


THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING


2009




The Fight or Flight Moment

Understanding Why We Leave or Stay in Industry

Sue Dorward
Sudo Coaching LLC



ANITA BORG INSTITUTE
FOR WOMEN AND TECHNOLOGY




Association for
Computing Machinery


Sudo Coaching LLC *Developing tomorrow's tech leaders*

Survey of Three 2008 Studies

- The Athena Factor: Reversing the Brain Drain in Science, Engineering, and Technology [SET] (Harvard)
- Women in Technology: Maximizing Talent, Minimizing Barriers (Catalyst)
- Climbing the Technical Ladder: Obstacles and Solutions for Mid-Level Women in Technology (ABI/Stanford) [*supporting underwriter*]



ANITA BORG INSTITUTE
FOR WOMEN AND TECHNOLOGY



Association for
Computing Machinery

THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

Sudo Coaching LLC

Developing tomorrow's tech leaders

Sue Dorward



- Coach high-potential techies
 - J&J, Google, Smith College/SWE
 - private clients (mid-career women!)
- Speaker at Google, SWE, ...
- Articles for IEEE (WIE)
- NYU coaching certificate, ICF certified
- iVillage VP, CNET senior engineer, instructor
- MS CS Princeton (NSF), BA CS Smith College



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

Sudo Coaching LLC

Developing tomorrow's tech leaders

Why focus on retention?

- SET growth is 5x other sectors (2008)
- Demand outstripping supply, IT supply shrinking
- Fewer visas since 2001
- Emerging economies - 75% Chinese students go home vs 20% prior
- Baby boom retirements
- Highly trained, expensive to replace

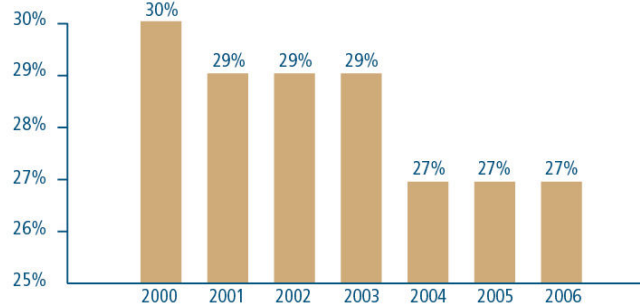


THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

Tech Women

Figure 1: Percentage of Computing and Mathematical Occupations Held by Women, 2000-2006¹⁵



US Bureau of Labor Statistics



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

5

Harvard Study: Athena Factor

Sylvia Ann Hewlett, Carolyn Buck Luce, Lisa J. Servon, Laura Sherbin, Peggy Shiller, Eytan Sosnovich, Karen Sumberg, *The Athena Factor: Reversing the Brain Drain in Science, Engineering, and Technology*, Harvard Business Review Research Report, June 2008, 108 pages.

This research was done by the Hidden Brain Drain Task Force, under the aegis of the Center for Work-Life Policy, a nonprofit think tank.



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

Sudo Coaching LLC

Developing tomorrow's tech leaders

Survey Research Sponsors

- Alcoa
- Cisco
- Johnson & Johnson
- Microsoft
- Pfizer



Sudo Coaching LLC

Developing tomorrow's tech leaders

Methodology

- Four surveys of men and women
 - US online survey (2493)
 - company surveys at 3 global corporations in S,E,T
- Respondents age 25-60 who
 - have a SET degree or tech on-the-job training, and
 - hold or held an industry SET job using that training
- Focus groups and interviews



Sudo Coaching LLC

Developing tomorrow's tech leaders

Fight or Flight Moment

- Over time 52% of women leave industry SET jobs
 - High tech 17% men vs. 41% women leave (2.5 times!)
- % tech-trained women in tech industry jobs:
53% (25-34) 50% (35-44) 31% (45-60)
- 50% go to non-industry SET jobs, 30% to non-SET industry jobs, 20% stay home



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

9

Sudo Coaching LLC

Developing tomorrow's tech leaders

Why the exodus?

