

Gathering Data and Using It to Generate Discussion and Action

Symposium on the Science of Diversity

Columbia University

November 17, 2006

Background

- Largely going to talk about our work on the status of women faculty at Princeton, which began in 2001 with a task force appointed by the President to examine the natural sciences and engineering, with the examination later extended to the humanities and social sciences
- However, approaches that I will discuss can be extended to any question about diversity
- This year, we will restudy the status of women faculty at Princeton and extend this work to include minority faculty

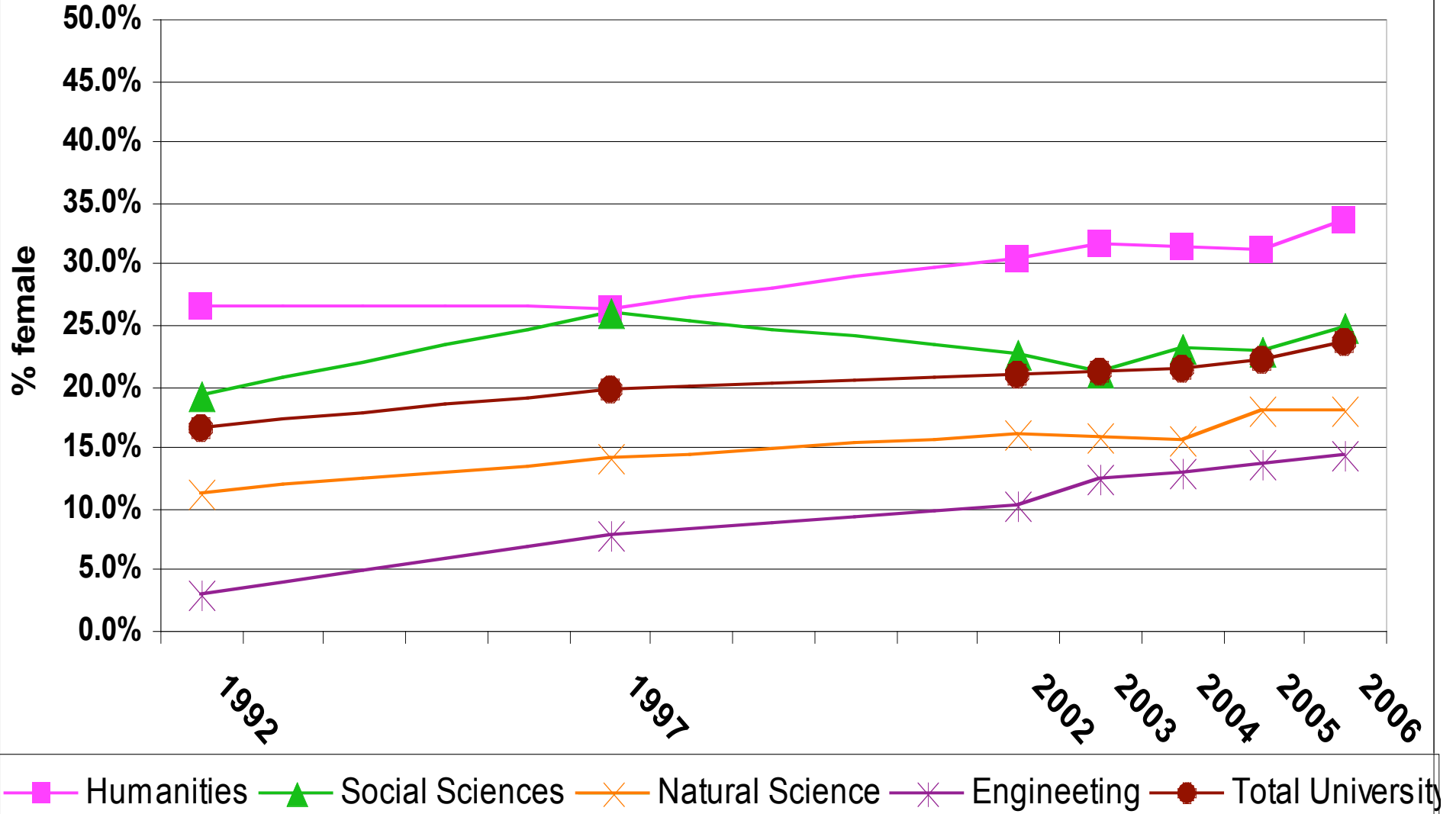
Basic Points

- **Data matter a lot in Universities.**
- **The data that we gather, how we present those data, and how we use those data to construct arguments and encourage discussion will make a big difference in what we will be able to accomplish.**
- **What we can accomplish will always, in the end, depend on the collective behavior of our colleagues, and it is much easier to engage our colleagues around data than around anything else, including principle. (That doesn't mean we should ignore principle.)**
- **Consequently, we have tried to establish a culture of data, and conversation based on data, in as many venues as possible.**
- **Our general approach is to ask people what they think we can do collectively to solve problems that show up in the data.**

