

# Grad School Challenges Specific to Women

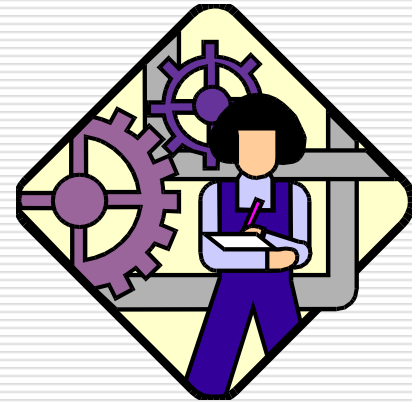
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***'Imagine that ...***

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***your lawyer, your doctor, your priest, rabbi, or minister, your Senator and Representative, your mayor, the president of your institution, most of its trustees, almost all of the deans and most of your colleagues were all women. How would you feel? "***

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***Sandler, Bernice R., 1986***

SWE 2003



# Outline

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- Graduate School
- Financial Aid
- Challenges for women

# BENEFITS

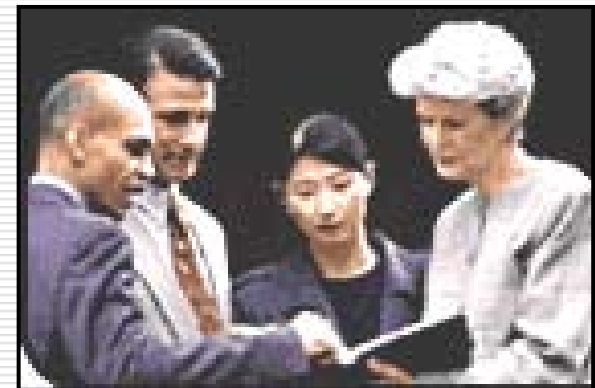
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## □ Increased compensation

- Higher starting salary
- Greater ability to earn independently

## □ Enhanced career flexibility

- Competitive advantage
- Greater choice of work
- Greater mobility



## □ Fortified self-confidence

- Demonstrated ability to perform rigorous tasks

# Today's Situation in Grad School

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In Engineering Schools women graduates comprise *less than 10% of the students!*

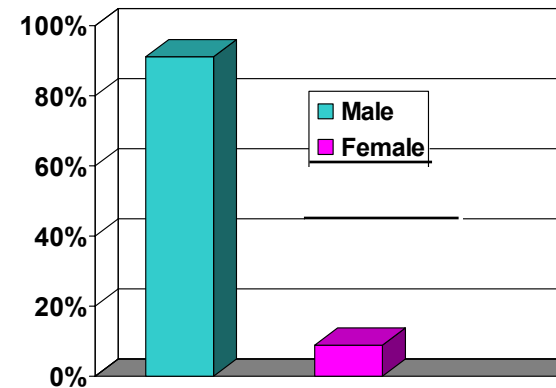
Possible causes

- Discrimination
- Harassment
- Isolation
- Lack of support

Yes, you'll be different, so?

