

Gender Equity
Whys, Wherefores, Therefores
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Creating Equity

Sex Disparities in Advancement and Income

Benefits of Insuring Gender Equity

Analyzing and Correcting Visible Gender-Equity Problems

Analyzing and Correcting Hidden Gender-Equity Problems

Individual Action for Gender Equity

Gender, Power, and Influence

Advancing Women: Annotated Bibliography

Creating Equity

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Why do so few women occupy positions of power and prestige in every field?

Why might people fail to recognize that there is a gender equity problem?

Background. The statistics on sex disparities (Valian, 2003, *Sex disparities in advancement and income*) and the references in the annotated bibliography (Valian, 2004, *Advancing women: Annotated bibliography*) lead to the following conclusions.

- There has been progress in gender equity:
 - men and women make roughly equal starting salaries at similar rank (but: the science and engineering pipeline preferentially leaks women; salaries in science and engineering remain a problem; there are signs of early rank differences in science and associated fields).
- Problems remain in all fields:
 - there is greater movement of women than men into part-time positions;
 - advancement is slower for women than for men;
 - women earn less money than men except at entry level;
 - women are particularly underrepresented at top-tier institutions;
 - women receive fewer national awards and prizes.

Two types of explanation are necessary to account for the ubiquity of the problems and the nature of the problems: a) an organizational analysis that brings to bear research and data on organizational structure and change; b) a social-cognitive analysis that brings to bear research and data on gender schemas and the accumulation of advantage. Here I present a social-cognitive analysis.

Gender schemas. Gender schemas - nonconscious hypotheses about sex differences - guide people's perceptions and behaviors, leading men and women alike to overvalue men and undervalue women. Gender schemas also lead us to give more advantages to men than women in professional settings. Finally, gender schemas lead to greater feelings of entitlement among men than women, resulting in different strategies for advancement. The advantages men have are small but numerous; they are molehills that accumulate over time to produce a mountain of advantage for men. (For fuller explication, see Valian, 1998, *Why so slow? The advancement of women*, MIT Press.)

Why we doubt that there is a gender equity problem. The gender schemas analysis has implications for how to justify the need for remedies and for what remedies to propose. For several reasons, it is difficult for people to imagine that anything could seriously be wrong with their practices. Reason 1: schemas operate largely below the level of awareness. Reason 2: there are a few salient, very successful women; the existence of exceptions distracts us from registering the general rule to which those women are exceptions. Reason 3: people sincerely espouse meritocratic and egalitarian beliefs and perceive themselves as acting in concert with

those beliefs. Reason 4: people believe that their corner of the world is a just world in which the deserving are rewarded and the rewarded are deserving.

People therefore rely on four common explanations for gender inequity: a) it's a pipeline problem; b) women's child-care responsibilities (which at best could be ameliorated via day care provisions) preclude their having enough time for serious investment in their professional lives or, in the case of faculty, for research; c) women and men have different values and preferences (which cannot and should not be tampered with); d) women lack information about the reward structure of their field. Each of these explanations obviates the need for change. According to the first explanation, equity is a problem that will take care of itself. According to the second and third, the differences in men's and women's responsibilities and natures dooms equity attempts to futility. According to the fourth, acculturating women will solve the problem.

Is it a *pipeline* problem? In many fields, there is a pipeline problem. But the pipeline selectively leaks women, as the decline in the percentage of women from undergraduate to graduate to professorial status shows. The problem is a leaky-pipeline problem. And that problem is itself likely to be caused in part by gender imbalances in the professoriate and the professions and by the practices that produce that imbalance. (See the annotated bibliography for more information.)

Is it a *child care* problem? In part. Working fathers do not do their share of child care. Few institutions supply high-quality day care to men and women. But women without children do not progress at the same rate as men. Thus, institutions do not develop their male and female employees equally well, even when the women have the same characteristics as the men. (See the annotated bibliography for more information.)

Is it a *values* problem? This is harder to evaluate. Survey data suggest that, by and large, men and women want the same things from their job. But it is probably also true that men are more willing than women to forgo a balanced life. Is it a wise policy decision to have those who forgo a balanced life (regardless of their sex) dominate our institutions? Or do people who live a balanced life provide benefits to an institution, benefits which add value but are insufficiently recognized and compensated?

Is it an *acculturation* problem? In part. Women do not receive as much information as men do about how to be successful. But not all institutional policies and practices should be acculturated to; some work against the full development of their members.

The first step in justifying attention to equity is to neutralize the faulty reasoning behind reluctance to begin equity efforts. The second step is to show that the institution will benefit by paying attention to equity. For example, gender is a window on institutional effectiveness: ensuring gender equity ensures a better-run institution.

Postdoctoral	30	10	12	na	0	0	32	22
	13	35	29	20				

1 = Biology; 2 = Chemistry; 3 = Earth & Planetary Sciences, 4 = Brain & Cognitive Sciences; 5 = Math; 6 = Physics

MIT Faculty Newsletter (March 1999). Special edition: A study on the status of women faculty in science at MIT, Vol XI, No 4. Available on-line.

Scientists and engineers: Academic tenure in 1997

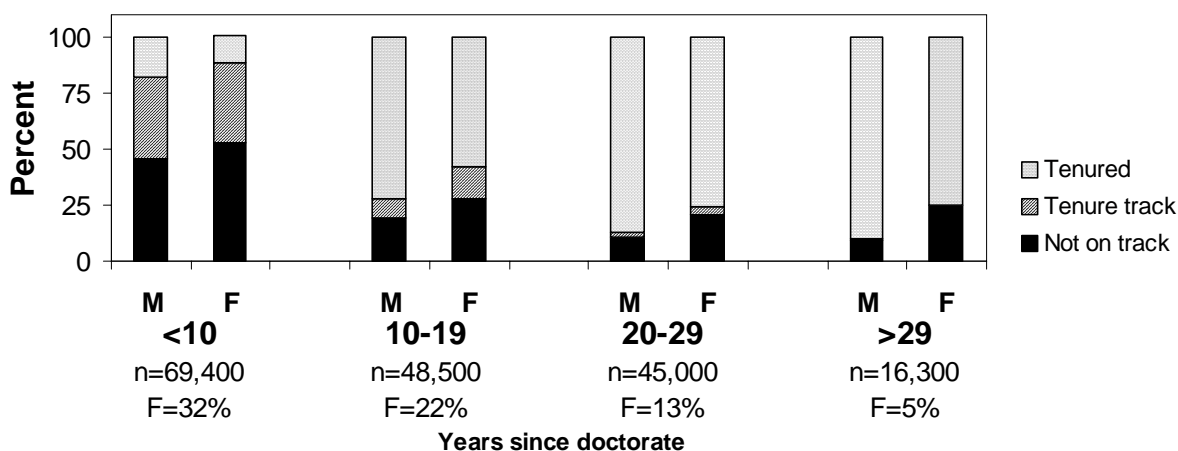
Representation of women doctoral scientists and engineers at universities and 4-year-colleges: 25% engineering - 6.5%; biological and agricultural sciences - 28%; psychology - 43%

Tenured or tenure-track (out of combined tenure, tenure track, not in track, and positions for which tenure not applicable [e.g., post-doctoral or other appointments]): 56% of women, 72% of men

Tenured or tenure-track (out of combined tenure, tenure track, and not in track [excluding other positions]): 77% of women, 88% of men
 engineering: 83% of women, 90% of men
 biological and agricultural sciences: 70% of women; 84% of men
 psychology: 75% of women; 89% of men

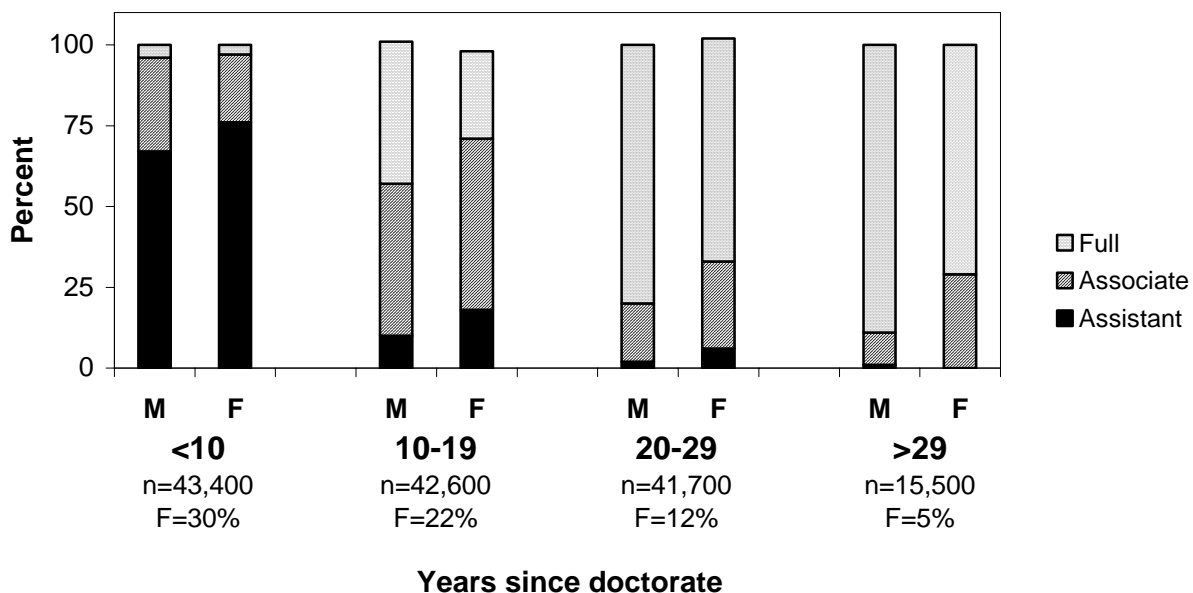
National Science Foundation, Division of Science Resource Studies. (1999). Characteristics of doctoral scientists and engineers in the United States: 1997; Table 19 and calculations from Table 20. Arlington, VA: National Science Foundation (NSF). Report available on line.

