


Time to Thrive, Not Just Survive: Accumulating Advantage for Women in ~~Chemistry~~ Science & Engineering



Debra R. Rolison

Surface Chemistry Branch

Naval Research Laboratory

Washington, DC

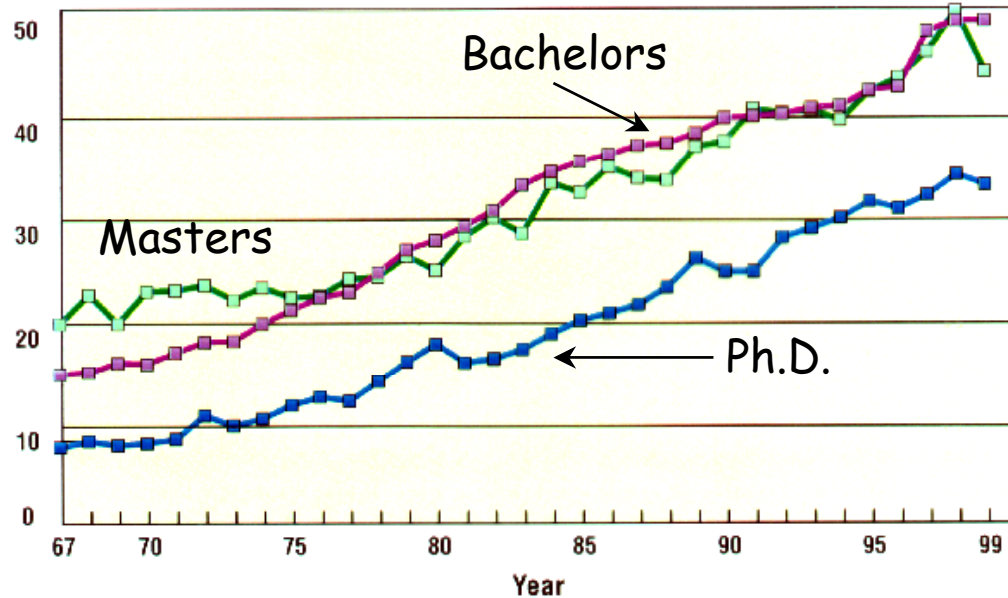
rolison@nrl.navy.mil

**** The views about to be expressed are those of the author and are not necessarily those of the Naval Research Laboratory or the Department of Defense ****

We have certainly accumulated the women...



Percentage

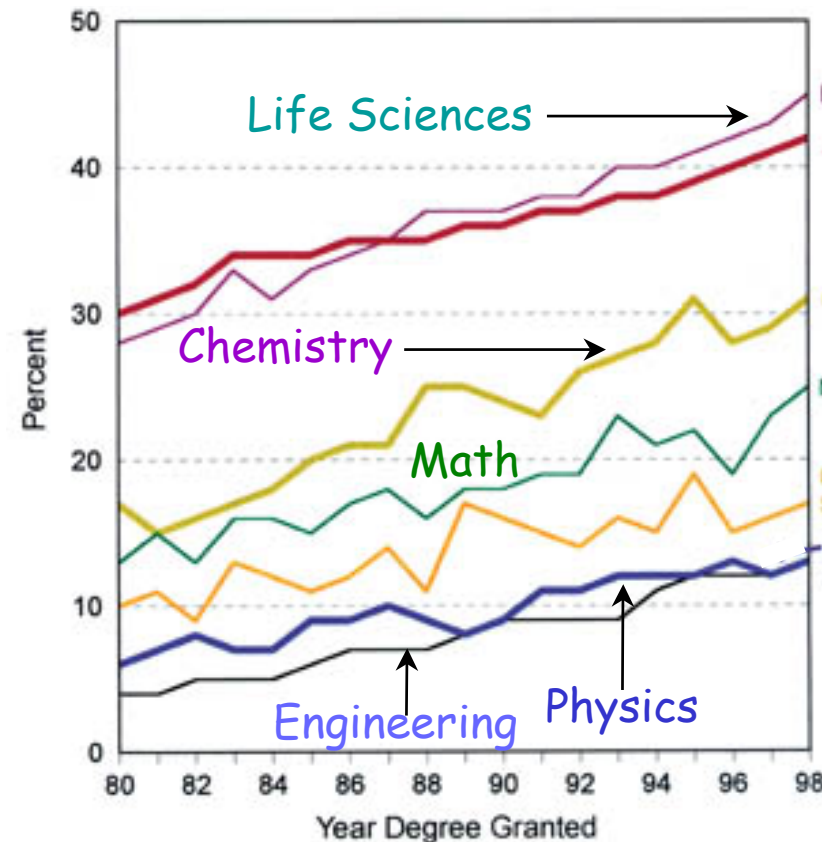


Percentage of Chemistry Degrees Earned by Women from 1967 to 1999


ACS Starting Salary Survey, 1999,
American Chemical Society

Percent of Ph.D.s Earned by Women in Selected S&T Fields

APS News, The Back Page, January 2000



Should scientists accept the (white) male-dominant status quo of the modern university and laboratory?



Our universities and laboratories have got to get out of this lily-white male universe if we want to stay at the forefront of science

a leader (as opposed to a (run-of-the-mill) manager) would not stand still for less for his institution

(... her institution? alas, there are very few examples of that...)

American universities have established a diverse student body ... why has that success not been reflected into creation of a diverse faculty??

