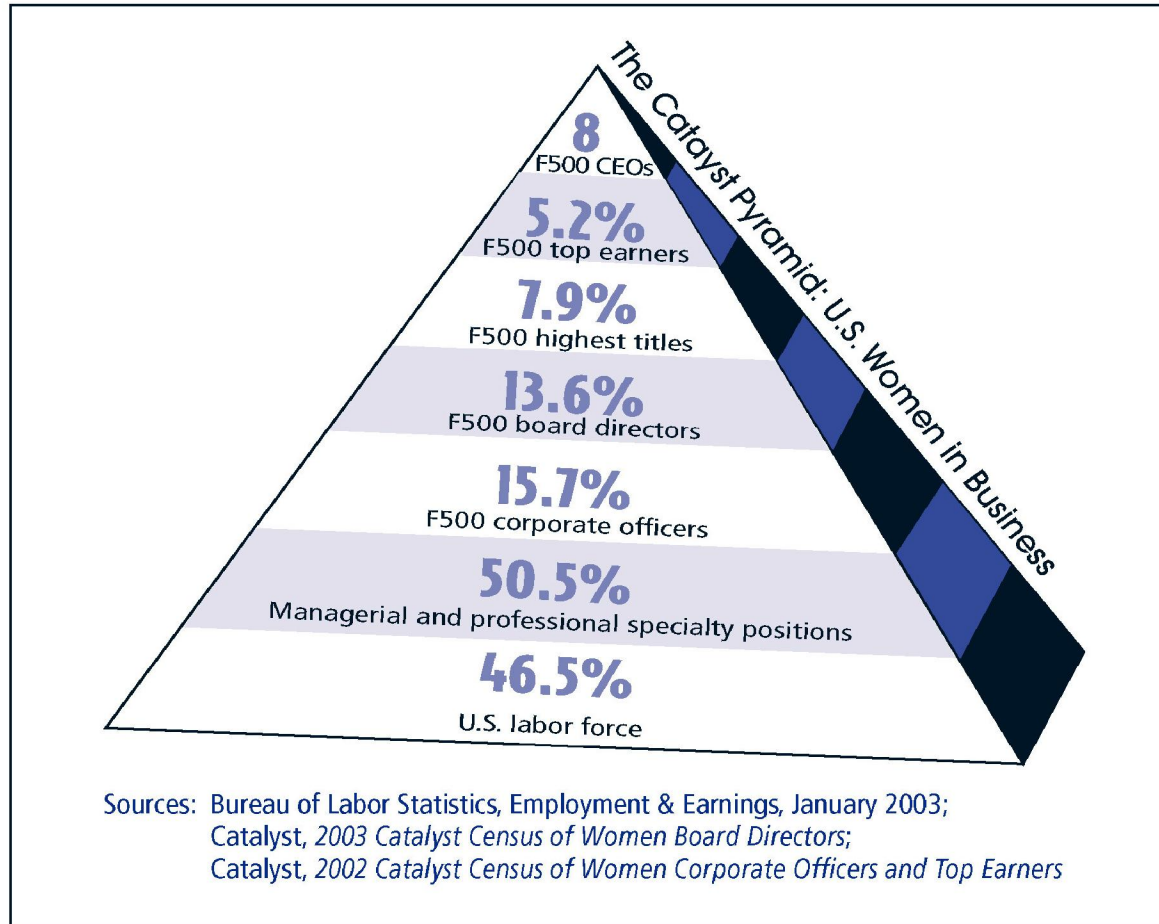


Reality or not?