Scientists & engineers by sex and year since degree: Academic tenure in 1997



National Science Foundation. (2000). Women, minorities, and persons with disabilities in science and engineering: 2000; calculated from Appendix Table 5-16. Arlington, VA: NSF. Report available on line: <http://www.nsf.gov/sbe/srs/nsf00327/start.htm>. "Not on track" includes "not on tenure track" and "no tenure system at institution/for my position". N.B.: This figure includes all scientists, whether ranked or not, and thus includes more scientists than the following figure.

Scientists & engineers by sex and year since degree: Academic rank in 1997



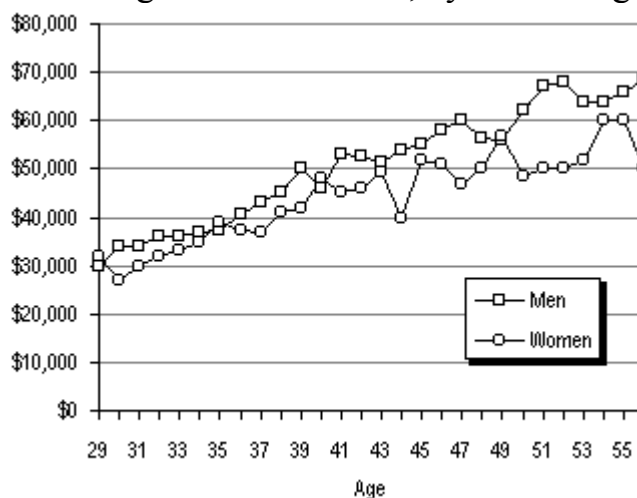
National Science Foundation. (2000). Women, minorities, and persons with disabilities in science and engineering: 2000; calculated from Appendix Table 5-15. Arlington, VA: NSF. Report available on line: <http://www.nsf.gov/sbe/srs/nsf00327/start.htm>. N.B.: This figure includes only ranked scientists and thus includes fewer scientists than the preceding figure.

Percentage of full-time ranked doctoral scientists and engineers in 4-year colleges or universities who are full professors, by sex and years since doctorate: 1997



National Science Foundation. (2000). Women, minorities, and persons with disabilities in science and engineering: 2000; calculated from Appendix Table 5-15. Arlington, VA: NSF. Report available on line: <http://www.nsf.gov/sbe/srs/nsf00327/start.htm>.

Median salary of doctoral scientists employed full time in 4-year colleges or universities, by sex and age: 1997



National Science Foundation. (2000). Women, minorities, and persons with disabilities in science and engineering: 2000; Figure 5-3. Arlington, VA: NSF. Report available on line: <http://www.nsf.gov/sbe/srs/nsf00327/start.htm>.

Scientists and engineers by sex and age: Median annual salary in 1997
All settings (academia, industry, etc.); doctorate recipients only

Physical and related sciences**Engineering**

<i>age</i>	<i>women</i>	<i>men</i>	<i>age</i>	<i>women</i>	<i>men</i>
20-29	35,000	43,000	20-29	40,000	60,000
30-39	47,000	51,000	30-39	58,900	65,000
40-49	58,000	69,300	40-49	68,000	74,000
50 or >	61,500	78,000	50 or >	75,800	82,000

Total science and engineering [also includes computer science, math, life sciences, social sciences]

<i>age</i>	<i>women</i>	<i>men</i>
20-29	31,000	47,000
30-39	42,000	54,900
40-49	54,000	65,000
50 or >	58,000	73,500

National Science Foundation. (2000). Women, minorities, and persons with disabilities in science and engineering: 2000; Appendix Table 5-24. Arlington, VA: National Science Foundation. Report available on line: <http://www.nsf.gov/sbe/srs/nsf00327/start.htm>.

**Scientists and engineers by sex and age:
Median number of subordinates in 1997 in business and industry
[n = 2,343,600; women = 20%]**

<i>age</i>	<i>women</i>	<i>men</i>	<i>age</i>	<i>women</i>	<i>men</i>
< 35	5	6	35-44	7	
45-54	8	14	≥ 55	10	13

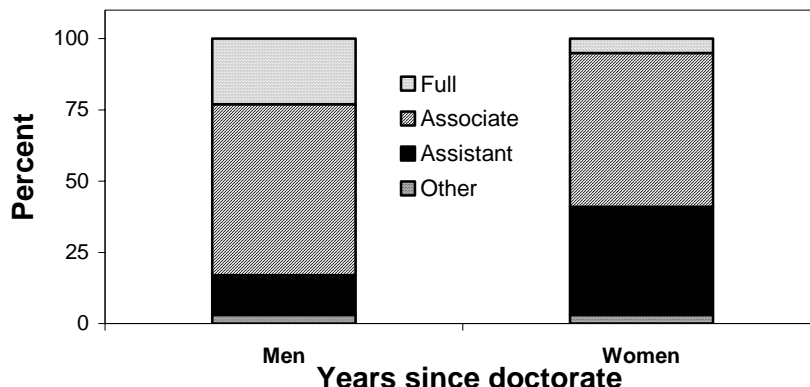
National Science Foundation. (2000). Women, minorities, and persons with disabilities in science and engineering: 2000; calculated from Appendix Tables 5-20 and 5-21. Arlington, VA: NSF. Report available on line: <http://www.nsf.gov/sbe/srs/nsf00327/start.htm>.

Medicine**Physicians in academic medicine: Advancement in rank**

Male and female graduates between 1979 and 1993 advanced to associate and full professor at different rates: in all years, fewer women were promoted than would be expected on the basis of their representation in the lower rank. Women's advancement was slower than men's in all subfields.

Nonnemaker, L. (2000). Women physicians in academic medicine. New England Journal of Medicine, 342, 399-405.

Percentage Faculty at Different Ranks, 11 Years after First Appointment (1991)



SOURCE: Tesch, et al. (1995)

Tesch, B.J., Wood, H.M., Helwig, A.L., & Nattinger, A.B. (1995). Promotion of women physicians in academic medicine. Glass ceiling or sticky floor? *Journal of the American Medical Association*, 273, 1022-1025.

Physicians: Median income data in 1990

For physicians below age < 45 with 2-5 years of experience, no income disparity once adjust for:

- a) *hours worked per week* - men work 62, women work 51
- b) *specialty* - men work in more remunerative specialties than women (in 4 highest-paying fields [radiology, general surgery, anaesthesiology, subspecialty surgery], 27% of men practice, 14% of women; in 3 lowest-paying fields [general practice, pediatrics, general internal medicine], 42% of men practice, 55% of women)
- c) *practice setting* - men work in more remunerative settings
- d) *miscellaneous factors* - AMA membership, marital status, etc.

For physicians with 6-9 years of experience, women make 96% of men's income even after adjustments.

For physicians with ≥10 years of experience, women make 85% of men's income even after adjustments.