Number and Percentage of Female Faculty at the Top 30 Departments in **Chemistry** for 2001 (Research expenditures for FY98 [NSF])

— 9 —			— 3 —		
UCLA	(11)	17.6%	Caltech	(3)	11.5%
— 7 —			Wisconsin	(10)	7.5%
Colorado	(6)	18.9%	U Penn	(13)	9.7%
— 6 —			UT-Austin	(14)	7.0%
Purdue	(7)	13.0%	Georgia Tech	(18)	8.8%
— 5 —			Oklahoma	(20)	12.0%
UC-Berkeley	(1)	9.8%	UC-Irvine	(29)	8.6%
UNC-Chapel Hill	(30)	16.7%	— 2 —		
— 4 —			Cornell	(9)	6.0%
Penn State	(4)	13.8%*	Northwestern	(21)	8.3%
Illinois	(5)	10.3%	Columbia	(27)	9.1%
Florida	(12)	8.7%	Notre Dame	(28)	7.4%
U Mass-Amherst	(16)	13.3%	— 1 —		
MIT	(17)	13.8%	Johns Hopkins	(2)	6.0%
UC-San Diego	(19)	8.7%	Stanford	(8)	4.0%
Ohio State	(22)	10.0%	Harvard	(15)	4.0%
Texas A&M	(25)	8.9%	<u>Rutgers</u>	(23)	2.6%
Michigan	(36)	8.3%	Arizona State	(24)	3.1%
			Princeton	(26)	3.8%

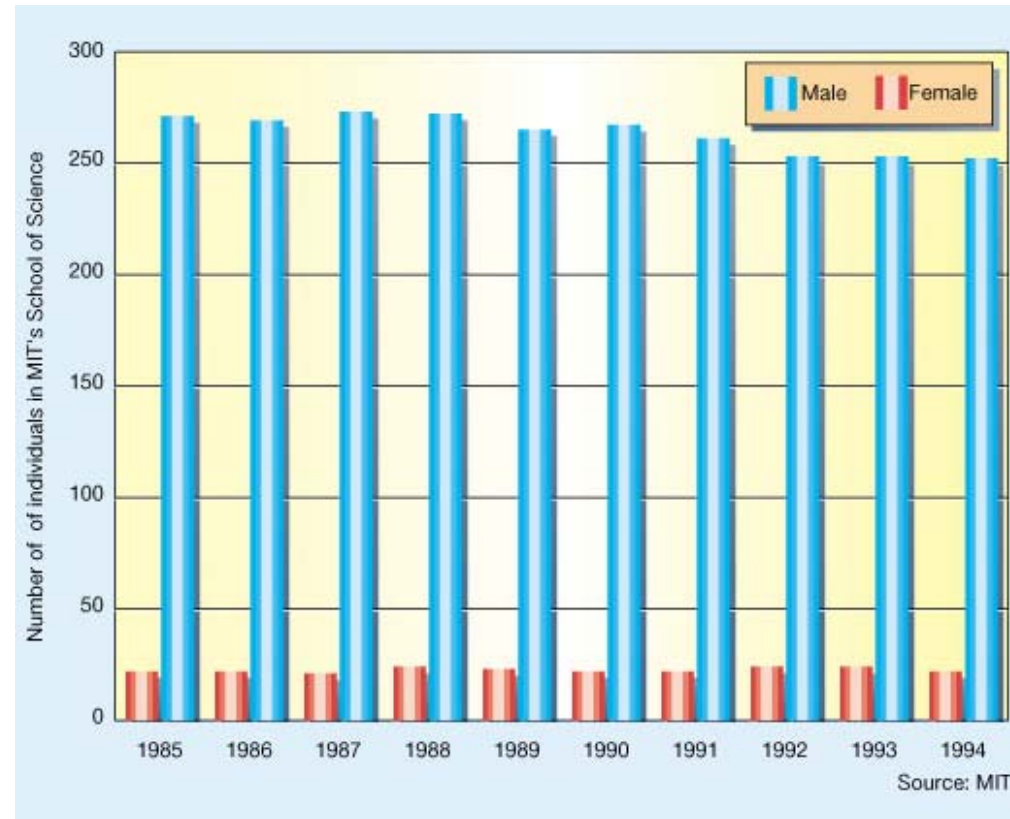
A stacked deck?? (or how level is that playing field?)

The 1999 MIT Report on the College of Science

The full MIT report documented a pattern of gender discrimination in:

- hiring
- promotion
- awards
- committee responsibility
- allocation of laboratory space
- research money

... MIT also found that, despite increasing numbers of women scientists, there had been no change in faculty ratios for 10-20 years

