

The Science Glass Ceiling

ACES Retreat

Case Western Reserve University

October 26, 2004

Dr. Sue V. Rosser
Dean, Ivan Allen College



A Research Scientist at a Prestigious Research I Institution:

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THE CHRONICLE

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The M.I.T. professors who studied the treatment of female faculty members included (from left): Sylvia Ceyer, Paola Rizzoli, Penny Chisholm, Nancy Hopkins, Leigh Royden, JoAnne Stubbe, and Mary-Lou Pardue.

Women at MIT Create a Movement for Female Academics

Their report changes their careers and prompts
other universities to look anew at gender bias: A16

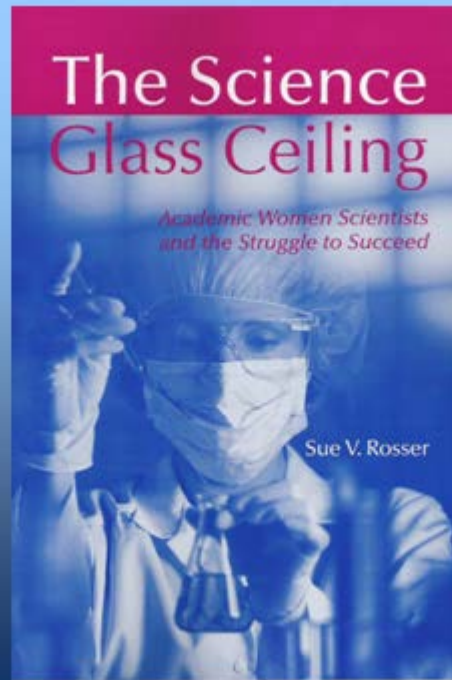
Statement by Leaders at MIT Meeting on 1/29/01

“Institutions of higher education have an obligation, both for themselves and for the nation, to fully develop and utilize all the creative talent available,” the leaders said in a unanimous statement. “We recognize that barriers still exist” for women faculty.

They agreed to:

- Analyze the salaries and proportion of other university resources provided to women faculty
- Work toward a faculty that reflects the diversity of the student body
- Reconvene in about a year “to share the specific initiatives we have undertaken to achieve these objectives”
- “Recognize that this challenge will require significant review of, and potentially significant change in, the procedures within each university, and within the scientific and engineering establishments as a whole.”

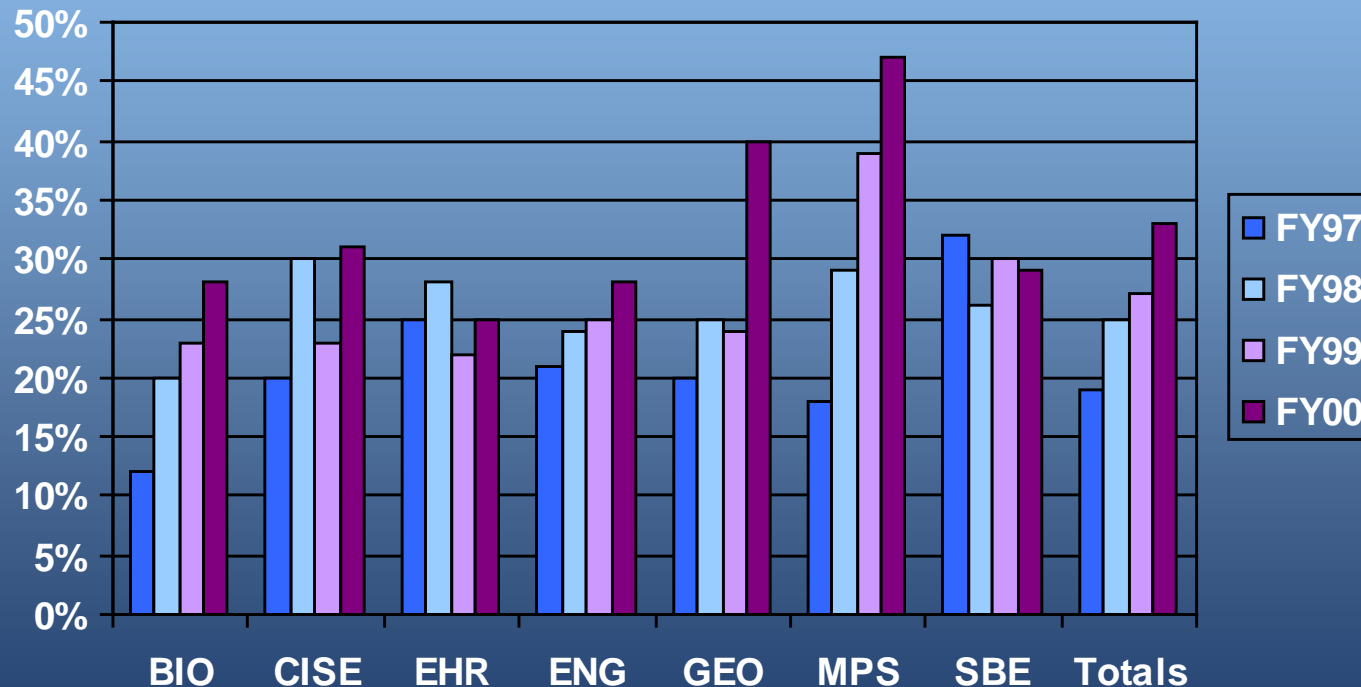
(Campbell, 2001, p.1)