- *Con:* Have to work twice as good
- *Pro:* Your face will be easy to remember

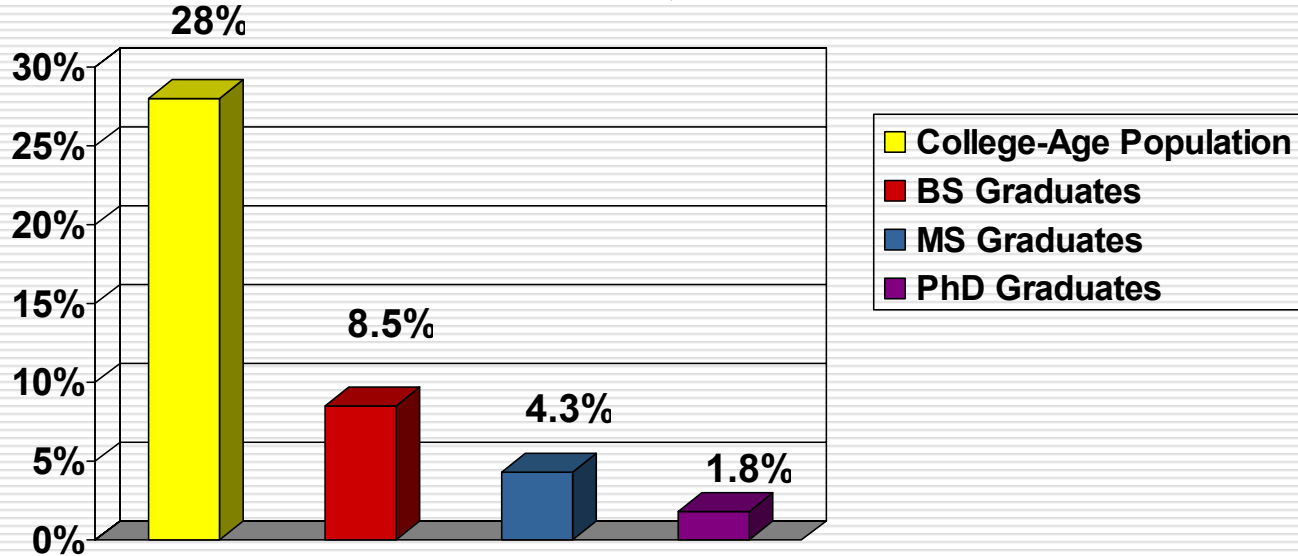
Graduate Student Population in US



# More statistics...

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**Percentage of Minority Engineering Graduates, 1994**



Source: NACME Research Letter, Vol. 6, Number 1, May 1996

# What is Graduate School?

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- It's unlike anything else
  - *Unstructured*
  - GPA of 4.0 is not a warranty of graduation
- Is not for everyone.
  - Independent work
  - Lots of reading
  - Commitment; (not finding a job is not a reason to go to grad school)

# Goal and Objective

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- Your goal is to graduate
- Need *unique* (interesting) *thesis topic*
- To graduate,
  - Be a good researcher;
    - (READ, READ, READ!)<sup>∞</sup>, understand.
    - Organized: keep a journal, file of papers
  - Stay motivated
  - Show *initiative* in research ideas



# Thesis

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- Start with the thesis *proposal*
  - This is required in many programs
  - Some also require candidacy and oral tests.
- Write *a chapter at a time*.
- Significant *content* is important.
- Good writing* style is very important.

# Grad school

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- Don't give up!
  - At some point everybody thinks that “*I'm not going to make it.*”  
Keep the faith!

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# RESOURCES FOR FINANCIAL INFORMATION

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- ❑ GEM's Web site - <http://www.gemfellowship.org>
- ❑ The Financial Aid Web site- <http://www.finaid.org/>
- ❑ The Graduate Office at your University
- ❑ The Graduate Office at Universities of interest to you
- ❑ The department you plan to pursue your degree in
- ❑ **McNair Scholars** waives application fees.  
Go to <http://www.ed.gov/offices/OPE/HEP/trio/mcnair>
- ❑ **Project 1000** waives up to seven application fees  
E-mail: [project1000@asu.edu](mailto:project1000@asu.edu)  
Go to <http://mati.eas.asu.edu:8421/p1000>

# Tips for Getting Fellowships!

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## ◆ Start Early

- Application deadlines range from early November to early February.

## ◆ Research your options

- To find a program or a fellowship that matches your interests and goals, plan on doing some serious research. The money won't necessarily come to you – you have to go to it (or at least tell them how to find you...).

## ◆ Pay attention to the restrictions

- Some programs put a limit on the number of credit hours you can have finished before application.

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# Discrimination

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- You “don’t look” smart
- Sexist or Sexual Humor
- Sexual Displays and Discussions
- Sexual Advances

# Sexist jokes-one experience

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- “At a conference in France, a male speaker, who was speaking about the importance of testing, showed an overhead slide of a naked woman with a caption of the sort --- *‘Would you buy this product without testing it first?’* There were only 2 or 3 women in the audience (of about 150), but I had fleeting feelings of having accidentally walked into a stag party and wondering if he had either not expected any women to be there or had discounted the importance of directing his remarks to the women in the audience.”



# Sexual Displays

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- Nude or semi-nude posters
- Example at Carnegie Mellon : **nude pictures as backgrounds on computer terminals** at computer lab.
  - Made some women feel as “available pray” not fellow workers.
  - Some graduate students and staff got together and tried to change the situation by publicly appealing to the community.

# Sexual Harassment

## At Harvard

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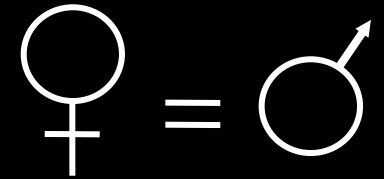
- ❑ 32% of the tenured female professors
- ❑ 49% of those without tenure,
- ❑ 41% of the female graduate students,
- ❑ 34% of the undergraduate women

reported having been sexually harassed by a person in authority at least once during their time at Harvard.



[[Gross 1991](#)], presents an account of the hostile environment for women at **Stanford Medical School**, which was recently called to attention by the resignation of a female neurosurgeon.

# Discrimination: ...Breaking the stereotypes



Equality

Both men and women are sometimes in fault.