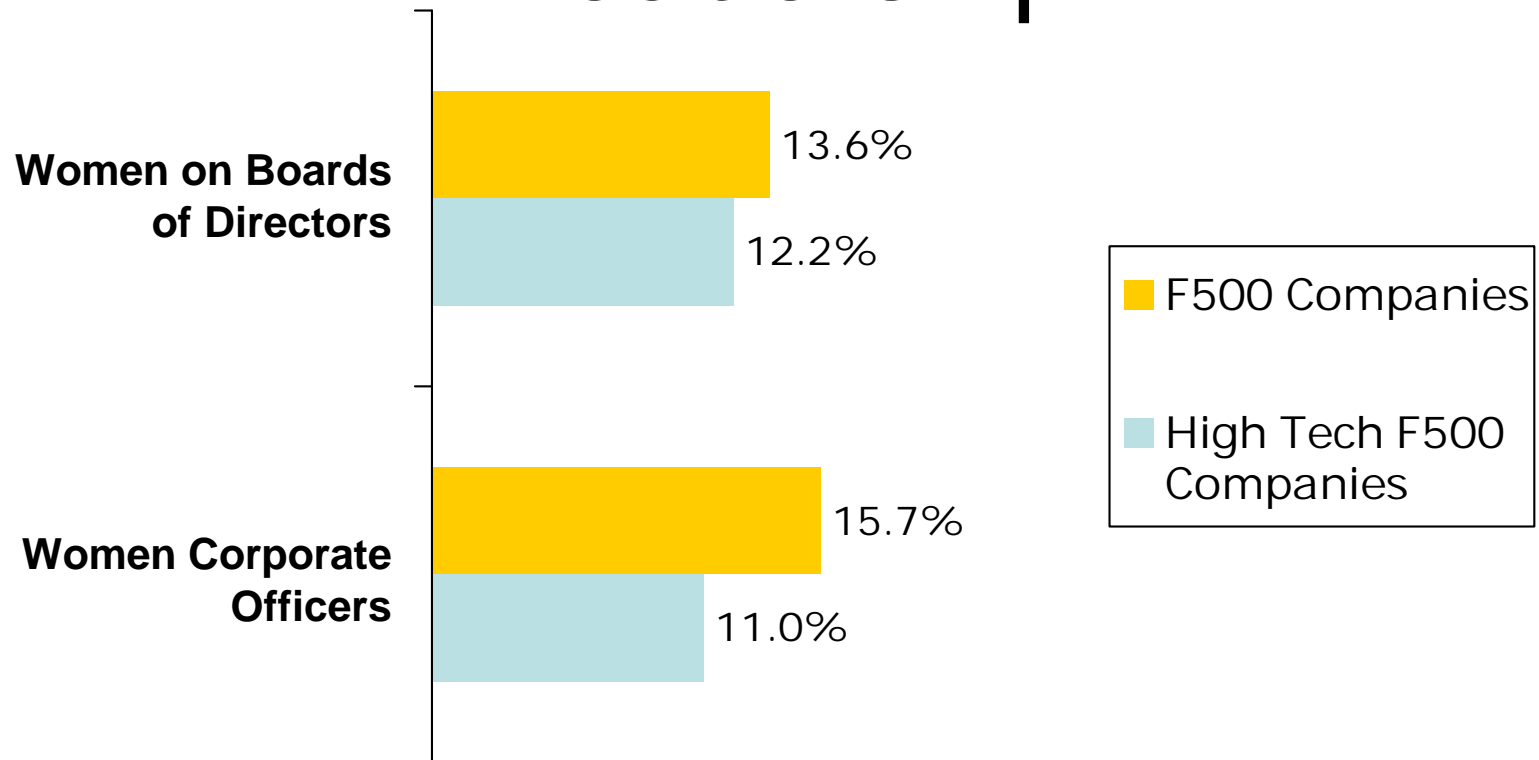
- There are no jobs in IT/computer science
 - FALSE, even with “globalization” the number of jobs in the next 10 years continues to increase



Women in Corporate America



Women in High Tech Leadership



Source: Catalyst, 2003 Catalyst Census of Women Board of Directors
Catalyst, 2002 Catalyst Census of Women Corporate Officers and Top Earners