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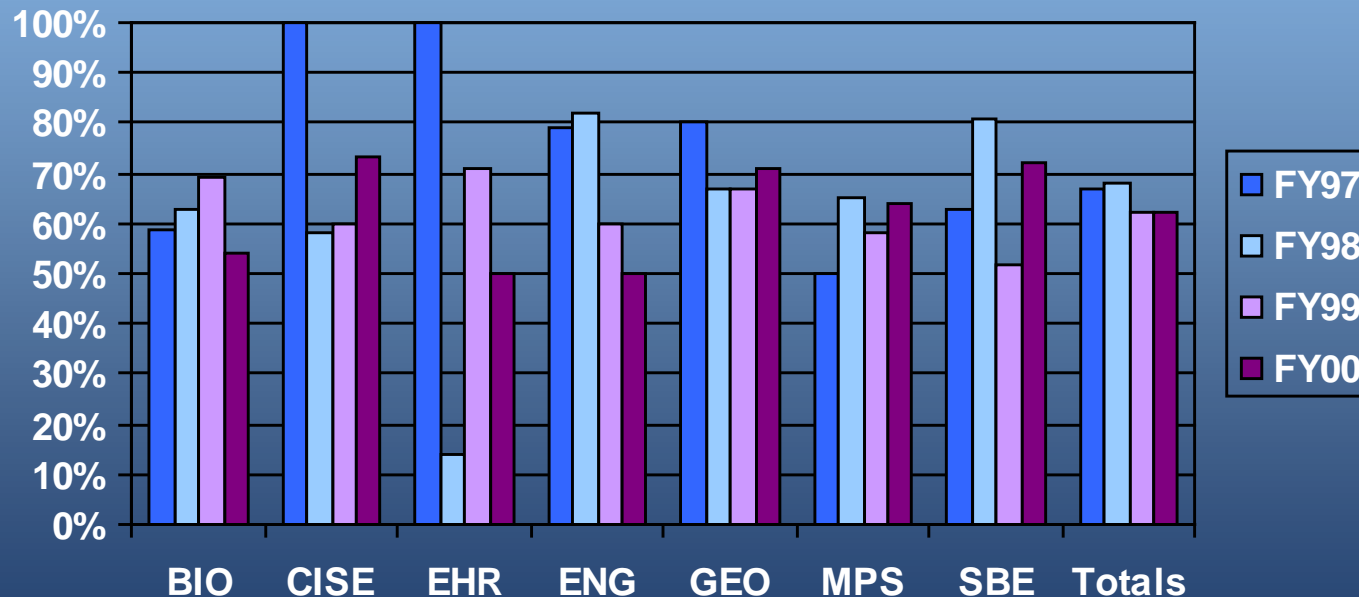
Summary Information for POWRE Awards for FY '97, '98, '99, '00

Overall Success Rate



Numbers and Disciplinary Distribution of Respondents to Questionnaire

Responses to E-mail Questions divided by Total Grants



Total Responses to Question 1

Question 1: What are the most significant issues/challenges/opportunities facing women scientists today as they plan their careers?