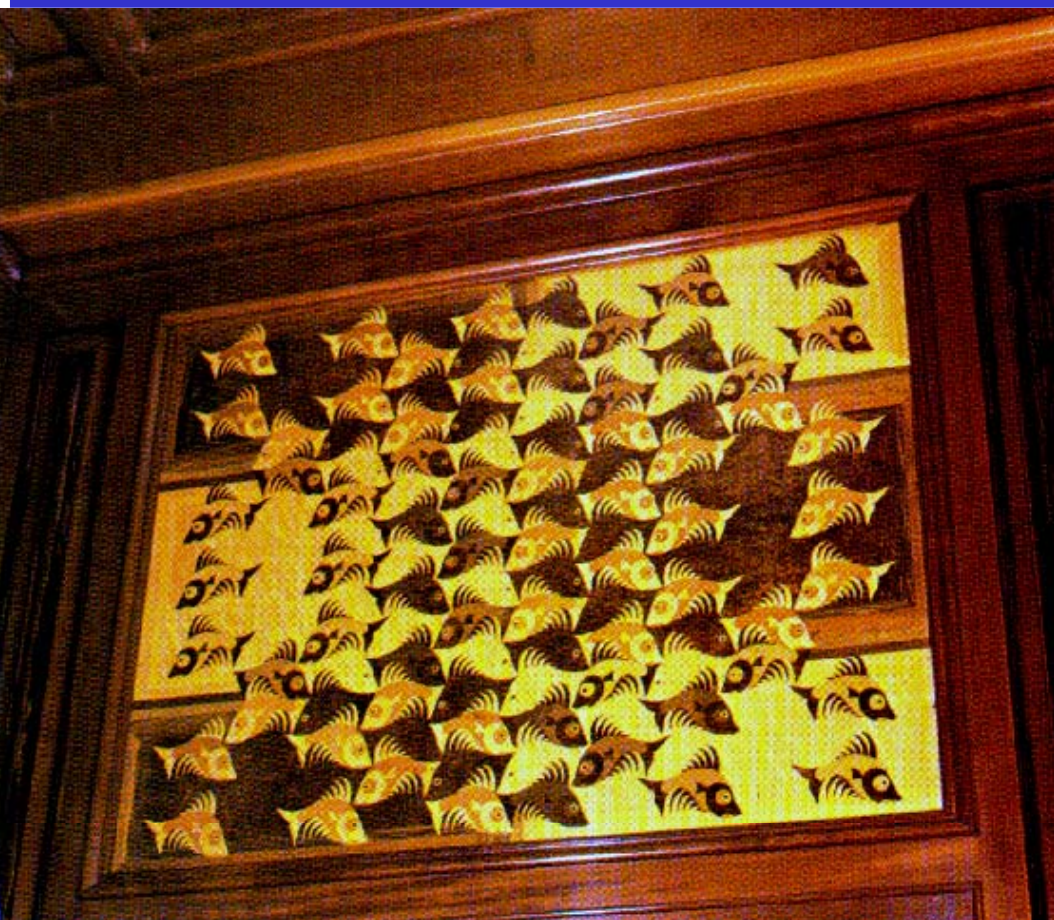


The imbalance of men and women in the School of Science at Massachusetts Institute of Technology [Loder, *Nature* **405** (2000) 713-714]

How level is that playing field? ... It's not just MIT...

- Women who teach in medical schools are less likely to be promoted at every step along the path [[New Eng. J. Med. 342 \(2000\) 399](#)]
- "Historic" admission by the University of Rhode Island that its engineering school was hostile to women
- University of Pennsylvania conducted a similar investigation [to MIT's] in 1970. Helen Davies (a microbiologist at the UPenn's Medical Center) says "... we went out and did a preliminary study on three-year-old data. We did not look appreciably better than MIT, though we started 29 years ago. This was a shock." [[Nature 405 \(2000\) 713](#)]
- An internal study at Caltech finds that female academic staff are paid less than men — of 283 academic staff at Caltech during the period studied, only 27 were women (9.5%) ... while >33% of undergraduates and 25% of graduate students are women [[Nature 412 \(2001\) 844](#)]
- The biology division at Caltech saw its first woman faculty member receive an endowed chair in late 2000, after some 70% of male biology faculty already had endowments — but the woman biologist's endowment came only after strong lobbying... [[Nature 412 \(2001\) 844](#)]

Historic opportunity? To be seized or squandered??



— real room in the academic pool —

Intarsia panel in the City Hall of Leiden

[from *The Magic Mirror of M.C. Escher*, B. Ernst, Taschen, 1994]

unless women fill their
share of the positions
opening up as the
academic chemists hired
in the 1960s retire

...

our profession will have
squandered its premier
opportunity to increase
the fraction of women
chemistry faculty

...

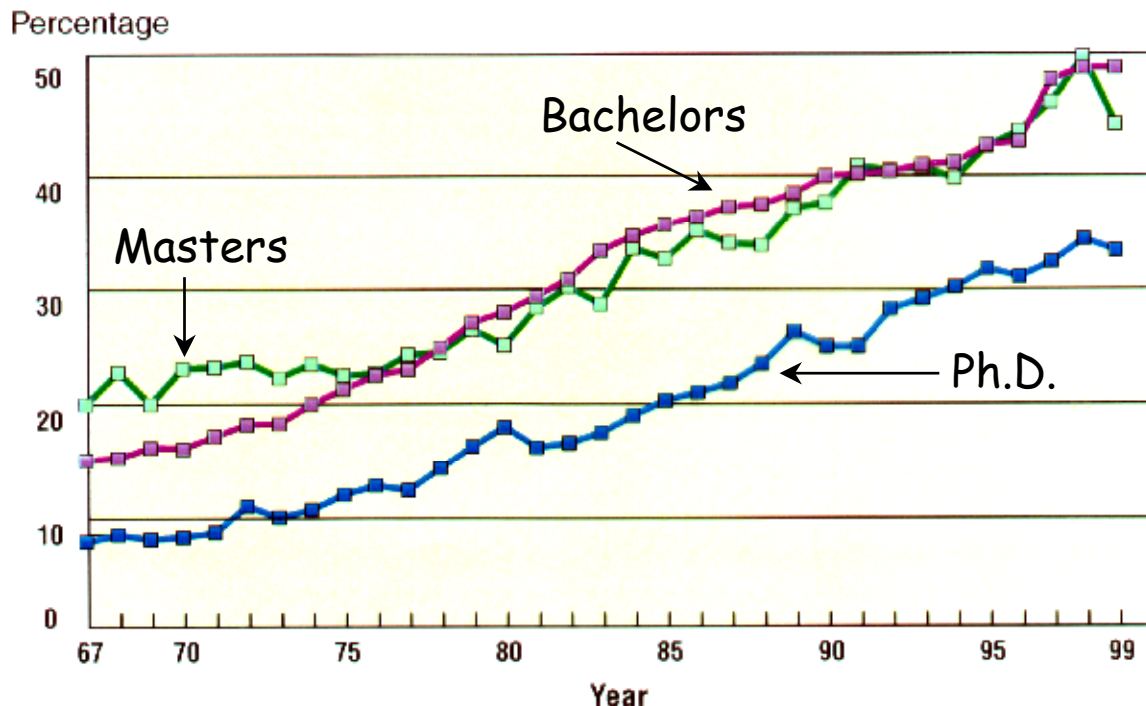
thereby locking in
another generation of
faculties with women-
poor demographics