Female physicians' median incomes as percentages of male physicians' median incomes (1990)

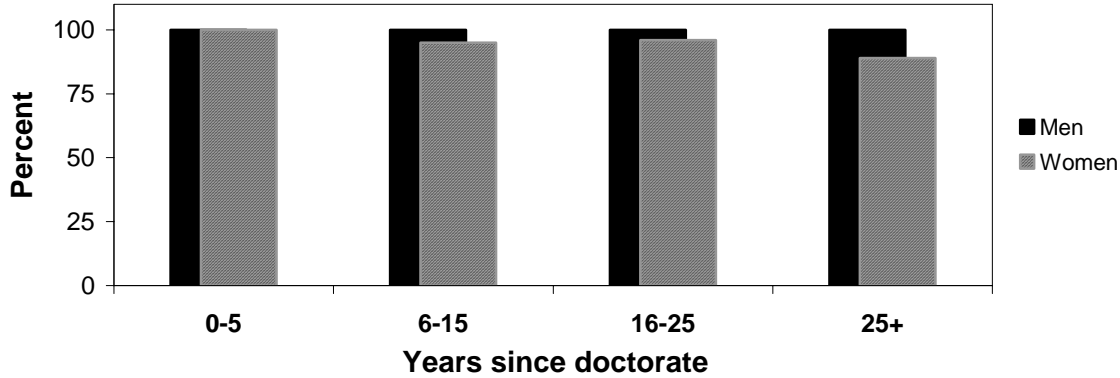


Baker, L. C. (1996). Differences in earnings between male and female physicians. The New England Journal of Medicine, 334, 960-964. Cited in Valian, pp. 208-210.

Humanities

Humanists by years of experience: Salary in academia in 1995

Female humanists' median salaries as percentages of male humanists' median salaries (1995)



Ingram, L. & Brown, P. (1997.) Humanities doctorates in the United States: 1995 profile. Washington, DC: National Academy Press; calculated from Statistical Table 19. Cited in Valian, pp. 223-224.

All disciplines

Academics across all disciplines: Tenure in universities and four-year colleges

	<i>% of women tenured</i>	<i>% of men tenured</i>	
1976-77		44	64
1995-96		48	72
2002-03		59	72

American Association of University Professors. (1997). The annual report on the economic status of the profession, 1996-1997 (Table 11). Academe, 83, no. 2 (March-April). Cited in Valian, pp. 230-231.

American Association of University Professors. (2003). The annual report on the economic status of the profession, 2002-2003 (Table 11). Academe, 89, no. 2 (March-April).

University and college presidents

	<i>% headed by women</i>	
	<i>1995</i>	<i>2001</i>
Private universities which grant PhD	6	9
Private two-year colleges	25	28

Ross, M. & Green, M. F. (1998). The American college president. Washington, DC: American Council on Education.

Corrigan, M. (2002). The American college president. Washington, DC: American Council on Education.

Law

In-house lawyers: Salary in 1992

Across 500 corporate law departments employing 7000 lawyers: women earned 94% of men's salaries at three lowest ranks; women earned 78% of men's salaries at three highest ranks. Example: male general counsels averaged \$205,097; females averaged \$152,412.

Franklin, B. D. (29 Oct 1992). Survey shows women earn less in-house than men. New York Law Journal, p. 1.

Franklin, B. D. (9 Nov 1992). Women get lower pay in law departments. The National Law Journal, p. 17. Cited in Valian, pp. 204-205.

Gender gaps for lawyer's earnings, 1969-1989

	1969		1979		1989	
	\$	%*	\$	%	\$	%
Unadjusted gap	31,098	45.5	30,645	53.3	31,588	41.4
Adjusted gap adjusting for						
(1) Hours worked	24,407	35.7	25,910	45.1	28,090	36.8
(2) (1)+ weeks worked	20,891	30.5	22,165	38.6	25,709	33.7
(3) (2)+ class of worker	17,588	25.7	20,684	36.0	23,508	30.8
(4) (3)+ age and age ²	19,416	28.4	14,056	24.4	16,488	21.6
(5) (4)+ marital status and race	16,677	24.4	12,921	22.5	15,277	20.0

* Gender gap as a percentage of men's mean earnings

Study using cohort data from the National Survey of Lawyers' Career Satisfaction. The gender gap in lawyers' incomes narrows the most after adjusting for age.

Chiu, C. & Leicht, K. (1999). When does feminization increase equality? The case of lawyers. Law & Society Review. 33:557-593.

Lawyers in 8 large law firms: Partnership in 1994

Percent of promotions to partner by sex, 1973-86

Year of Hire	M	F
1973-74	18	25
1975-76	20	14
1977-78	26	9
1979-81	22	13
1982	19	5
1983-84	16	5
1985-86	16	5
Total	19	8

Study of 8 large Manhattan law firms.

Epstein, C. F., Saute, R., Oglensky, B., & Gever, M. (1995). Glass ceilings and open doors: women's advancement in the legal profession. *Fordham Law Review*, *64*, 306-449. Cited in Valian, pp. 201-203; new calculations from data Epstein et al.

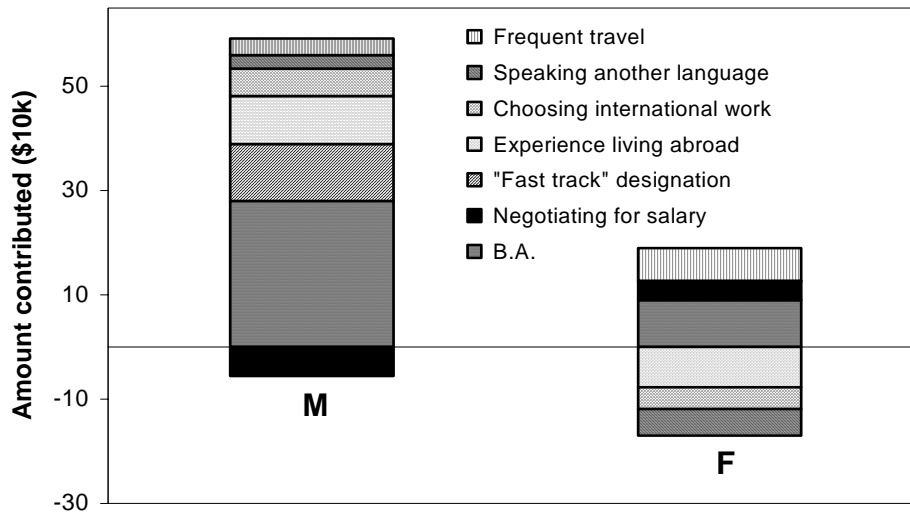
Business

International business people: Salary determinants

Of 17 factors that contributed to determining salaries, 14 helped men more than women, 2 helped women more than men. Examples:

<i>factor</i>	<i>men</i>	<i>women</i>
BA	adds \$28,000	adds \$9,000
“fast track” designation	adds \$10,900	adds \$ 200
experience living abroad	adds \$ 9,200	subtracts \$7,700
choosing international work	adds \$ 5,300	subtracts \$4,200
speaking another language	adds \$ 2,600	subtracts \$5,100
negotiating for salary	subtracts \$5,600	adds \$3,500
frequent travel	adds \$ 3,200	adds \$6,300

Salary determinants of international business people (1991)



Egan, M. L. & Bendick, M., Jr. (1994). International business careers in the United States: Salaries, advancement and male-female differences. *International Journal of Human Resource Management*, 5, 35-50. See Valian, 196-197.

Conclusions

- 1) There has been progress: men and women make roughly equal starting salaries at similar ranks, although science and engineering salaries remain a problem.
- 2) A remaining problem: the science pipeline leaks women.
- 3) Another remaining problem: there are signs of early rank differences.
- 4) Yet another remaining problem: advancement is slower for women than for men.
- 5) The problem of advancement is general. It occurs in all the professions and thus requires general explanations. One such is social-cognitive: gender schemas and the accumulation of advantage.
- 6) Insuring equity requires knowledge of facts and theory, so that the problem can be intelligently analyzed and treated.

Benefits of Ensuring Gender Equity

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Why is gender equity desirable, above and beyond fairness?

Equity is a window on institutional effectiveness. Solving an equity problem can lead to solving a problem unrelated to equity. Equity problems often point to general problems.

The reason equity is a window on institutional effectiveness is that women and minorities, as groups, have less power in institutions than do white men, as a group. Women and underrepresented minorities act as a proxy for those with less institutional power.

Without policies that ensure equal access, resources and facilities tend to flow to those who have the most power in the institution. Without policies that track the progress of different groups within the institution, it is impossible to know whether resources and facilities are being distributed evenly.

One example: a discovery that women in an institution receive computer support more slowly than men can lead to a rational and systematic way of handling all computer help requests.

Another example: the discovery that women receive less information about how to succeed can lead to the discovery that department chairs and division heads do not see faculty or staff development as one of their most important responsibilities. That in turn can lead to improved development procedures across the board.

Another example: the difficulty of determining how long women stay in the rank of associate professor can lead to the discovery that the institution has no effective way of monitoring overall faculty progress and thus no way of determining where improvements are needed.

Gender equity in salary, promotion, and access to resources maximizes the number of people who will receive the power and resources they need in order to do their best work. It also reduces the possibility that some people are prospering at the expense of others.

Equity increases the range and size of the candidate pool, thus maximizing the chances of hiring the best new faculty or staff.

The larger the pool, the greater the choice and the higher the likelihood of finding well-qualified candidates.