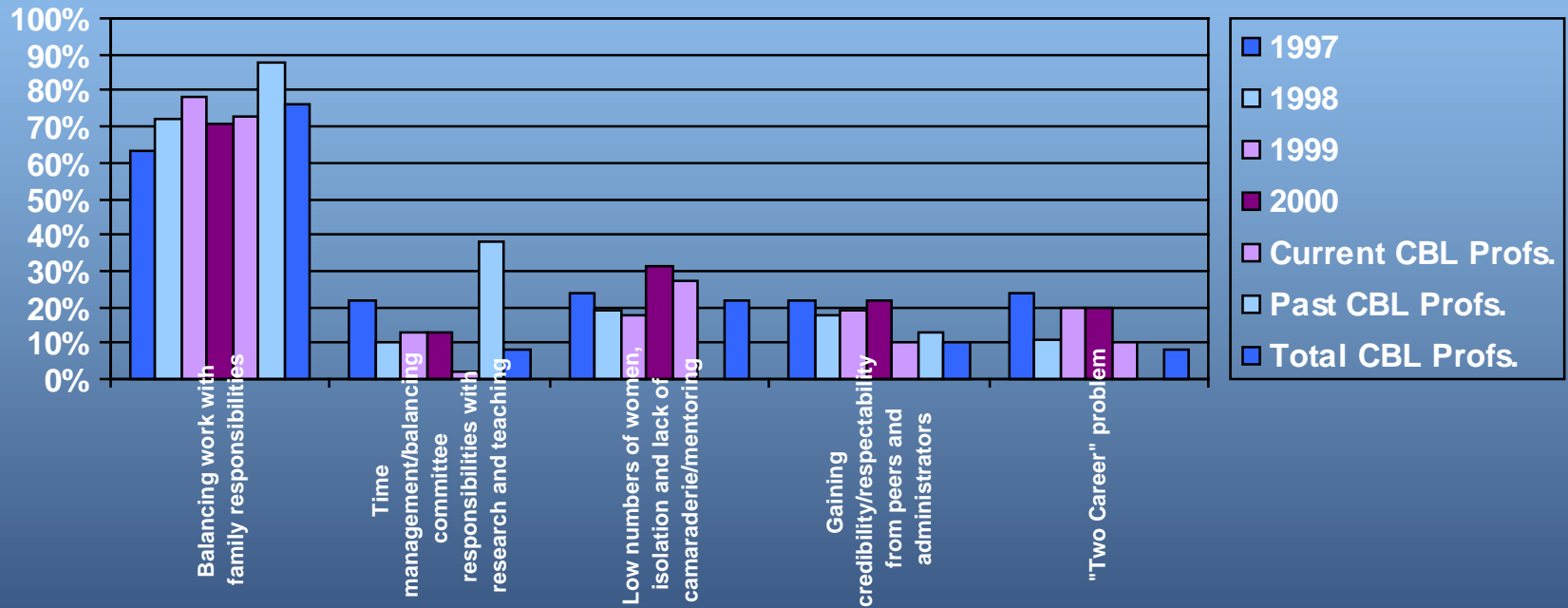


Table 3. Total Responses to Question 1

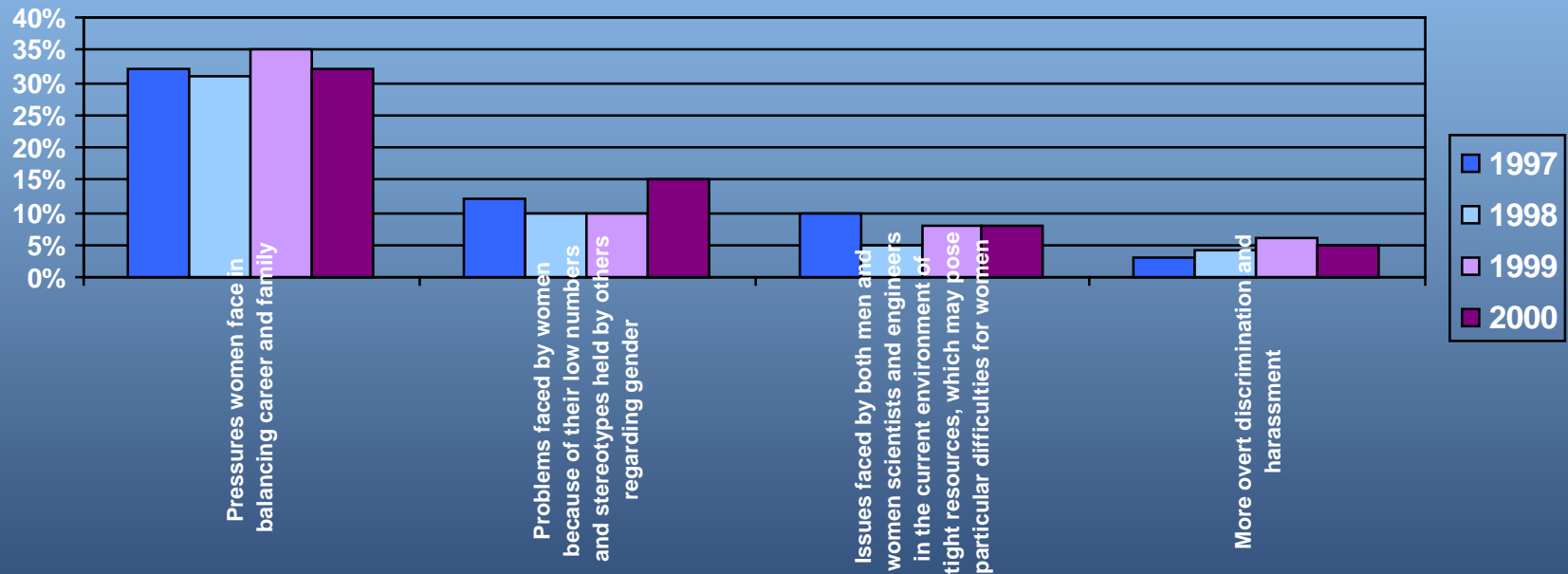
Question 1: What are the most significant issues/challenges/opportunities facing women scientists today as they plan their careers?

Categories	1997		1998		1999		2000	
	% of responses		% of responses		% of responses		% of responses	
1 Balancing work with family responsibilities (children, elderly relatives, etc.)	62.7	(42/67)	72.3	(86/119)	77.6	(76/98)	71.4	(75/105)
2 Time management/balancing committee responsibilities with research and teaching	22.4	(15/67)	10.1	(12/119)	13.3	(13/98)	13.3	(14/105)
3 Low numbers of women, isolation and lack of camaraderie/mentoring	23.9	(16/67)	18.5	(22/119)	18.4	(18/98)	30.5	(33/105)
4 Gaining credibility/respectability from peers and administrators	22.4	(15/67)	17.6	(21/119)	19.4	(19/98)	21.9	(23/105)
5 "Two career" problem (balance with spouse's career)	23.9	(16/67)	10.9	(13/119)	20.4	(20/98)	20.0	(21/105)