- Most discrimination is done unconsciously!*
  - Create **awareness**, in a **polite** way (jokes?)
- Don't leave the Discrimination Radar **ON**
- Networking with Co-workers, **Mingle**; football, golf, parties ...
- Appearances **ARE** important
  - loose the Hello Kitty folders!
  - dress up appropriately for work and research
  - Women language
- Find a mentor and an advisor



# Look at these photos, what do you see?

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20

# The Mentor

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- initiates the protégé in the customs, demands, and expectations of academic life
- shares wisdom and knowledge, and provides encouragement and comments on protégés work.
- can provide career assistance for the protégé by making recommendations to colleagues at other institutions,
- helps to form with the protégé the sense of herself as a member of the profession, encouraging and fostering a self-image as a legitimate member of the community of scholars

# Choosing the *Right Advisor*\*

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- Advisor is the most important person for your MS or PhD! (women or men)
- Area of research, fame, good school?
- Interview advisor,
  - ask about average time to graduate, your special circumstances like family.
- Talk to his/her current grad students
  - Ask about failure rate, relations, support
- Ideally, you should get along and trust advisor.

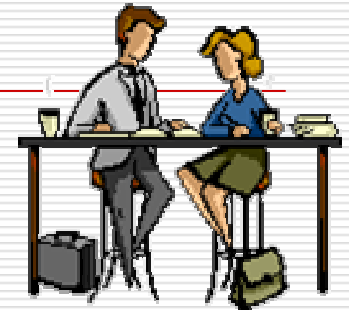


# Socializing with Co-workers

- ❑ Discussions with topics of interest to most men, such as **sports and cars**, topics which women are often uninformed about or uninterested in.
- ❑ The resulting inability to participate in discussions can make it difficult for women to bond socially, and often leads women to feel outright alienated...  
“ This is exactly what happened to me at each T.A.-- faculty meeting“ says new faculty member at U.S. university.

# Women language often differs from that of men in subtle ways

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- hesitation and false starts ('I think...I was wondering...')
- high pitch
- 'tag' questions ('This is really important, don't you think')
- a questioning intonation in making a statement ('The second chapter does most to clarify the theme?')
- excessive use of qualifiers ('Don't you think that *maybe sometimes...*')
- other speech forms that are excessively polite and deferential ('This is probably not important, but...')





# Different Priorities

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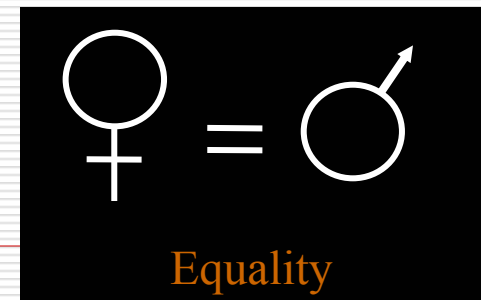
- ❑ In our society, most women are often less willing or able to devote all of their life to a job, particularly because working full force is often difficult without a support spouse to take care of other parts of one's life.
- ❑ When women do decide to put their career first, it is still assumed that they do not take their career seriously.
- ❑ A balance life is psychologically healthy and can boost your creativity



# Family Priorities; Married status

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- Make sure spouse understands children are responsibility of both,
  - your work should also be a priority for him.
- Two cases to avoid:
  - Non-cooperative husband
  - “Self-slaved” wife (yes, it happens)



IQ ≠ PhD

but

IQ + M<sub>Operandi</sub> = PhD

- People skills: Know how to play the game
- Integrate: networking is important
- Network with supporting societies
  - (SWE, WEP, MEP,....)
- Get to **work!**
  - be disciplined, make a schedule
- Married status helps
- Set time for **recreation** too!



# What is the missing link?

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Why aren't more female students pursuing and/or completing graduate degrees?

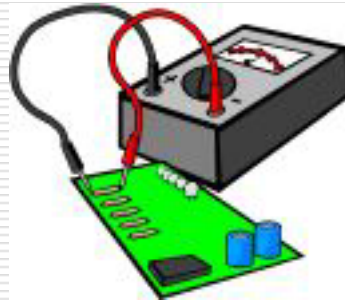
- Image: stereotype of what an engineer should be or look like
  - Media, movies, TV, toys don't help
- Hostility environment
- Economic factors?

# What else can we do to increase the numbers?

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- Be a good role model
- Dissemination (talk at K-12 & Univ)
- Tell them "how to play the game"





# Summary

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- Choose the **Right Advisor**.
- Keep a **positive attitude**. Make friends
  - (These will be your future collaborators)
  - Don't let others bring you down with discriminating comments, etc.
- Work together with **spouse** to set goals straight
  - Set time to **relief stress** with entertainment
- Be a leader, take **initiative** to do good research
  - Read a lot of papers (ask your advisor)
  - Organize, work efficiently
- **Don't give up** and we'll take over the World.



This presentation is at

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[www.ece.uprm.edu/~pol](http://www.ece.uprm.edu/~pol)

under Women in  
Science