Also, women job candidates are likely to be slightly more talented than men, given their difficulties in accumulating advantage.

Within colleges and universities, a diverse faculty gives students a head start in learning how to appreciate and interact with a range of authority figures.

Students will graduate into working in a diverse world. The mental flexibility that is necessary for success in a diverse world will be developed in part through experiences with a diverse student body and in part through experiences with a diverse group of faculty and administrators.

By modeling diversity in the professoriate and in senior levels in the professions, equity demonstrates to women and underrepresented minorities that they have a future - a good future - in academia and the professions. And if they do not have a future, why are we educating them?

Aspirants do not need to see people exactly like them in senior positions and among the faculty. But the presence of a variety of social groups in positions of authority should have two effects.

First, diversity suggests that there is room for the aspirant: where there is a lot of variety it is plausible to think that there is room for more.

Second, and relatedly, diversity will make the role of, say, scientist or surgeon or successful business person one which is not sex- or race-specific. It will thus make it easier for everyone to make accurate judgments of the qualifications and value of non-traditional applicants for positions.

Equity increases the likelihood of innovations in ideas, policies, research, teaching, and scholarship.

Innovations arise from diverse groups of people with diverse perspectives. It is not that people reason differently as a function of their sex or race, but that they will have somewhat different interests and experiences which in turn give rise to different ideas.

(A good example: the development within the discipline of psychology of new areas as women and underrepresented minorities entered the field.)

Further, the acceptance of innovations is more likely among a diverse group of people.

Equity creates a stronger and more viable institution via a reputation for fairness.

Demonstrations of fairness, and concern for fairness, build loyalty from within, attract interest from outside, and increase the attractiveness of the institution to underrepresented groups.

Analyzing and Correcting Visible Gender-Equity Problems

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Preliminaries to analyzing and correcting visible gender-equity problems

1. Accept that there are no one-time fixes; gender equity requires consistent and constant effort.
2. Develop accountability from top to bottom.
3. Take an experimental approach: if one strategy doesn't work, change the variables or variable values and try another strategy.
4. There are two strategies for achieving gender equity. One is to try to meet the national average on a range of measures. The other is to try to be the best. The latter strategy is more likely to achieve gender equity because it is more likely to spark a thorough examination of current practices and policies.
5. Consider gender equity to be a discipline: there is a subject matter; there are concepts; there is a theoretical framework to develop; there are data to gather in order to understand what gives rise to inequity and what conditions yield a stably equitable environment.

In-depth example of accountability up and down the ladder (for academia but modifiable for business, law, and industry)

Create monitoring system

- annual review of equity benchmarks (via Institutional Research)
 - see examples of visible and hidden problems
 - maintain adequate data base

Rate departments

- current status of gender equity
- improvement in gender equity

Use equity status as a criterion

- for allocating space
- for permission to search
- for appointment to leadership position

Reward departments and department heads that demonstrate equity in practice

Give negative consequences to departments and department heads where there is credible evidence of

- bias
- discrimination
- harassment
- insufficient attention to gender equity

Provide release time or other benefits to faculty working on improvement of equity

Consider creation of position of Vice President for Diversity and Innovation

Ensure that leaders *lead*

- leaders have power and must be taught how to use it
- leaders create other leaders by vouching for them and must be taught how to endorse others

In-depth example of reviewing and improving search procedures (for academia but modifiable for business, law, and industry)

Search for couples

Search for talented women and minorities at non-elite institutions

- use the knowledge that location creates productivity as much as or more than the reverse: identify women who are publishing more than is typical for their location; they are likely to do well at your institution

Search for non-traditional candidates for senior positions

- women and minorities are less likely than white men to fit the traditional profile of experience because they are less likely to have been chosen for leadership positions
- search for women who are likely to succeed in leadership role by examining other leadership roles that they have already performed (even if those roles are non-canonical); groom internal women by giving them a range of responsibilities

Instruct search committees in where they are likely to go wrong

- too narrow a job description based on replacing what already exists
- too little power over appointment in hands of women who have minority status with respect to a field of inquiry
- insufficient recognition of need for extra effort to attract women and minorities
- insufficient welcoming of women and minorities at interview
- insufficient start-up packages and unattractive teaching loads for women and minorities

Examples of Problem Types and Solutions

Problem Type

- sex disparities in attrition among students from undergraduate to graduate study, especially in traditionally male- or female-dominated fields (e.g., few women in certain science fields; few men in certain health fields)
- sex disparities in attrition among students from graduate study to post-doctoral work or academic employment, especially in traditionally male- or female-dominated fields

Possible Solutions

- questionnaires to determine male and female perceptions of graduate work and academia, followed if necessary by intervention program to alter perceptions
- survey of faculty efforts to attract students to independent study and research, followed if necessary by intervention program to reward faculty with diverse group of students
- improvement of gender ratios in faculty
- review for possible change those policies female students find alienating

Problem Type

- sex disparities in graduates' post-doctoral fellowship and employment opportunities

Possible Solutions

- train faculty and employers in writing letters of recommendation
- review letters of recommendation for over-praise of men and under-praise of women

Problem Type

- lack of systematic information to students and faculty about role of gender schemas in evaluations of others and their consequent advancement or lack thereof

Possible Solutions

- annual seminars to students and faculty
- orientation seminars for new majors, new graduate students, and new faculty

Problem Type

- few women in leadership positions as heads of departments, sections, or important committees

Possible Solutions

- make leadership positions attractive to women and underrepresented minorities
- appoint women to leadership positions
- ensure that men and women in leadership positions receive equal support staff and resources

Problem Type

- sex disparities in tasks and roles (e.g., more women than men in time-intensive, low-reward tasks: undergraduate advisor; student disciplinary and grade committee assignments)

Possible Solutions

- appoint men to low-reward tasks at same rate as women

Problem Type

- sex disparities in teaching assignments (e.g., time-intensive courses; range of courses; service courses; courses in specialty)

Possible Solutions

- department heads to review course assignments semester-by-semester and correct disparities

Problem Type

- sex disparities in recruitment for post-doctoral, faculty, and other positions (e.g., short lists of candidates do not represent candidate pool; candidate pool does not represent potential candidate pool)

Possible Solutions

- ensure that job descriptions do not inadvertently exclude women or men by type of expertise advertised for, level of position, and so on
- identify talented women regardless of area
- require chairs and search committees to justify pattern of disparities in hiring
- reward chairs and search committees who succeed at gender equity
- provide job-hunting assistance to partner

Problem Type

- sex disparities in salary

Possible Solutions

- develop appropriate statistical models for assessing outliers
- use scatterplots
- examine salaries for outliers and "inliers" (outstanding women may be at the mean instead of above it)
- require departments to justify outliers and "inliers"
- examine criteria determining "merit" for unintended negative impact on women
- ensure that face time is not rewarded more than efficiency and quality of product
- correct disparities

Problem Type

- sex disparities in time in assistant and associate ranks

Possible Solutions

- develop appropriate statistical models for assessing time in rank
- evaluate all men and women for possible promotion at least every two years
- establish yearly evaluations at which criteria for promotion are communicated and candidates' qualifications are clearly and thoroughly assessed
- examine ranks for outliers and "inliers"
- query department heads about anyone in rank for six years or more
- require heads to justify time in rank
- examine criteria determining promotion for unintended negative impact on women
- ensure that face time is not rewarded more than efficiency and quality of product
- correct disparities

Problem Type

- sex disparities in retention rates

Possible solution

- conduct exit interviews with individual and individual's supervisor, chair, division head
- use anonymous questionnaires on routine basis to assess employee satisfaction

Problem Type

- sex disparities in tenure rates in academia

Possible Solutions

- establish yearly evaluations at which criteria for tenure are communicated and candidates' qualifications are clearly and thoroughly assessed
- examine criteria on which tenure decisions are made to ensure quality as well as quantity
- ensure that quantity is not rewarded more than quality
- require chairs to justify disparities in time to tenure
- correct disparities

Analyzing and Correcting Hidden Gender-Equity Problems

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Problem Type

- lack of knowledge about whether gender equity problems exist

Possible Solutions

- devote institutional resources to identifying and ameliorating problems (see visible problems handout)
- hire appropriate staff to interview individual students and faculty about perceived problems; follow-up with broad questionnaire
- give individuals release time to work on problems
- schedule annual reviews for problem areas
- learn from case studies and best practices

Problem Type

- lack of interest in gender equity on part of administrators, division heads, chairs, and others

Possible Solutions

- educate institution about gender schemas and accumulation of advantage
- make administrators at all levels accountable for gender equity
- make institutional rewards contingent on progress toward gender equity
- develop performance review criteria that include specific equity demands
- communicate benefits of equity (how it will help with other institutional goals)

Problem Type

- undergraduate students evaluate female TAs more negatively than male TAs despite equal or superior performance from females