6 Lack of funding/inability to get funding	7.5	(5/67)	4.2	(5/119)	10.2	(10/98)	8.6	(9/105)
7 Job restrictions (location, salaries, etc.)	9.0	(6/67)	9.2	(11/119)	7.1	(7/98)	5.7	(6/105)
8 Networking	6.0	(4/67)	<1	(1/119)	0	(0/98)	4.8	(5/105)
9 Affirmative action backlash/discrimination	6.0	(4/67)	15.1	(18/119)	14.3	(14/98)	12.4	(13/105)
10 Positive: active recruitment of women/more opportunities	6.0	(4/67)	10.1	(12/119)	9.2	(9/98)	14.3	(15/105)
11 Establishing independence	3.0	(2/67)	0	(0/119)	6.1	(6/98)	2.9	(3/105)
12 Negative social images	3.0	(2/67)	3.4	(4/119)	2.0	(2/98)	<1	(1/105)
13 Trouble gaining access to nonacademic positions	1.5	(1/67)	1.7	(2/119)	1.0	(1/98)	1.9	(2/105)
14 Sexual harassment	1.5	(1/67)	<1	(1/119)	2.0	(2/98)	1.9	(2/105)
15 No answer	0	(0/67)	<1	(1/119)	1.0	(1/98)	1.9	(2/105)
16 Cut-throat competition	--	--	--	--	1.0	(1/98)	1.9	(2/105)

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Categorization of Question 1 across Year of Award