Of those leaving:

- Extreme Job Pressure (39%) – hours, stress, health
- Culture not woman-friendly (38%)
- Compensation (27%)

SET Industry women:

- Feel career is stalled (46%) (mid-career)
- Lack career paths (47%), sponsors (84%), mentors (47%), role models (40%) (tech) - Lewinsky factor
- Feel isolated (38%) (tech)



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

More subtle attrition factors

- Risk-aversion leads to fewer high-profile successes
- Less credit even if you take a risk, no 2nd chances (no sponsor)
- Sidetracked into helper roles
- Macho culture (Discrimination)
 - 66% mid / 64% tech “experienced sexual harassment”
 - 44% mid / 46% tech “perceive bias in performance evaluation”
 - 23% mid / 27% tech “believe women are seen as intrinsically less capable”



What helps retain women?

- 10% female management tipping point
 - culture change from the top
 - less isolation
 - more role models
- Flexible workday and career track timing
- Career paths, mentors, and sponsors
- Opportunities for altruism (Athena factor)
- On-ramps (64% are interested)



Catalyst Study: Women in Technology

Heather Foust-Cummings, Laura Sabattini, Nancy Carter,
Women in Technology: Maximizing Talent, Minimizing Barriers,
2008, 38 pages.

Lead Sponsor: IBM Corporation (*175% increase in women execs
in late '90s*)

Contributing Sponsors: Cisco Systems, Inc., Dell Inc.,
National Center for Women and Information Technology
(NCWIT)



Background

- 3rd study in a series (2003, 2005), very focused
- Phase 1: Towers Perrin-ISR surveys of men and women in 23 tech organizations (2002-2005)
- Phase 2: Online survey of 471 women who either work at tech co. (80%) or are techies at non-tech co. (20%); 2/3 techies, 1/2 managers, 87% US (2007)



Table 4: Individual Barriers to Career Advancement: Generational Cohorts

Barrier	Percentage of Women Responding That Barrier Affected Career Advancement to a Great or Very Great Extent		
	Boomers	Gen X	Gen Y
Not Having a Mentor, Sponsor, or Champion Who Makes My Accomplishments Known to Important People in the Company	45%	32%	18%
Lacking Role Models in the Company Who Are Similar to Me	43%	38%	31%
Being Excluded From the Important Networks of Key Decision-Makers	40%	32%	20%
Having a Limited Number of Important or Special Job Assignments That Are Highly Valued by Higher-Level Managers	26%	28%	27%
Not Understanding the "Unwritten Rules" or Norms of My Company or Department	25%	20%	16%
Not Fitting the Company Image of How a Leader Should Look and Behave	23%	18%	16%

© 2008 Catalyst

More likely to report barriers if...

- Have MS or PhD
- Work for larger company
- Have fewer women in your working group

Barriers are the same for tech and non-tech women, at tech and non-tech companies.



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

Gender-Based Differences

Tech women gave lower ratings than tech men and non-techies on every measure of:

- supervisors and supervisory relationship
- perceptions of fairness and voice

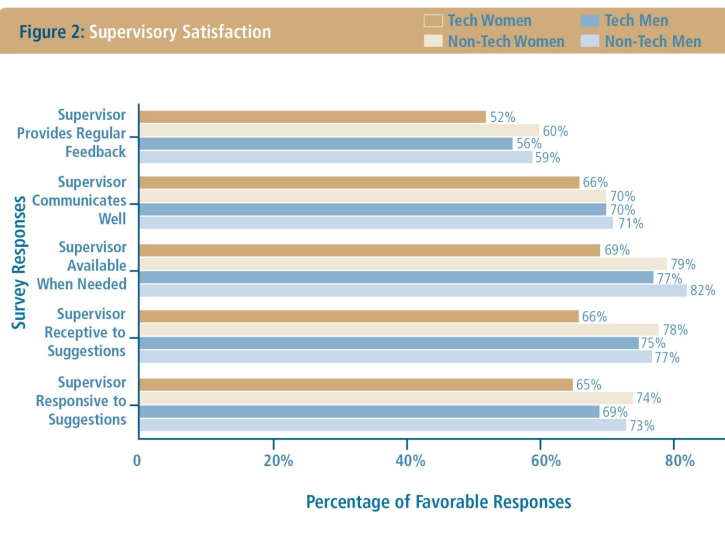
All other areas were similar, including “planning to leave” and “career development”.



THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

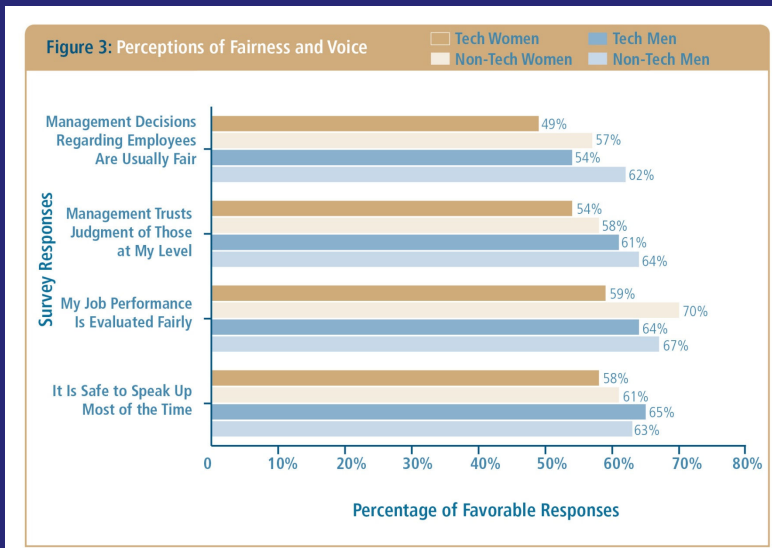
2009

Figure 2: Supervisory Satisfaction



THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

2009



THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

2009

Climbing the Technical Ladder

Caroline Simard, Andrea Davies Henderson, Shannon Gilmartin, Londa Schiebinger, Telle Whitney, *Climbing the Technical Ladder: Obstacles and Solutions for Mid-level Women in Technology*, 2008, 81 pages.

Authors are from Anita Borg Institute for Women and Technology (ABI) and Michelle R. Clayman Institute for Gender Research at Stanford University



THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

2009

Underwriters

- Research Underwriters - NSF, NCWIT, Career Action Center, ABI, Stanford
- Report underwriters
 - Contributing – Symantec, Stanford, ABI
 - Supporters – ***Sudo Coaching LLC***, Alexander Atkins Design, Inc., Ventana Public Relations, Jody Mahoney



Methodology

- Surveyed technical employees (men and women) of seven top-tier Silicon Valley software and hardware companies
- 14% response rate (1,795 of 12,805)
- One co. encouraged women to respond
- 112 follow-up interviews (men and women)



Respondent Profile

- 34% women (vs 24% expected)
- 55% mid-level (~10-20 years exp.)
- Avg. man 2 years older, almost 4 years more tech expertise than avg. woman (attrition)
- 48% international (born outside US)
 - 41% int'l from India, 11% China
 - 59% int'l women from India, 18% China

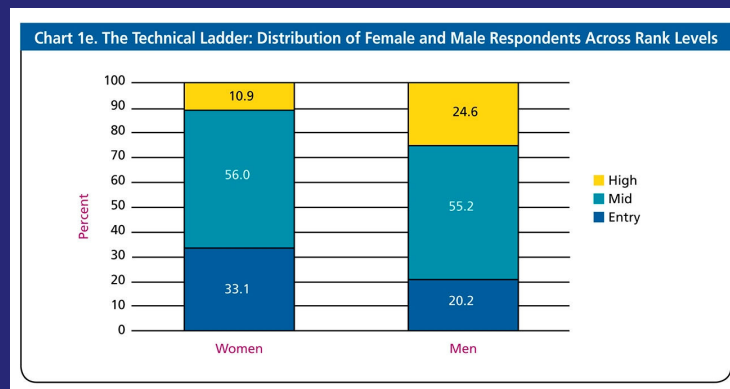


THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

2009

“2.7x more likely to be in high-level position if male”

© 2008 Anita Borg Institute for Women and Technology



THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

2009

At mid-level,
women are more likely than men to...