Possible Solution

- conduct orientation sessions for undergraduates about how gender works: how and why they are at risk of undervaluing female and overvaluing male instructors (of any rank); convey the institution's confidence in the knowledge and competence of their instructors

Problem Type

- institutional practices with inadvertent disproportionate impact

Possible Solutions

- interview perceptive staff about practices that generally seem to limit the institution (e.g., only tenuring full professors); these are likely to have diversity consequences as well
- attempt to eliminate or control such practices

Problem Type

- gender disparities in: a) office space; b) laboratory space; c) knowledge of internal resources; d) access to internal research funds; e) access to technical and computer assistance; f) access to secretarial and research assistance; g) access to specialized equipment

Possible Solutions

- rectify space inequities
- interview highly successful individuals to determine what resources they draw upon
- create surveys and administer to all staff to determine knowledge and use of each resource
- where knowledge is lacking, create handbook to inform staff of resources
- require support staff to keep log of requests and date requests are filled
- require equipment gatekeepers to keep log of requests and date requests are filled

Problem Type

- criteria for success too narrow

Possible Solutions

- identify unheralded contributions that improve quality of institution
- include such contributions as criteria for advancement

Problem Type

- criteria for success not communicated equally to young men and women

Possible Solutions

- interview highly successful and less successful individuals to determine what information they receive and in what contexts they receive it
- create surveys of all staff to determine their knowledge of criteria and attempts to meet them
- require chairs to communicate criteria explicitly
- develop informal channels of communication for women that are parallel to those for men

Problem Type

- lack of knowledge about how gender schemas work to advantage men and disadvantage women
- lack of awareness of likelihood of overvaluing men and undervaluing women
- belief that excellence is transparent and obvious
- belief that meritocratic beliefs insure unbiased judgments

Possible Solution

- educate self and others via seminars, lectures, and workshops about gender schemas and
- accumulation of advantage

Problem Type

- underexplored research and teaching opportunities concerning gender equity

Possible Solutions

- incorporate academic work on schemas, attitude change, and organizational change into women's studies programs, management programs, science and technology programs, and so on
- support development of fundable projects to integrate basic and applied research on improving gender equity
- develop courses in which students integrate basic and applied research to devise interventions for specific institutional problems
- sponsor think-tank conferences to address gender equity

Problem Type

- unequal mentoring of women and men

Possible Solutions

- identify known good mentors; interview for mentoring techniques
- teach senior staff how to mentor; inform mentors about likely imbalances

Problem Type

- failure to highlight women's and men's accomplishments equally
- failure to legitimate women as leaders in their field

Possible Solutions

- identify occasions on which individuals can be given positions of leadership
 - e.g., presentations to important outsiders such as trustees, donors, stockholders
- ensure equal representation of males and females

Problem Type

- disproportionately more males than females invited as speakers and colloquium presenters

Possible Solutions

- develop routine counting procedure for insuring appropriate representation
- understand lower cognitive availability of women's names compared to men's

Problem Type

- more effort made to groom men for stardom in field
- more nominations of men than women for prizes and awards, to journal boards, and to steering committees of major professional organizations

Possible Solutions

- identify women who are outstanding and promote their professional development
- evaluate heads of departments and divisions on the ability to create women leaders

Problem Type

- gender disparities in understanding of reward structure of organization

Possible Solution

- develop workshops for students, post-docs, and junior staff explaining structure of organization, operation of gender schemas, and effective strategies for professional development

Problem Type

- reward structure of organization undervalues contributions of the less powerful

Possible Solution

- review policies for isolation and marginalization of women and underrepresented minorities

Problem Type

- reluctance of women to work for gender equity

Possible Solutions

- educate women about effects of gender schemas on the self
- provide institutional rewards and resources for women and men to develop equity plans

Individual Action for Gender Equity*

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Helping women succeed: If you are a leader

- Perform frequent review of visible and hidden problems (see handouts); make data available via periodic reports
- Examine successful programs from elsewhere, adapting as necessary
- Identify reasons for institution to commit to change (e.g., will help solve institutional problems)
- Develop accountability for gender equity within organization
- Codify changes in institutional practices in order to routinize best practices
- Explicitly identify women and men who should be groomed for leadership positions
- Identify men and women who can work successfully for gender equity; reward them for doing so
- Supply resources for change
- Pay continuing attention
- Reward other leaders who have a record of helping women and men equally
- Communicate information about criteria for success within and outside institution
 - men receive much information informally; hard to be successful by accident
- Nominate women and men equally for important prizes and positions within and outside the institution
- Solicit comments and suggestions from women and men equally
- Listen to women's and men's suggestions equally
- Ensure equal participation of women and men in public settings
- Assign responsibilities to women which are out of the ordinary, visible, and relevant to current institutional problems
- Develop faculty-student partnerships

Helping women succeed: If you are a colleague of either sex

- Support changes to improve equity for women and underrepresented minorities
- Nominate women for important awards, prizes, committees, and positions
- Help women with information and resources (women tend to lack both)
- Pass along information equally to female and male colleagues
- Ally with women on issues of common interest
- Make eye contact with women when they are speaking to you
- Nod when women make valuable points
- Solicit and listen to women's suggestions
- Talk about your work with female as well as male colleagues

Helping women succeed: If you are a woman

- Read handout on gender, power, and influence
- Support changes to improve equity
- Know the data: enlist help of appropriate administrators to collect needed data on visible and hidden problems (see handouts); it is the institution's responsibility to collect and monitor such data
- Identify allies, male as well as female
- Work with institutional allies at all levels; assume that they are concerned about equity until they demonstrate otherwise; keep everyone courteously informed about your activities
- Ensure that institutional allies receive appropriate public praise
- Examine successful programs from elsewhere, adapting as necessary
- Identify problem areas for women
- Identify reasons for institution to commit to change
- Obtain resources for change
- Negotiate for release time and other resources in order to develop solutions
- Be strategic; have a Plan B
- Work with allies in professional organizations to increase visibility of women
- Ensure that changes in institutional practices are codified

Helping yourself succeed: If you are a woman

- Read handout on gender, power, and influence
- Indicate willingness to be nominated for important prizes and positions
- Become successful outside the institution
- Build power by performing jobs which are out of the ordinary, visible, and relevant to current institutional problems
- Learn what resources are available and necessary for success at your job; work to acquire those resources
- Learn how to negotiate
- Negotiate
- Seek information about criteria for success (men receive much information informally; hard to be successful by accident)
- Make allies and find sponsors:
- Be friendly and respectful (to take the sting out of competence and effectiveness)
- Recognize that you can do everything "right" and still fall behind

*My thanks to Emma Stokes (Johns Hopkins) and Kathryn Spoehr (Brown) for many helpful suggestions.

Gender, Power, and Influence

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Background

- gender schemas
- accumulation of advantage
- "just world" beliefs
- attributions: ability, effort, task difficulty, luck

Evaluations of the self

- women and men differ in how entitled they feel and behave
 - women perform equal or better work for less pay
- women have negative attitudes toward affirmative action for themselves
 - women chosen on the basis of their sex have more negative self-evaluations than do men chosen on the basis of their sex
- women and men may differ in attributions for success and failure
- women deny personal disadvantage

Negotiation

- at least moderate feelings of entitlement are necessary to negotiate effectively
 - understand how entitlement works
- learn how to negotiate
 - demonstrate how department, school, or institution will benefit from what you want
 - example: you want a course release; show that you will use that release to apply for a grant in a new area or embark on some other new activity that will benefit the institution
 - example: you want an assistant; show how that assistant will make you or your section more productive and allow you to add a needed function or improve an existing function
 - women who are perceived as self-aggrandizing are viewed particularly negatively
 - example: you want a considerable salary increase; justify it by a) what the going rate seems to be, b) the extra responsibilities you have assumed, c) the benefits you have recently brought to the institution, or d) the initiatives that you are planning on undertaking

- example: balance a request for something that appears to benefit only you (e.g., salary) with something that clearly benefits others (e.g., an upgraded facility for students)
 - if feasible, offer to share the expenses for an item you are requesting
- understand that everything can be negotiated
 - resources
 - teaching
 - number of courses
 - level of course
 - labor-intensiveness of course
 - teaching assistance
 - ability to teach in one's area
 - extra compensation for performing extra institutional work
 - research assistants
 - summer salary
 - course reduction
 - support for post-doc
 - support for graduate student
 - needed equipment
 - extra term off
 - early sabbatical
- role-play before an important negotiation
- see readings and suggestions at http://www.hunter.cuny.edu/genderequity/seminars/f03_seminar_Dec03.htm