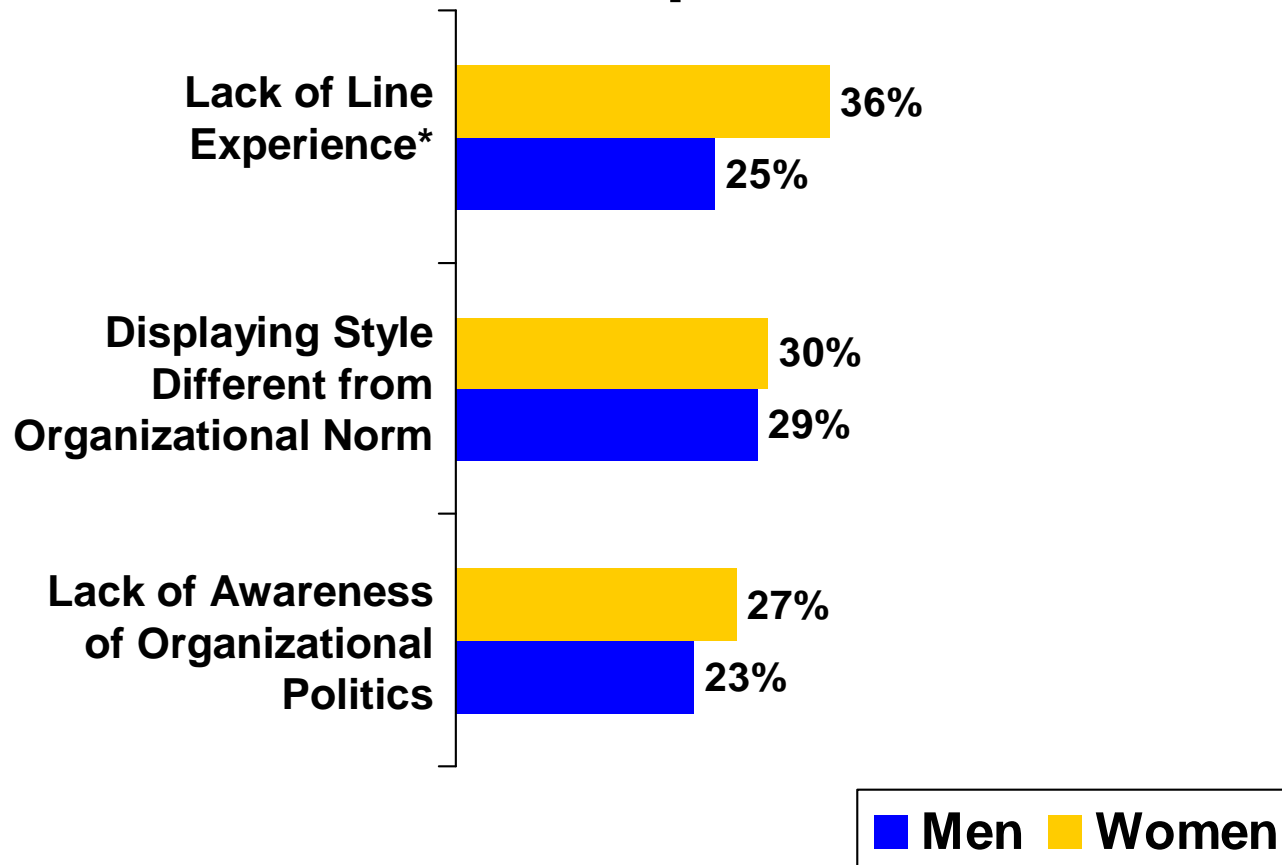
Reality or not?

- There aren't as many women at the top in technology as non-technology fields
 - TRUE, but the numbers aren't great in non-technology fields either