Cocktail folklore and real statistics

Point: applications from women for advertised positions are only ~ 10% of the total (9 men for every woman)
c.f.

Counterpoint: for every 2 men granted a Ph.D. in Chemistry, there is 1 woman
r.s.

the women are there (and have been for years) ... why aren't they voluntarily applying for academic positions??



Percentage of Chemistry Degrees Earned by Women from 1967 to 1999

ACS Starting Salary Survey, 1999,
American Chemical Society

Women are the “canaries in the mine”

The disproportionate absence of women from the academic applicant pool is the signature that an unhealthy environment exists in U.S. chemistry departments



Montferrant, Les douze dames de rhétorique, French, 15th century, Bibliothèque Nationale, Paris

Why are women voting with their feet against the career home (academics) that they know the best?

— Is it because —

COACH, 2000

<http://www.uoregon.edu/~coach/>

- ? of the long hours and low pay?
- ? they don't want to serve on many fascinating university committees?
 - including every affirmative action committee ever constituted on campus?
- ? they don't wish to compete for grants when 4 excellents and one very good mean a proposal is denied?
- ? they don't want to postpone having children until they have gained tenure, in their mid- to late 30s?
- ? they don't want to be role models for every young woman on campus, and beyond?
- ? they don't want to be a mentor and advisor, not only to a disproportionate number of students, but also to male colleagues seeking a friendly and unthreatening ear?
- ? or is it because, as (more than) one male chemist has commented:
“once again, women have shown that they are smarter than men”

... we need to admit that the current state of U.S. S&E departments does not serve a modern society

but, creates, instead, an unhealthy environment for:

- (1) those men and women who want children — and to play a continuing, rather than merely genetic role in their lives
- (2) those women who, once they demonstrate productivity, scholarship, and mentorship still reap less respect — and the ancillary rewards of space, salary, funding, and awards — than their male colleagues
- (3) those men and women who want to create collaborative, cooperative, team-based research programs
- (4) those men and women who place the educational and mentoring aspects of their job first
- (5) those undergraduate students (> 50% of whom are now women), graduate students, and postdoctoral associates who are trying to envision their lives in science and careers as chemists

... an unhealthy environment for ... people?

The crux of the problem ... departmental and scientific culture

Why has the problem of women in science not been solved??

Wolf-laureate Chien-Shiung Wu

"I sincerely doubt that any open-minded person really believes in the faulty notion that women have no intellectual capacity for science and technology. Nor do I believe that social and economic factors are the actual obstacles that prevent women's participation in the scientific and technical field.

"The main stumbling block in the way of any progress is and always has been unimpeachable tradition."



... and the tradition of Western science has been one of a “world without women”



Albrecht Dürer's "Adam and Eve",
retouched by Kathy Grove to
remove Eve

D.F. Noble, *A World without Women*,
Knopf, 1992

- academic culture traces its origins to the monastery and the ecclesiastical schools
- vestiges of that tradition still cling to the “ideal” of academic life
- this “ideal” requires either true monastic dedication or an infrastructure: *i.e.*, a wife
- such is simply no longer life in today's world ... it certainly is not an option open to most women

?? Is an academic career off-limits to talented, dedicated women and men just because they recognize the need for family in their lives (and the time investment required therein)??

Unconscious discrimination against women in science?

“unconscious discrimination arises due to deep-seated habits that will be very hard to change ... our selection procedures tend to select not only for talents that are directly relevant to success in science, but also for assertiveness and single-mindedness ... qualities that are at best very indirectly related to being a good scientist, and that clash with cultural pressures ... ”

(1) *APS News* 9:1 (2000), The Back Page

(2) H. Georgi, *Who Will Do the Science in the Future*, National Academy Press, Washington DC, 2000



Howard Georgi
Mallinckrodt
Professor of Physics
Harvard University

“It is not impossible to succeed as a scientist without being assertive and single-minded, but the system encourages and rewards people with these traits in a number of ways.”