Power and influence: the individual

- perform jobs which are
 - out of the ordinary
 - visible
 - relevant to current institutional problems
- eschew routine, invisible, "housekeeping" tasks
- build reciprocal relationships
 - solve problems for other people
 - make clear that you expect a return (e.g., "you owe me one")
 - ask others to help you solve problems
- make alliances with both men and women
- become successful outside the institution
- seek information about criteria for success; hard to be successful by accident
 - men receive much information informally
 - learn what resources are available
 - build reciprocal relationships: provide other people with information; ask others for information
- adopt impersonal, friendly, and respectful style

Effectiveness in influencing decisions

- be prepared
 - even minimal preparation is better than none: sometimes only a few minutes of preparation are required (most other people will have done no preparation)
 - read the relevant materials – knowledge is power
 - develop your point of view
 - articulate to yourself the most important rationale(s) behind your view
 - be prepared with comprehensive and even-handed arguments
 - comprehensiveness can help preempt certain objections
 - even-handedness will help you be perceived as neutral
 - but put your favored action in the best possible light
 - practice presenting your view and the rationale(s) for it succinctly
- lay a groundwork of alliances
- marshal support before important decisions are made
 - identify and speak with likely allies, especially those who are highly respected
 - ask allies for advice about how to proceed
 - ask allies to do some of the work
 - determine what resistance there might be
 - evaluate objective merits of resistance
 - evaluate reasons for subjective resistance

Power and influence: improving the status of women and other groups

- examine successful programs from elsewhere
- identify problem areas for women and other social groups that lack power
- identify and work with institutional allies at all levels
- make specific proposals
 - demonstrate need and show how institution will benefit
 - provide supporting documentation for action
 - best practices
 - scientific literature
 - provide timeline
 - indicate what outcome measures will be used
- identify reasons for institution to commit to change
 - better serve women students in science and engineering
 - attract more women as faculty
 - attract more recruiters to campus
 - improve morale
 - see associated handout
- obtain institutional commitment to and resources for change
 - do not labor for love
- take experimental approach
- recognize necessity for on-going action

Advancing Women: Annotated Bibliography

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Data on women and men in academia

For a review of current data, see [Tutorial 1 - The Data on Sex Disparities in Rank and Salary](#) from Valian's *Tutorials for Change: Gender Schemas and Science Careers*. This web-based tutorial can be found at: www.hunter.cuny.edu/gendertutorial

Also see *Sex disparities in advancement and income* (Valian, 2003).

Long, J. S. (Ed.). (2001). *From scarcity to visibility: Gender differences in the careers of doctoral scientists and engineers*. Washington, D. C.: National Academy Press.

Excellent in-depth review of sex differences in salary, rank, and tenure among men and women in the sciences and engineering, using NSF synthetic cohort data. Presentation of both overall analyses and analyses that control for time since degree, rank, specialty, type of institution, and familial status. Among the notable findings: there is a cost to a woman of being a woman, net other variables; the heaviest cost for women with children is movement from full-time to part-time work; women who remain full-time differ from their female peers without children only in achieving full professorship slightly later; being in a field with many women (such as the social sciences) does not guarantee better advancement than being in a field with few women.

Xie, Y. & Shauman, K. A. (2003). *Women in science: Career processes and outcomes*. Cambridge, MA: Harvard University Press.

Examination of synthetic cohort data at key transition points in a scientist's life: high school to college, college to an advanced degree or the science workplace, an advanced degree to a career in academia or industry. At each transition point, science loses more females than males. Among the notable findings: ability (as measured by standardized tests) does not determine youngsters' interest in science; the primary effect of childbirth is the disproportionate loss of mothers from the full-time labor force; the sex disparity in productivity is decreasing; productivity differences are not attributable to parental status.

Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press. Chapters 11 and 12.

Summary of data on women in science and humanities faculties in the US: salary, rank, tenure, productivity, and teaching.

Valian, V. (2003). *Sex disparities in income and advancement*. Unpublished handout, Hunter College – CUNY; accessible at www.hunter.cuny.edu/genderequity

Figures from 1997 for academic scientists and engineers show slight disparities in tenure and tenure-track positions, as well as rank, even for people under age 35. Median annual salaries across all settings are lower for women than men at every age breakdown.

Ross, M. & Green, M. F. (1998). *The American college president*. Washington, DC: American Council on Education.

Corrigan, M. (2002). *The American college president*. Washington, DC: American Council on Education.

In 1995, women were 6 % of the presidents at private universities which grant the PhD but 25% of presidents of private two-year colleges; in 2001, the respective figures were 9% and 28%. The figures show the common inverse relation between representation of women and prestige: women are more numerous at low-prestige institutions.

Nonnemaker, L. (2000). Women physicians in academic medicine. *New England Journal of Medicine*, 342, 399-405.

How many associate or full professors "should" there be, given the number of assistant or associate professors? Via cohort data of medical school graduates from 1979 to 1993, Nonnemaker shows that at both the associate and full level, more women would be expected than are present, even controlling for specialty. Income figures show advantages for women over men in pediatrics and family medicine; those advantages do not carry over to promotion where, in almost every specialty where there are enough numbers for a meaningful comparison, men are advantaged relative to women.

Fox, M. F. (1981). Sex, salary and achievement: Reward-dualism in academia. *Sociology of Education*, 54, 71-84.

Fox, M. F. (1985). Publication, performance, and reward in science and scholarship. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (pp. 255-282). NY: Agathon.

Sonnert, G. & Holton, G. (1996a). Career patterns of women and men in the sciences. *American Scientist*, 84, 63-71.

Sonnert, G. & Holton, G. (1996b). *Gender differences in science careers: The Project Access study*. New Brunswick, NJ: Rutgers University Press.

Zuckerman, H. (1987). Persistence and change in the careers of men and women scientists and engineers: A review of current research. In L.S. Dixon (Ed.), *Women: Their underrepresentation and career differentials in science and engineering* (pp. 123-156). Washington, DC: National Technical Information Service.

Women publish fewer articles than men do, but the average article by a woman is cited more often than the average article by a man. Women emphasize quality, men quantity.

Sources of gender inequities

Gender schemas

Fiske, S. T. & Taylor, S. E. (1991). *Social cognition, 2nd ed.* NY: McGraw-Hill. Schemas are implicit, often nonconscious, hypotheses that we use to interpret social events. This book reviews many different kinds of schemas.

Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press. Chapters 6 and 7.

Our schemas about males and females directly include expectations about their professional competence and they bias our interpretation of actual performance. To oversimplify, we expect men to do well, and see men's actual performance in the rosy light of our positive expectations; men carry a small plus sign. Conversely, we expect women to do less well, and see their actual performance in the darker light of our negative expectations; women carry a small minus sign. Gender schemas are held by both males and females. The content of gender schemas is widely shared throughout a culture. Most experiments show no differences in the judgments males and females make. Schemas are cognitive in origin but have motivational and emotional consequences as well as consequences for judgments and evaluations.

Accumulation of advantage

Martell, R. F., Lane, D. M., & Emrich, C. (1996). Male-female differences: A computer simulation. *American Psychologist*, *51*, 157-158.

A computer simulation of promotion practices at a hypothetical corporation provides a convincing demonstration of the cumulative effects of small-scale bias. The simulation "created" an organization with an 8-level hierarchy. It staffed each level of the hierarchy with equal numbers of men and women. The simulation assumed a certain percentage of incumbents would be promoted from one level to the next. Finally, it assumed a tiny bias in favor of promoting men, a bias that accounted only for 1% of the variability in promotion. The simulation then ran through a series of promotions. After repeated promotions, the highest level in the hierarchy ended up being 65% male. This scenario demonstrates that operating at a systematic minute disadvantage can have substantial long-term effects.

Merton, R.K. (1948). The self-fulfilling prophecy. *Antioch Review*, *8*, 193-210.

Merton, R.K. (1968). The Matthew Effect in science. *Science*, *159*, 56-63.

Merton originated the notion of the accumulation of advantage and disadvantage. Like interest on capital, advantages accrue; like interest on debt, disadvantages accrue. Very small differences in treatment can, as they accumulate, have major consequences in salary, promotion, and prestige. It is unfair to men and women to neglect small cases of group-based bias, because those small cases add up.

Who perceives gender inequity when?: belief in a just world; benevolent sexism; parenthood

Lerner, M. J. (1975). The justice motive in social behavior: An introduction. *Journal of Social Issues*, *31*, 1-19.

People want to believe in a "just world" and will interpret data accordingly, failing to perceive contrary evidence. We see the rewarded as deserving and the deserving as rewarded.

Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press. Chapter 7.

If one wants to believe that advancement is determined by merit, as most people (especially those who are successful) do, the data available to us are easily interpreted in line with our hypothesis that the world is a "just world". In a just world bad things do not happen to good people, and good things do not happen to bad people. The fact that some women make it to the top is interpreted as showing that evaluations are basically fair and that truly able women will succeed. The fact that we have admired the competence of some women is interpreted as showing that we are free of gender bias, or at least free enough. It is hard for us to see that we are in error. We have the beliefs we do because we view ourselves as fair and impartial. That allows us to place in the background the rule of our behavior and put in the foreground the exceptions to it. We fail to see just how often the rule operates. It is hard to remember that an exception is just that: an atypical event.