- be Asian (44 vs 37%)
- experience a competitive work environment (66 vs 47%) – difference only at mid-level (promotions)
- have partner working full-time (79% vs 38%)
- have techie partner (69% vs 32%)
- feel long hours needed to succeed (58 vs 47%)



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

25

At mid-level,
women are less likely than men to...

- feel they work long hours (36 vs 41%)
- have a partner who does not work (9% vs 34%)
- have a partner primarily responsible for home and kids (13% vs 51%)
- have CS or engineering degree (62 vs 77%)
- learn tech skills on own time (62 vs 82%)



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

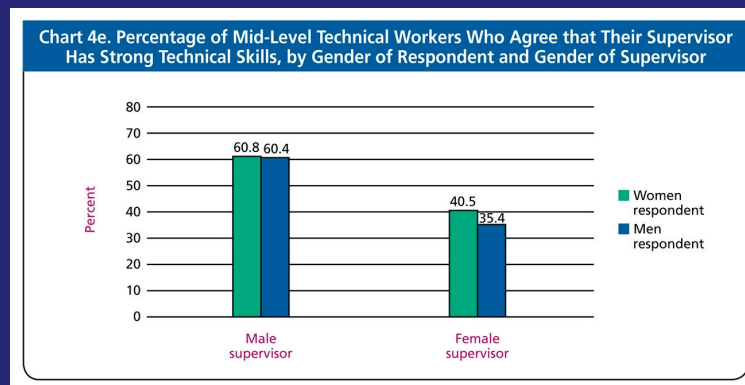
26

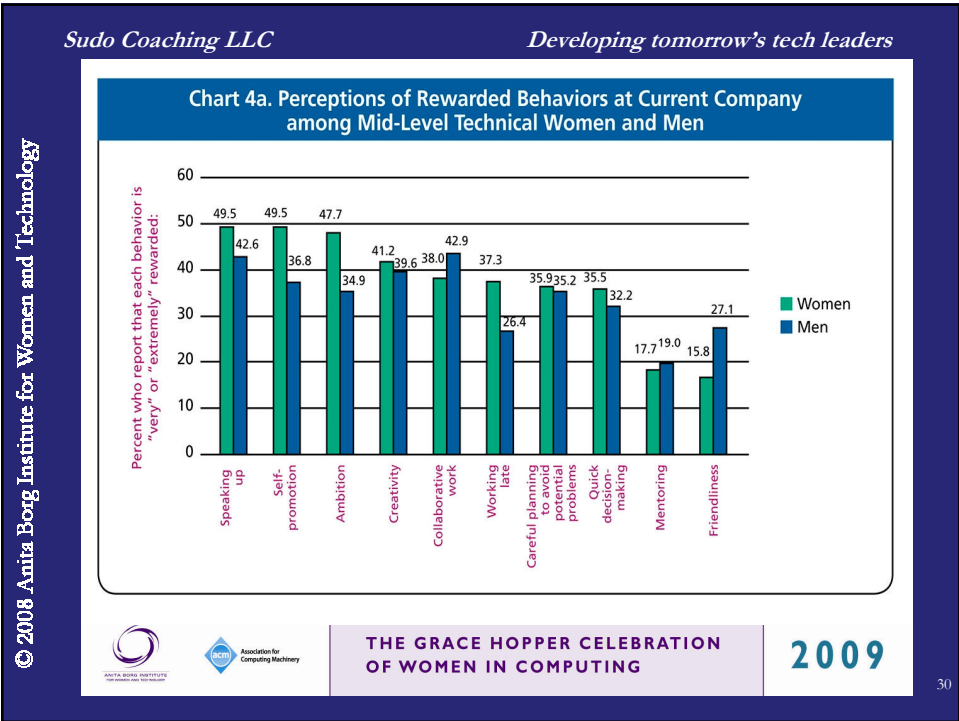
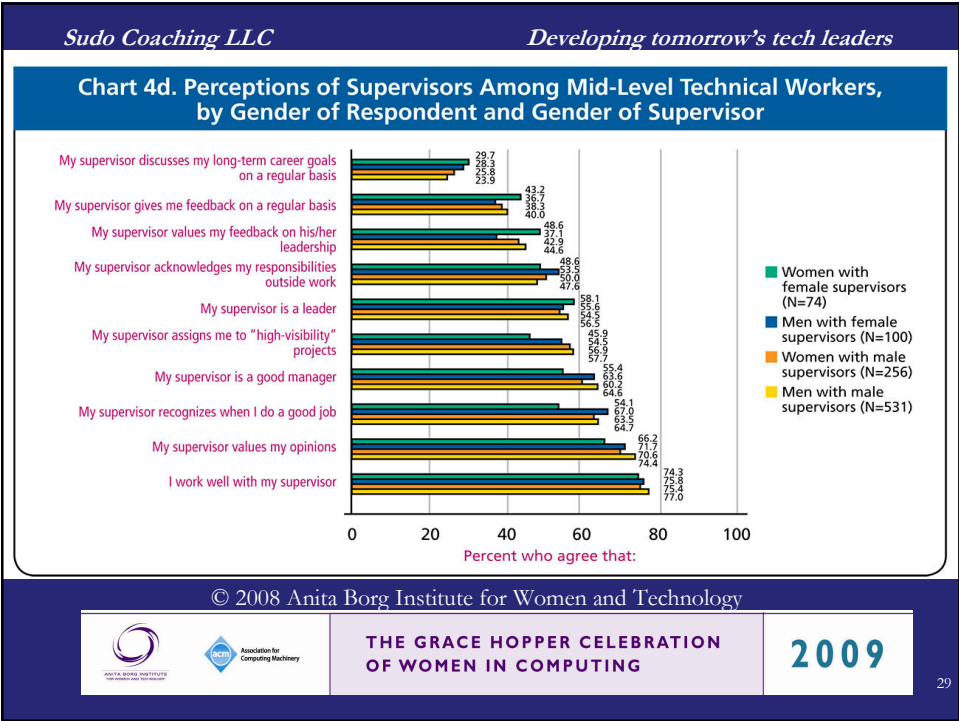
High-level women are more likely than mid-level women to...

- have CS degree (42 vs 29%)
- have a techie partner (75 vs 69%)
- have partner responsible for home & kids (24 vs 13%)

50% difference in tech skills? (expect 26% based on degree)

© 2008 Anita Borg Institute for Women and Technology





What can we do?

- Look for 10% women execs (woman-friendly culture)
- Combat isolation (mentor, sponsor, coach, role models)
- Have a career goal and let people know
- Build and demonstrate tech skills
- Ask for high-profile & riskier assignments

- Be flexible (schedule, promotions, off- and on-ramps)
- Train supervisors (comm, fairness, career development, tech)
- Re-evaluate tech/risk criteria for promotions, provide support
- Align reward systems (mentoring, career development)
- Altruistic opportunities



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

31

Links to Studies

- Harvard – <http://braindrain.hbr.org> (\$295)
(volume discounts)
- Catalyst – <http://catalyst.org/publication/36/>
(free PDF or \$40 printed)
- Stanford – <http://anitaborg.org/news/research/>
(free report and executive summary PDFs)



THE GRACE HOPPER CELEBRATION
OF WOMEN IN COMPUTING

2009

32

Sudo Coaching LLC

Developing tomorrow's tech leaders

Sue Dorward Tech Leader Coach

sue@sudocoaching.com

<http://www.sudocoaching.com>

articles & presentations on resources page



	 Association for Computing Machinery	THE GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING	2009
---	--	---	------