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Table 4. Categorization of Question 1 across Year of Award

Question 1: What are the most significant issues/challenges/opportunities facing women scientists today as they plan their careers?					
Categories	Response numbers^b	Means of responses			
		1997	1998	1999	2000
A Pressures women face in balancing career and family	1, 5, 7	31.9%	30.8%	35.0%	32.4%
B ^a Problems faced by women because of their low numbers and stereotypes held by others regarding gender	3, 4, 8, 10, 12	12.3%	10.1%	9.8%	14.5%
C ^a Issues faced by both men and women scientists and engineers in the current environment of tight resources, which may pose particular difficulties for women	2, 6, 16	10.0%	4.8%	8.2%	7.9%
D More overt discrimination and harassment	9, 11, 13, 14	3.0%	4.4%	5.8%	4.8%

^aThe alphabetic designation for categories B and C have been exchanged, compared with earlier papers (Rosser and Zieseniss, 2000) to present descending response percentages.

^bGiven the responses from all four years, after receiving faculty comments at various presentations of this research, and after working with the data, we exchanged two questions from both category B and D to better reflect the response groupings. Specifically, responses 10 and 12 (considered in category D in Rosser and Zieseniss, 2000) were moved to category B. Similarly, responses 11 and 13 (included in category B in Rosser and Zieseniss, 2000) were placed into category D.

Category A: Pressures women face in balancing career and family

At the risk of stereotyping, I think that women generally struggle more with the daily pull of raising a family or caring for elderly parents, and this obviously puts additional demands on their time.

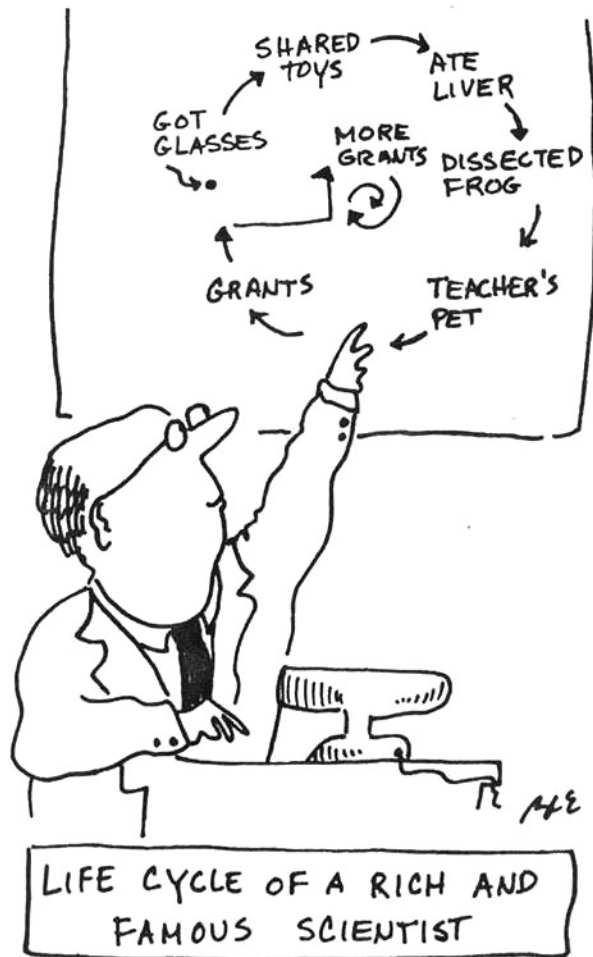
(2000 respondent 63)

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Category A: Pressures women face in balancing career and family

At the risk of stereotyping, I think that women generally struggle more with the daily pull of raising a family or caring for elderly parents, and this obviously puts additional demands on their time. This is true for younger women, who may struggle over the timing of having and raising children, particularly in light of a ticking tenure clock, but also for more senior women, who may be called upon to help aging parents (their own or in-laws). Invariably they manage, but not without guilt.

(2000 respondent 63)



LIFE CYCLE OF A RICH AND FAMOUS SCIENTIST

Importance of Flexibility and Duration of Award

Child care benefits - I've never heard of anything similar elsewhere, and it's really a great way to make it easier for women in academia to balance work and family (not that it's ever easy).