Glick, P. & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist*, *56*, 109-118.

Glick, P., Fiske, S. F., Mladinic, A., et al. (2000). Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology*, *79*, 763-775.

Prejudice against women can be benevolent as well as hostile. Benevolent sexism includes the ideas that women should be cherished, protected, and financially provided for and that women are purer, more refined, and more moral. Men and women who endorse benevolent sexist attitudes also tend to endorse hostile sexist attitudes. Men's and women's attitudes are correlated. Nations with less gender equality show higher sexism scores. Because people can hold warm and apparently positive attitudes toward women, it is difficult for them to perceive the sexism latent within those benevolent attitudes.

Warner, R. L. & Steel, B. S. (1999). Child rearing as a mechanism for social change: The relationship of child gender to parents' commitment to gender equity. *Gender & Society*, *13*, 503-517.

Women endorse gender equity policies (such as pay equity and affirmative action) more than men do. Men with only daughters endorse equity policies more than do childless men or men with both daughters and sons, and much more than do men with sons only. Women with only daughters endorse equity policies more than other types of women, but there are no differences among women without children, women with both sons and daughters, and women with sons only.

Choosing and developing leaders

Nonconscious evaluations of others - effects of gender schemas

Bargh, J. A. & Chartrand, T. L. (1999) The unbearable automaticity of being. *American Psychologist*, *54*, 462-479.

Much of human perception occurs nonconsciously, rapidly, and automatically.

Biernat, M., Manis, M., & Nelson, T. (1991) Stereotypes and standards of judgment. *Journal of Personality and Social Psychology*, 66, 5-20.

College students were shown photographs of other students and were asked to estimate their height in feet and inches (including their footwear). The photos always contained a reference item, such as a desk or a doorway, so that height could be accurately estimated. Unbeknownst to the students who were doing the estimating, the experimenters had matched the photographs so that for every photograph of a male student of a given height there was a female student of the same height. The student judges were affected by their knowledge that men are on average taller than women, so that when they were exposed to a sample contrary to the general rule, they judged the women as shorter than they really were, and the men as taller. There were no differences between female and male judges: both underestimated women's height and overestimated men's height. Judgments are influenced by gender schemas even when objective characteristics are being evaluated.

Perceptions of competence and professional ability - effects of gender schemas

Trix, F. & Psenka, C. Exploring the color of glass: letters of recommendation for female and male medical faculty. (2003). *Discourse and Society*, 14, 191-220.

Letters of recommendation for successful female and male medical faculty showed differences in terms used to describe them and in the length of letters. Letters for females were shorter than those for males; included more phrases expressing doubts about the candidate; used more "grindstone" adjectives; mentioned their sex more often; were more likely to include only minimal information; mentioned their personal life more often. Letters for males, compared to letters for females, included more repetition of standout words like "outstanding", "excellent", and "superb"; included more references to research, skills and abilities, and career; included fewer references to training and teaching; mentioned their publications, vita, patients, and colleagues more often. Letter writers are at risk of underselling the abilities and qualifications of the women they write for and of overselling the abilities and qualifications of the men they write for.

Heilman, M. E., Block, C. J., Martell, R. F., & Simon, M. C. (1989). Has anything changed? Current characterizations of men, women, and managers. *Journal of Applied Psychology*, 74, 935-942.

Male managers rated different groups of people on a series of adjectives. One group was asked to rate successful managers on 92 different characteristics, according to how typical of successful managers they thought that quality was. The characteristics ranged from "leadership ability" to "fearful". Most people rated successful managers as typically having high leadership ability and not fearful. A second group rated women in general, and a third group rated men in general. Male managers rated men in general and successful managers as very similar, much more similar than they rated women in general and successful managers. Other groups of male managers rated female and male managers described as successful. Most differences in ratings of men and women disappeared, but even successful women managers were perceived as having less leadership ability than successful men managers. Furthermore, women managers were seen as having negative qualities that men managers did not have, such as being bitter, quarrelsome, and selfish.

Butler, D. & Geis, F. L. (1990). Nonverbal affect responses to male and female leaders: Implications for leadership evaluations. *Journal of Personality and Social Psychology*, 58, 48-59.

Both women and men - nonconsciously but visibly - react negatively to women in a situation which is aimed at finding a group solution to a problem. People respond especially negatively to women's attempts to be assertive. Females trained to act as leaders received more negative facial reactions than positive ones. The trained males, in contrast, always received more positive reactions than negative ones.

Dovidio, J. F., Ellyson, S. L., Keating, C. F., Heltman, K., & Brown, C. E. (1988). The relationship of social power to visual displays of dominance between men and women. *Journal of Personality and Social Psychology*, 54, 233-242.

Eye gaze reflects social dominance. The more powerful person in a dyad looks more when speaking than listening; the less powerful person looks as often when listening as speaking. Looking while listening conveys deference. When both the male and female members of a dyad have antecedently said they know little about a topic, they reproduce the phenomenon that occurs when the man has said he knows a lot about a topic and the woman has said she knows little about a topic: men look more while talking than listening; women look similarly whether talking or listening.

Porter, N. & Geis, F. L. (1981). Women and nonverbal leadership cues: When seeing is not believing. In C. Mayo & N. Henley (Eds.), *Gender and nonverbal behavior*. New York: Springer Verlag.

When observers are shown a slide of five people seated around a table and described as a working group, they reliably pick the person sitting at the head of the table as the leader of the group under three conditions: all the participants are male; all the participants are female; the group has a mixed sex composition and the person at the head is male. If it is a mixed-sex group and the person at the head is female, observers choose her half the time and a male seated on either side of the table half the time. No differences between male and female observers.

Eagly, A. H., Karau, S. J., & Makhijani, M. G. (1995). Gender and the effectiveness of leaders: A meta-analysis. *Journal of Personality and Social Psychology*, 117, 125-145.

This meta-analysis of studies which concentrated on evaluations of women as leaders suggests that women are particularly disadvantaged when their style of leading is masculine. Having a style that is assertive to the point of appearing autocratic, rather than cooperative and participative, is especially costly for a woman. When experiments investigated the effects of autocratic leaders - leaders who told people what to do without consulting them - women were especially negatively evaluated. A highly assertive style is incongruent with our conception of women and women are penalized if they adopt such a style. There are no differences between males and females in their judgments.

Heilman, M. E. & Stopeck, M. H. (1985). Attractiveness and corporate success: Different causal attributions for males and females. *Journal of Applied Psychology*, 70, 379-388.

Attractiveness helps men appear more competent but makes women appear less competent. That is because attractiveness intensifies a person's gender. An attractive man is

more of a man and hence more competent than an unattractive man. An attractive woman is more of a woman and hence less competent than an unattractive woman.

Heilman, M. E. (1980). The impact of situational factors on personnel decisions concerning women: Varying the sex composition of the applicant pool. *Organizational Behavior and Human Performance*, 26, 386-395.

Women are judged more positively if they are more than 30% of the applicant pool than if they are 25% or less of the pool.

Sackett, P. R., DuBois, C. L. Z., & Noe, A. W. (1991). Tokenism in performance evaluation: The effects of work group representation on male-female and white-black differences in performance ratings. *Journal of Applied Psychology*, 76, 263-267.

Women are judged more positively in work groups where they make up more than a third of the group.

Dovidio, J. F. & Gaertner, S. L. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science*, 11, 315-319.

White students in 1999 reported less racial prejudice than did white students in 1989. Nevertheless, in both time periods, white students recommended blacks for a position as a peer counselor less often than they recommended whites when the targets had ambiguous qualifications. (When targets had clearly strong or clearly weak qualifications, white students recommended whites and blacks equally often.) Observers judged the qualifications of both races similarly, but gave whites the benefit of the doubt as far as recommending them for a position. Implications: good intentions are not enough; high-status targets are likely to be recommended over low-status targets when their qualifications are in the mid-range.

Interventions to promote gender equity

What administrators can do - implications of laboratory data

Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press, Chapter 14.

This chapter summarizes data showing when erroneous judgments are most likely (little time, divided attention, low accountability), what types of reasoning errors are exacerbated when social groups are involved (failure to appreciate covariation, blocking, illusory correlation), how to improve reasoning about others, and how to use the authority of leaders to legitimate other leaders. Women, more often than men, lack information about what is required for career advancement, take on routine responsibilities which will not help their advancement, and get less mentoring from senior faculty.