Barriers to Advancement

Men's Top Barriers

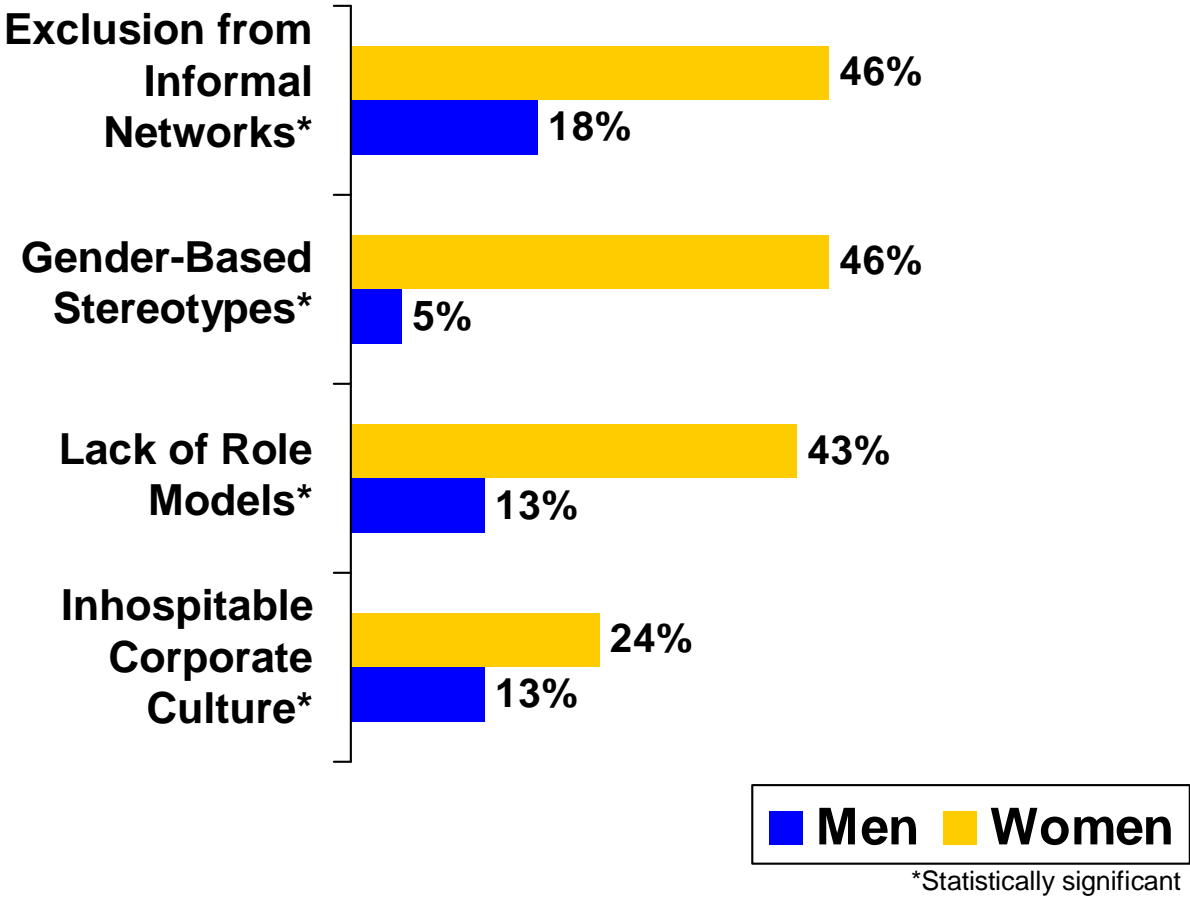


*Statistically significant



Barriers to Advancement

Women's Top Barriers



Summary of Barriers to Women in High Tech

- An **exclusionary culture** that does not support women's advancement. (31% of barriers identified)
- Companies don't **strategically and objectively identify and develop** talent. (23% of barriers identified)
- Women feel **isolated** because they lack mentors, networks, and role models. (22% of barriers identified)
- The **demands** of work and careers are at odds with having a commitment to family and personal responsibilities. (16% of barriers identified)

Source: Catalyst, *Bit by Bit: Catalyst's Guide to Advancing Women in High Tech*, 2003



Women's advancement in IT

- Cultural and gender stereotypes negatively affect perception and assessment of women's performance*
 - People like me: People are promoted with similar characteristics to those in positions of authority
 - Stereotypes frame the assumptions and metrics
 - Boorish behavior is tolerated
 - Style trumps substance: Women in IT expect work to be acknowledged and reviewed without self promotion
- Work/life balance is generational not gender issue
 - Decisions on a women's behalf without her participation, based on her personal or family situation
- Women benefit from encouraging culture, which is set by CEO

**Where are the Women in Information Technology?*

Pre-study by Anita Borg Institute for work with NCWIT supported by NSF grant no. 0413538



Reality or not?

- The barriers to advancement for men and women are different
 - TRUE, while some of the barriers are the same, women face additional barriers