(CBL respondent 37)

Category A: Pressures women face in balancing career and family

Managing dual career families (particularly dual academic careers). Often women take the lesser position in such a situation. Ph.D. women are often married to Ph.D. men. Most Ph.D. men are not married to Ph.D. women.

(2000 respondent 16)

Category B: Problems because of low numbers and stereotypes

The biggest challenge that women face in planning a career in science is not being taken seriously. Often women have to go farther, work harder and accomplish more in order to be recognized.



(2000 respondent 21)

Importance of credibility/respectability

The CBL Professorship is a tremendous help in two regards. First, simply the prestige of having a named professorship has been useful. Second, the financial security provided by this fellowship has allowed me to undertake risky projects in the lab. Since these are the type of projects that have the highest possible reward, this flexibility is greatly appreciated.

(CBL respondent 28)

Category B: Problems because of low numbers and stereotypes

In my field, (concrete technology) women are so poorly represented that being female certainly creates more notice for you and your work, particularly when presenting at conferences. This can be beneficial, as recognition of your research by your peers is important for gaining tenure; it can also add to the already large amount of pressure on new faculty.

(2000 respondent 70)

Importance of credibility/respectability

People take notice that I have a named chair.



(CBL respondent 2)

Category C: Issues faced by all, with particular difficulties for women

I have noticed some problems in particular institutions I have visited (or worked at) where women were scarce. As a single woman, I have sometimes been viewed as “available,” rather than as a professional co-worker. That can be really, really irritating. I assume that single men working in a location where male workers are scarce can face similar problems. In physics and astronomy, usually the women are more scarce.

(1997 respondent 26)

Category C: Issues faced by all, with particular difficulties for women

I still find the strong perception that women should be doing more teaching and service because of the expectation that women are more nurturing. Although research as a priority for women is given a lot of lip service, I've not seen a lot of support for it.

(2000 respondent 1)

Importance of Flexibility and Duration of Award

The fund given in addition to the academic salary has been very useful, especially since the things it could be put toward were left up to us (within reason). I have been able to use this fund to start a new project in the lab (that I had not accounted for in my start-up package), hire an undergraduate technician for the summer, and buy computer equipment that made my teaching duties easier.

(CBL respondent 4)

Category D: More overt discrimination and/or harassment

There are almost no women in my field, no senior women, and open harassment and discrimination are very well accepted and have never been discouraged in any instance I am aware of.



(1998 respondent 53)

Category D: More overt discrimination and/or harassment

I have often buffered the bad behavior of my colleagues - and over the years I have handled a number of sexual harassment or “hostile supervision” cases where a more senior person (all of them male) was behaving inappropriately toward a lower social status woman (or in rarer cases a gay man).

(1999 respondent 59)

Category D: More overt discrimination and/or harassment

The discrimination they continue to face in the workplace. We seem to be making virtually no gains in terms of rates at which women are granted tenure or promotion to full professor. The older I get, the more depressing these statistics become. Women's research is often marginalized. Women's approaches are not recognized. Men scientists want to judge women by "their" standard (i.e. the white male way of doing things!). Most men have no appreciation for the power and privilege of their whiteness and maleness.

(1999 respondent 70)

Laboratory climate - positive

The most significant challenge I face is favoring “hacker” experience. In the computer science discipline in which I work, respect is conferred upon those who possess knowledge obtained primarily through countless hours investigating the nuances of hardware and operating systems. To many in my peer group, this is a relaxing hobby and way of life.

(1999 respondent 68)

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(1999 respondent 68)

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Laboratory climate - positive

I find the laboratory climate more liberal than, say, the “office climate.” I also feel autonomous, powerful and free in this environment (maybe it’s because I get to use power tools?) In the laboratory climate, I am able to create and build. I am also able to ask for help and delegate responsibility. Sometimes my colleagues ask me for help.

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(1997 respondent 27)

Policy/Practice Areas Ripe for Change

- Balancing career and family
- Low numbers of women and stereotyping
- Overt discrimination and harassment
- Decreased funding issues



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GT's ADVANCE Project Goals

A network of termed professorships established to mentor women faculty

A series of leadership retreats with women faculty and senior institutional leaders

A series of family-friendly policies

Data gathering and interviews to develop MIT-like Report to chart equity progress

A formal tenure and promotion training process to remove subtle gender, racial, and other biases