The crux of the problem ... the departmental culture ... as exemplified by its reward structure

What they say

- (1) The first duty of (chemistry) faculty is to the young people whom they have chosen to teach, mentor, and guide in the joys and rigors of chemistry
- (2) The second duty is to produce quality scholarship

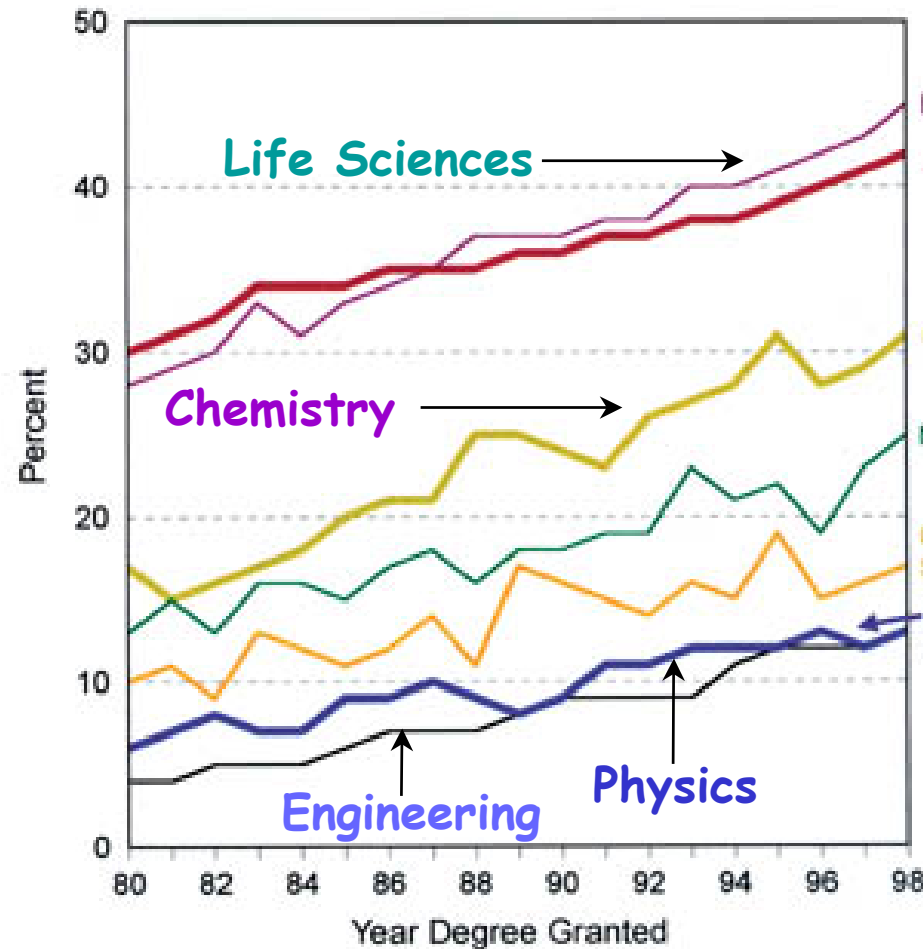
What they do

- (1) Reward those who bring in the most overhead-bearing monies
- (2) Reward those who excel at promoting their science
- (3) Reward the single-minded and aggressive

Search committees? ... or envelope-opening committees??

- ✓ they certainly don't seem willing to seek out new lifeforms, unless that manila envelope drops in their laps
- ✓ why didn't they wonder about the discrepancy between the number of women graduated with Ph.D.s in Chemistry every year vs the number of women applying for faculty openings?
- ✓ why didn't they wonder what that said about their department as a place to live?
- ✓ what does that say about the scientists on these committees as observers of natural phenomena?

APS News, The Back Page, January 2000



Percent of Ph.D.s Earned by Women in Selected S&T Fields

Search committees? ... or envelope-opening committees??

- ✓ S&E&T departments need to recruit what they need... and they need women
- ✓ S&E&T departments certainly recruit the men that they want to join their ranks
- ✓ universities certainly understand that to build a competitive, functional team, recruitment is a necessity...
they would fire their basketball coach if he didn't do it



Jacob Jordaens, *The Four Evangelists*, Antwerp, c. 1625, oil on canvas, Musée de Louvre, Paris

Evaluators and evaluation committees can ...

- ✓ recognize that there is bias in evaluating "others"
- ✚ Men just need to get over this fantasy they have that they are objective ...
 - they ain't —
- ✓ Men also need to recognize that it is human to identify (and therefore) pick the person who most reminds one of oneself

Ex. 1: "Blind" auditions can explain 30 to 55% of the increase in women winning orchestral jobs

Washington Post, 13 July 1997

Ex. 2: University psychology professors prefer, 2:1, to hire "Brian" over "Karen", even when the application packages are identical

[*Washington Post*, 2 April 2000]

R.E. Steinpreis, K.A. Anders, D. Ritzke
Sex Roles 41 (1999) 509

Ex. 3: Women applying for a Swedish Medical Research Council postdoctoral fellowship had to be 2.5 times more productive to receive the same competence score as the average male applicant

C. Wennerås, A. Wold, Nature 387 (1997) 341

In general:

level of
prestige



women



A telling statistic — even elementary
school kidlets know the score

More than 1,000 Michigan elementary school students were asked to describe [in 2000, not 1975 or 1950] what life would be like if they were born a member of the opposite sex ...