Valian, V. (various dates). Benefits of insuring gender equity; Analyzing and correcting visible gender-equity problems; Analyzing and correcting hidden gender-equity problems; Individual action for gender equity; Gender, power, and influence. *Unpublished frequently-updated manuscripts, Hunter College – CUNY. Available at www.hunter.cuny.edu/genderequity*

These documents summarize a) reasons to promote equity (e.g., gender equity is a window on institutional effectiveness), b) where problems – visible and hidden – are likely to occur and possible solutions for them, c) what individuals can do, and d) how gender is related to power.

Blair, I. V. & Banaji, M. R. (1996). Automatic and controlled processes in stereotype priming. *Journal of Personality and Social Psychology, 70*, 1142-1163.

People can learn to reduce their reliance on gender schemas, even if they cannot eliminate their gender bias entirely.

Moskowitz, G. B., Gollwitzer, P. M., Wasel, W., & Schaal, B. (1999). Preconscious control of stereotype activation through chronic egalitarian goals. *Journal of Personality and Social Psychology, 77*, 167-184.

People who are actively and strongly committed to egalitarian goals (being fair, tolerant, and open-minded) are less likely to be influenced by stereotypes. The article reviews other data showing that being aware of bias, being motivated to be unbiased, and having time and attention to devote to evaluations of others, reduces biased judgments even if a schema is activated.

Brown, V. & Geis, F. L. (1984). Turning lead into gold: Leadership by men and women and the alchemy of social consensus. *Journal of Personality and Social Psychology, 46*, 811-824.

Geis, F. L., Boston, M. B., & Hoffman, N. (1985). Sex of authority role models and achievement by men and women: Leadership performance and recognition. *Journal of Personality and Social Psychology, 49*, 636-653.

Geis, F. L., Brown, V., & Wolfe, C. (1990). Legitimizing the leader: Endorsement by male versus female authority figures. *Journal of Applied Social Psychology, 20*, 943-970.

Leaders legitimize other leaders. Undergraduate evaluators watched a videotape in which five graduate students had a group discussion (Brown & Geis, 1984). On the tape, a faculty member introduced one of the students as the leader. In one version of the tape the faculty member vouched for the student's expertise, mentioning the student's theoretical knowledge and performance ability. In the other version the faculty member simply said the student would be the leader. The two videotapes were otherwise identical. After watching the video, the evaluators judged the student leader on a number of dimensions, including how much leadership the leader showed, how good the leader's contributions were, how desirable it would be to hire the leader, and how much salary the leader deserved. The leader scored higher on all those measures if the faculty member had vouched for the student's expertise. As usual, there was no difference in how male and female evaluators responded. The same effect occurred whether the student leader was male or female, and there was no difference in how positively male and female leaders were rated. The same effect occurred whether the faculty member was male or female. A credible authority figure can successfully legitimize others. Chief academic officers can create academic leaders of both sexes.

Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life*. Glenview, IL: Scott Foresman.

Mentors can directly help proteges' careers in 5 ways: sponsoring promotions; coaching for desired organizational behaviors; protecting against problems; providing challenges; and showcasing talents and abilities. Mentors can help proteges' personal goals in 4 ways: developing a sense of self as a professional; counseling; friendship; role modeling. Only limited tests for mentors' success in any of the 9 domains exist.

Ragins, B. R. & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology, 84*, 529-550.

Compared to formal mentoring, informal mentoring is spontaneously initiated, lasts for 3-6 years, changes the amount, type, and purpose of contact over time, and may have more motivated and skilled mentors. A survey of 614 proteges in male-, female-, and non-biased occupations compared the effectiveness of formal and informal mentoring. Proteges in informal mentoring reported more career development functions than did those in formal mentoring relationships; they reported higher levels of compensation. Proteges (both male and female) of male mentors made more money than proteges of female mentors. Male proteges of male mentors made the most money; female proteges of female mentors made the least. (Male mentors probably have more organizational power and knowledge than female mentors.)

Formal proteges made the same amount of money and had the same number of promotions as individuals with no mentors; only informal proteges outearned and had more promotions than those with no mentors. Formal mentoring programs should mimic informal mentoring as much as possible. Caveat: the effectiveness of informal mentoring may be due to selection factors.

What administrators can do - case studies

Fried, L. P., Francomano, C. A., MacDonald, S. M., Wagner, E. M., Stokes, E. J., Carbone, K. M., Bias, W. B., Newman, M. M., & Stobo, J. D. (1996). Career development for women in academic medicine: Multiple interventions in a department of medicine. *Journal of the American Medical Association, 276*, 898-905.

The Johns Hopkins University Department of Medicine successfully developed a program to advance women from assistant professor to associate professor.

Benz, E. J., Jr., Clayton, C. P., & Costa, S. T. (1998). Increasing academic internal medicine's investment in female faculty. *American Journal of Medicine, 105*, 459-463.
How medical schools can improve the status of female faculty.

Schaller, M. & Crandall, C. S. (1999). Individual goals in evolving organizations. *American Psychologist, 54*, 778-788.

Organizations with a diverse group of people are more open to innovative ideas.

Meyerson, D. E. & Fletcher, J. K. (Jan-Feb 2000). A modest manifesto for shattering the glass ceiling. *Harvard Business Review*, 127-136.

Small changes in procedures can have large long-term effects. Such changes can range from lengthening interviews (to insure that male interviewers are as effective with women candidates as they are with men) to ensuring equal access to important institutional committees and positions.

What individual women can do

Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press. Chapter 14.

This chapter summarizes data on personal style and personal effectiveness, but warns that women can do everything "right" and still not advance because of structural problems within the institution. Suggestions: build power, use a "neutral" style in professional settings, become an expert, negotiate, bargain, seek promotion, seek challenging assignments, seek information.

Kanter, R. M. (1979). Differential access to opportunity and power. In R. Alvarez & K. G. Lutterman (Eds.), *Discrimination in organizations* (pp 52-68). San Francisco: Jossey-Bass.

A manual on how to achieve power in organizations. She defines power as efficacy in shaping the goals and policies of an organization or group. Activities build power if they are a) out of the ordinary or pioneering or not part of the job description, b) visible to others in the group, and c) relevant to current organizational problems. People who want to advance should shun routine, invisible jobs. Administrators should equalize the presence of men and women in such jobs.

Ragins, B. R. & Sundstrom, E. (1989). Gender and power in organizations: A longitudinal perspective. *Psychological Bulletin*, 105, 51-88.

Women are less likely than men to obtain or receive information about promotion possibilities, job openings, and other opportunities for advancement.

Ridgeway, C. L. (1982). Status in groups: The importance of motivation. *American Sociological Review*, 47, 76-88.

To be accepted as a leader, both men and women must demonstrate their competence to the group, but women in addition must demonstrate that they are not trying to acquire status at the expense of other members of the group. Women must subordinate, and be seen to subordinate, their personal needs to the needs of the group. Attempts at self-aggrandizement by women are particularly negatively perceived. Implications: women should be impersonal, friendly, and respectful.

Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology, 35*, 4-28.

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist, 52*, 613-629.

Inzlicht, M & Ben-Zeev, T. (2000). A threatening intellectual environment: Why females are susceptible to experiencing problem-solving deficits in the presence of males. *Psychological Science, 11*, 365-371.

Gender schemas are mentally invoked both by observers and by women themselves when women are in a male domain, such as mathematics, and their status as women is highlighted. Women with high aspirations are subject to stereotype threat in such circumstances, resulting in a decrement in performance. Women placed in a group with two other people performed worst on a math test if the other two people were male, next worst if one of the other two was male, and best if none were male. Males were unaffected by the sex composition of the group.

Stuhlmacher, A. F. & Walters, A. E. (1999). Gender differences in negotiation outcome: A meta-analysis. *Personnel Psychology, 52*, 653-677.

Walters, A. E., Stuhlmacher, A. F., & Meyer, I. I. (1998). Gender and negotiator competitiveness: A meta-analysis. *Organizational Behavior and Human Decision Processes, 76*, 1-29.

Kary, L. J., Thompson, L., & Galinsky, A. (2001). Battle of the sexes: Gender stereotype confirmation and reactance in negotiations. *Journal of Personality and Social Psychology, 80*, 942-958.

Men are more competitive and more successful than women in negotiations. One determinant of negotiation success is the 'opening bid'; men tend to make more extreme opening bids than women. In a laboratory simulation of mixed-sex purchase negotiations, ambitious women did worse when their gender stereotypes were implicitly activated and better when they were explicitly activated (leading to reactance).

Babcock, L. & Laschever, S. (2003). *Women don't ask: Negotiation and the gender divide*. Princeton, NJ: Princeton University Press.

One reason women do not do as well as men is that women attempt to negotiate in fewer areas than men do. Another reason is that organizations are more likely to respond well to men's attempts to negotiate than to women's, especially if women use a "masculine" negotiating style.

For other readings on negotiation, see
http://www.hunter.cuny.edu/genderequity/seminars/f03_seminar_Dec03.htm