Op Ed column in the *Washington Post*, 31 July 2000

> 40 % of the girls saw positive advantages to being a boy: better jobs, more money, and definitely more respect

95% of the boys saw no advantage to being female

WHY?? gender schemas — unconscious mechanisms by which men and women assign higher “value” to men and lesser “value” to women

A stacked deck?? (or how level is that playing field?)

An excerpt from the Declaration of Sentiments adopted at the Woman's Rights Convention in Seneca Falls in 1848:

“He [Man] has monopolized nearly all the profitable employments, and from those she [woman] is permitted to follow, she receives but a scanty remuneration. He closes against her all the avenues to wealth and distinction which he considers most honorable to himself. As a teacher of theology, medicine, or law, she is not known.”



Seneca Falls, NY
National Park

Lucretia Coffin Mott introduces Susan B. Anthony to Elizabeth Cady Stanton

[photo: C. Korzeniewski]

A stacked deck??

(... or how level is that playing field?)

For women, gender schemas lead to accumulation of disadvantage rather than advantage

- any one instance may seem minor (not being an invited speaker, or invited author, or research co-PI, or team member, or member of important university/federal committees, or editorial boards, or international advisory boards or ...)

... but integrate these disadvantages over time ...

Martell, Lane & Emrich developed a computer model of promotion practices at a hypothetical company ...

- (1) initially, equal numbers of men and women at the entry level
- (2) assigned a **1% bias** in promoting men over women
- (3) after a series of promotions, the highest level was 65% male

American Psychologist **51** (1996) 157

... Women in science apparently
accumulate one advantage...

immortality...

“The fact that women were featured in some obituaries [in *Nature* from 1949-1999 and *Science* from 1940-1969] ... demonstrates that noteworthy women were contributing to scientific and scholarly endeavours half a century ago. As more females received doctorates over subsequent years, however, the numbers of obituaries for women decreased to zero in the physical sciences, social sciences, education, humanities and other categories. One may therefore conclude that women in these fields no longer die.”

Dean Falk, Dept of Anthropology, University of Albany, Albany, NY
Nature 407 (2000) 833

Words to ponder... Valian: Why so slow?

- “... the underlying reality is that men and women work in different organizational environments. Women work in an environment that is less likely to offer them rewards they deserve.”
- “It is easy to understand why people would be unwilling to say that they benefit from discrimination. A white man, for example, will be loath to acknowledge that he owes a large part of his promotion, or his career, to the overly positive evaluations he has received because of his race and sex.”
- “Implicit hypotheses about women and men do not allow us to give women the same credit for their achievements that we give men.”
- “Unless we—women and men alike—understand how gender schemas disadvantage women professionally, women will not achieve the positive evaluations their work merits, women will get less than their fair share, and women’s achievement will continue to be slow.”

How do institutions change?

"Saw the editorial. I was shocked—shocked. After all these years, to find out that men were the problem. I never would have guessed." (... yes ... his tongue was in his cheek ...)

It's Not News!!!

Men, because they have been and predominantly still are the stewards and beneficiaries of the current system, have a moral responsibility to decide how to transform the institution ... a leader (as opposed to a (run-of-the-mill) manager) would not stand still for less for the health of the institution

- complete demolition [see the French Revolution]
- coercion: e.g., no Federal dollars... a **very** large stick
- a sustained effort to change the reward structure, because that is the only way to lead a standing structure by the nose

The crux of the problem ... the departmental culture as exemplified by its reward structure

Point

The U.S. university system for all its warts does, in fact, serve society very well in many ways and produces people who do great science

Counterpoint

So what!

... does that mean the U.S. university system won't serve society — and science — better when it changes and integrally includes female and minority scholars??

... and why should the U.S. taxpayer support a discriminatory institution?

Is it time to "Title IX" U.S. chemistry departments for their entrenched inability to increase the number of women represented on their faculties? Rolison, C&EN, 13 March 2000

Title IX, Education Amendments of 1972

Section 1681. Sex (a) Prohibition against discrimination

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.

Section 1681. Sex (b) Preferential or disparate treatment

Title IX may not be used to discriminate... but... “... this subsection shall not be construed to prevent the consideration in any hearing or proceeding under this chapter of statistical evidence tending to show that such an imbalance exists...”

<http://www2.dol.gov/dol/oasam/public/regs/statutes/titleix.htm>

Isn't being a faculty member at a university an
“educational activity”?

Title IX? Doesn't Title VII Apply??

Why Not Seek Redress via Civil Rights — EEO
Legislation?

... because a “one-S&E&T-department-at-a-time” lawsuit, even a class-action suit, is a war of attrition ...

... against the women ...

(the women aren't broken, the system is ...)

Need an example?

The outcome of the class-action suit against the University of Minnesota

- \$7 million in legal fees and settlements, including
 - ▶ \$1.6 million to settle Shyamala Rajender's lawsuit [originally filed because the Dept of Chemistry would not transfer her to the tenure track]
 - ▶ \$100,000 award to Ms Rajender (who is now a lawyer)
 - ▶ \$1.5 million in legal fees for her lawyers
- and that's in 1980 \$\$—

(1) Nijole Benokraitis and Joe R. Feagin, *Modern Sexism: Blatant, Subtle, and Covert Discrimination* (2nd Ed.), Englewood Cliffs, NJ: Prentice-Hall, 1995;

(2) <http://www1.umn.edu/mnwomen/mwchistory.html>

... and 20 years later??

- Of the 46 Assistant/Associate/Full Professors listed at <http://www.chem.umn.edu/directory> in 2000, 3 were women ... 6.5%

...upping the ante ... Throw out the old "dictionary"

▶▶ "... you're only here because you're a woman..."

when far-too-many men are "here" because they're men
(thanks to gender schemas)

▶▶ "preferential hiring"...

we've always had it: ~100% white men ... now, *that's* a quota!!!
... or because we've had universities since 1088: "Isn't a millennium of affirmative action for white men sufficient??"

▶▶ "search committee"

manila-envelope-opening committee (uninterested in searching...)

▶▶ a male colleague calls you a "bitch" in a heated discussion...

don't crumble... you've just been told you're winning the argument!

▶▶ "I generally prefer carrots to sticks."

... We are dealing with carnivores. Carrots are for vegetarians.

▶▶ "We only want the *best* candidate ..."

... fortuitous that in the old dictionary there's a picture of a white man by the definition of "best"...

... upping the ante...

- Create professional society equivalents to Title IX
 - *e.g.*, the American Chemical Society could award Petroleum Research Fund (PRF) grants to XX and URM faculty in all departments but otherwise only to faculty from departments with environments that have attracted women above the historical brick wall of 10%
- Do diversity audits of chemical sciences departments
 - highlight and praise the departments that create environments appealing to women and minorities
- Encourage undergraduates to give diversified institutions their first attention when looking at graduate school
- OUT THE TOXIC DEPARTMENTS !!!

... guerilla website??

Doctorate schools of faculty members at the “Top 10” chemistry departments*

	Ph.D. School of Faculty at Top 10			Faculty at #11-25		
	Women	Men	Total	Women	Men	Total
UC-Berkeley	8	36	44 (18.2%)	4	43	47
Caltech	1	17	18	2	21	23
Harvard	2	57	59 (3.4%)	1	49	50
Stanford	2	16	18	1	19	20
MIT	4	22	26 (15.4%)	1	35	36
Cornell	1	9	10	4	14	18
Columbia	1	14	15	3	11	14
U of Illinois	0	9	9	3	13	16
Wisconsin	0	9	9	3	15	18
Chicago	1	11	12	1	16	17

►► it's a power law: the top 10 hires from the top 10, but the women educated at the top 10 (other than Berkeley and MIT) *really* don't want an academic career in the top 10 (or top 25)...

* Compiled by Valerie Kuck, 2001, by data mining the 1999 Directory of Graduate Research

... upping the ante...



- Create a new guideline for professional society (especially ACS) awards — if women are not among the nominees under consideration, the award simply is not bestowed AT ALL that year. In that the Awards committee was not presented with a comprehensive, unbiased slate, to uphold the honor and prestige of the award, no award should be given
- Educate faculty that as a society we (men and women) overvalue the competence, stature, and productivity of men and undervalue that of women
- Put to rest the myth that a scientist's best creativity and productivity occurs in early career: the tenure clock is an artifice and one that has been especially damaging to young women trying to integrate career and family

How do S&E&T departments get more women as faculty?

- On-site day care
- Mentorship that illuminates the choices and opportunities
- Reconfigure how students are supported to do research as part of their graduate degrees
- Dial-back the demands ... men and women in academia have always worked hard ... now they work insanely hard

If faculty must become the equivalent of CEOs (and COOs and CTOs and CFOs and...) to thrive in academia, and it seems they must, the pay had better become commensurate (dream on) — or return the faculty to their primary function: training and challenging students in pursuit of scholarly research

- Change the reward structure — REALLY reward, and reward first and foremost those professors who truly guide, mentor, and challenge in the classroom and the research lab — and the system will turn on a dime

What role can the funding agencies play??

- ✓ Fund graduate students outside the competitive grant system

"The main reason we have to write proposals is to support our graduate students, right?"

- ✓ Reward via grant funds/renewals those faculty who do do it right

... such faculty are indeed national treasures: **REWARD THEM!!!**

- ✓ Do diversity audits and use regulations already on the books to withhold awards to departments with a clear and egregious pattern of an environment hostile to women:

THE GOAL: WOMEN WHO DO MORE THAN JUST SURVIVE ... THEY THRIVE

A complex, multivariate problem... yet why do the PTB push a one-answer mantra??

30 years ago the mantra was “keep women in the pipeline”

[Eqn] more women with Ph.D.s in S&E = problem solved

(i.e., more women hired into academia, winning awards, *u.s.w.*)

WRONG!!!

(necessary, but not sufficient)

Today's mantra: achieve “critical mass” of women faculty in a department ... but ...

► differentiation of female faculty produces isolation even when the numbers reach critical mass

Etzkowitz et al. (1) *Science*, 1994, 266, 51; (2) *Athena Unbound—The Advancement of Women in Science and Technology*, Cambridge University Press, 2000

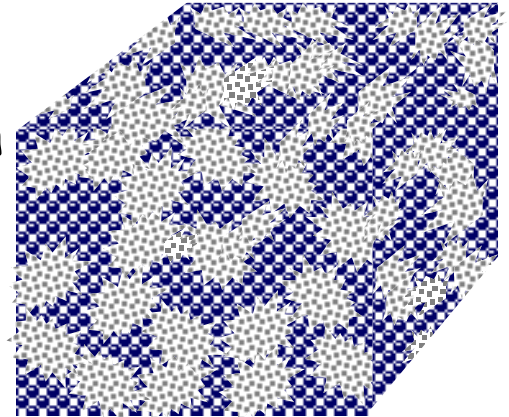
What if it isn't a critical mass that is needed, but a percolation threshold??

~ 15% ... that number is where one needs to be to reach a percolation threshold in a 3-D problem

Once \geq the 3-D percolation threshold, the small amount of “other” in the sea of the majority thinks it is representative of the whole and electron conductivity (if we are talking about one of my research interests — composite electrode materials) occurs with impunity, as does communication and a sense of community, if we are talking about women in a man's world.

- Is reaching $>15\%$ a happenstance outcome?
- Is reaching a contiguous network the better goal??

3-D percolation



... and women *and* men can be members of such networks

If we can't pull women chemists into academics when there is one women for every two men who graduate with Ph.D.s in chemistry, how are we ever going to get underrepresented minorities (URMs) onto chemistry faculty?



Tracking (lack of) diversity.

Oklahoma's **Donna Nelson** with students Audra Wendt, front left, and Lina Ea, who helped collect data on minority chemistry faculty members.

[1] *Science*, **292** (2001)
1291; 18 May

[2] *AWIS Magazine*, Spring
2001, 10

Is the answer ... we aren't??? ...

Top Chemistry Departments with —0— URM Faculty

Caltech (26)	MIT (29)	Kansas (24)
Colorado State (29)	Northwestern (24)	UNC-CH (35)
Columbia (22)	Penn State (29)	Rochester (20)
Florida State (37)	Princeton (26)	S. Carolina (27)
Harvard (25)	Stanford (25)	Texas (43)
Indiana (30)	U. Akron (17)	Utah (29)
Johns Hopkins (16)	Chicago (26)	Wisconsin (40)
	Colorado (37)	Virginia Tech (28)

of African-American assistant professors in
the top 50 chemistry departments: 0, nada, zip

of African-American assistant professors in
the top 50 chemical engineering departments:
0, nada, zip

CAWMSET (Commission on the Advancement of Women and Minorities in Science, Engineering & Technology Development)
... Congress is fed up... [<http://www.nsf.gov/od/cawmset/start.htm>]

Professional Life: Problem

The U.S. workplace culture needs to value differences more.

The Commission recognizes that racial prejudice and ethnic and gender stereotypes are still pervasive in professional life. For women, underrepresented minorities, and people with disabilities these problems are manifested in inadequate work and family life accommodation, unequal pay scales and advancement, and non-inclusive behaviors in the SET workplace.

Recommendation

The Commission recommends that both public and private SET employers be held accountable for the career development and advancement of their employees who are women, under-represented minorities, and persons with disabilities.

... upping the ante ... Congress is fed up ...

[<http://commerce.senate.gov>]

3 October 2002 — Hearing on Title IX and Science Subcommittee on Science, Technology, and Space from the Statement of Senator Ron Wyden, Chair:

In my view, if Title IX can do that on the playing field it should certainly do so in the classroom, where its help was originally directed... This week, I will offer another amendment to the NSF authorization bill. I want the National Academy of Sciences to report on how universities support their math, science and engineering *faculty* with respect to Title IX. This can cover hiring, promotion, tenure, even allocation of lab space.

The Federal government should share some of the spotlight. I will request that the Academy's report also detail how many Federal grants for scientific research are given to men and women and why. It's time Congress quantified and qualified the realities facing women in the sciences. Only then can we find fully effective solutions.

See also: News Focus by J. Mervis, *Science* (2002) 11 October, p. 356

... upping the ante ... Congress is fed up ...

[<http://thomas.loc.gov/home/c107/query.html>]

H.R. 4664 "An act to authorize appropriations for fiscal years 2003, 2004, 2005, 2006, and 2007 for the National Science Foundation and other purposes"

—signed into law by President Bush on 19 December 2002—

SEC. 18. REPORTS—(b) FACULTY. Not later than 3 months after the date of enactment of this Act, the Director shall enter into an arrangement with the National Academy of Sciences to assess gender differences in the careers of science and engineering faculty. This study shall build on the Academy's work on gender differences in the careers of doctoral scientists and engineers and examine issues such as faculty hiring, promotion, tenure, and allocation of resources including laboratory space ...

(c) GRANT FUNDING. Not later than 3 months after the date of enactment of this Act, the Director shall enter into an agreement with an appropriate party to assess gender differences in the distribution of external Federal research and development funding. This study shall examine differences in amounts requested and awarded, by gender, in major Federal external grant programs.

People in academics can, and do, do it right — we should stop rewarding the ones who do it wrong, even if they bring in dollars (and renown) galore

The first and highest rewards should go to those who fulfill their duties to what *is* the product of the U.S. university:
the students

WHY? Brutal environments drain the joy out of doing science

... a former postdoctoral associate of mine commented that it was a high tribute to my Ph.D. advisor, Royce Murray, that every person she had met who had come through his group retained such a love of science—the sheer joy of tussling and playing with new science. Coming from an Ivy League university, she has seen more than her share of the browbeaten — and they are not joyous scientists...

... for future reference...

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... places to go...



Chesapeake Bay Bridge before being opened to traffic
(File photo, Washington Post)

“The most notable fact that culture imprints on woman is the sense of our limits. The most important thing one woman can do for another is to illuminate and expand her sense of actual possibilities.”

Adrienne Rich in *Of Woman Born*, 1976