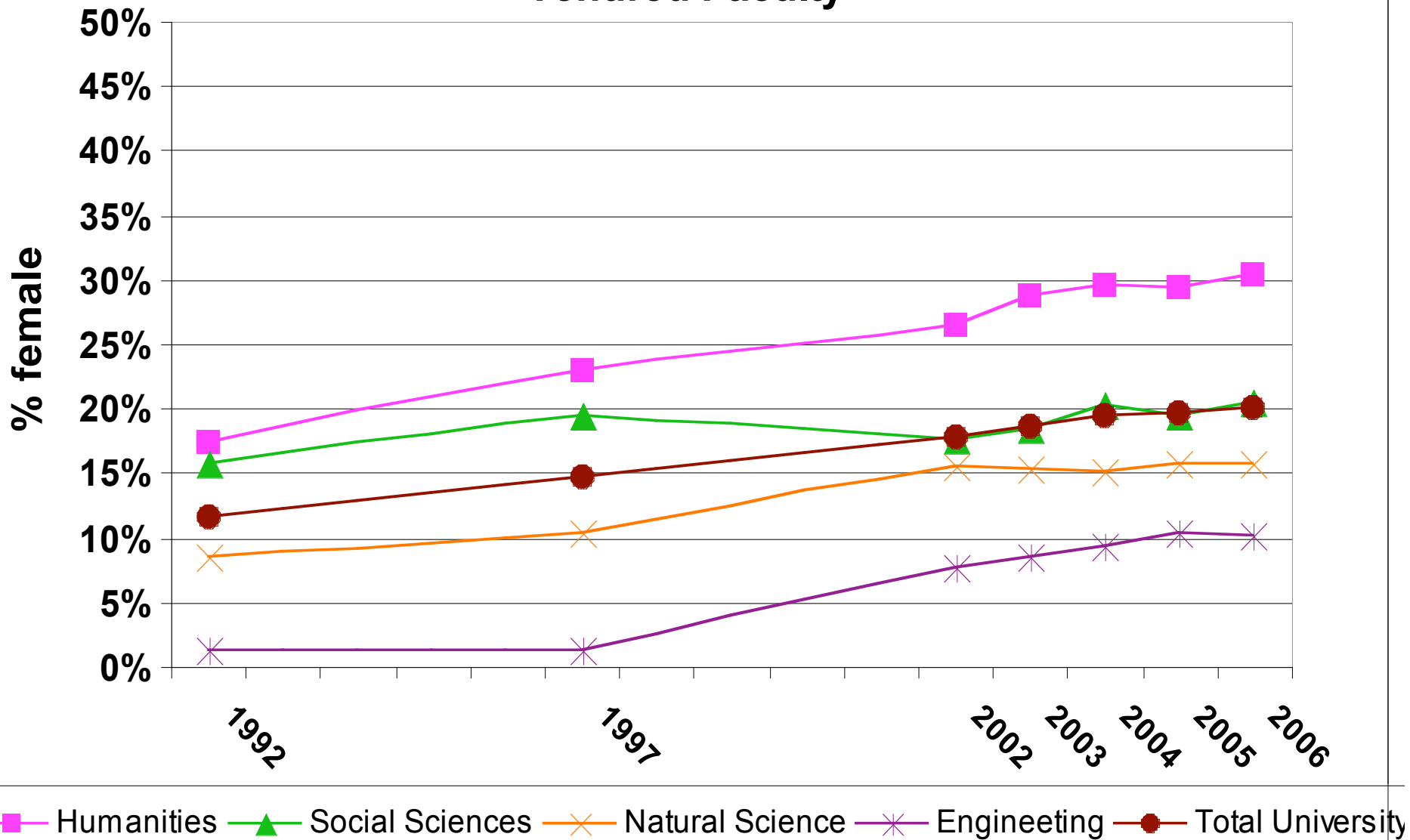
Data We Have Gathered and Used

- **Data on the representation of women at Princeton using the University's personnel & Registrar's databases**
- **Data on the salaries of Princeton faculty**
- **Data on faculty perceptions of their Princeton experiences using an on-line survey of current and former faculty**
- **Data from departments on research & work allocations**
- **Data from meetings with department chairs and with other individual faculty**

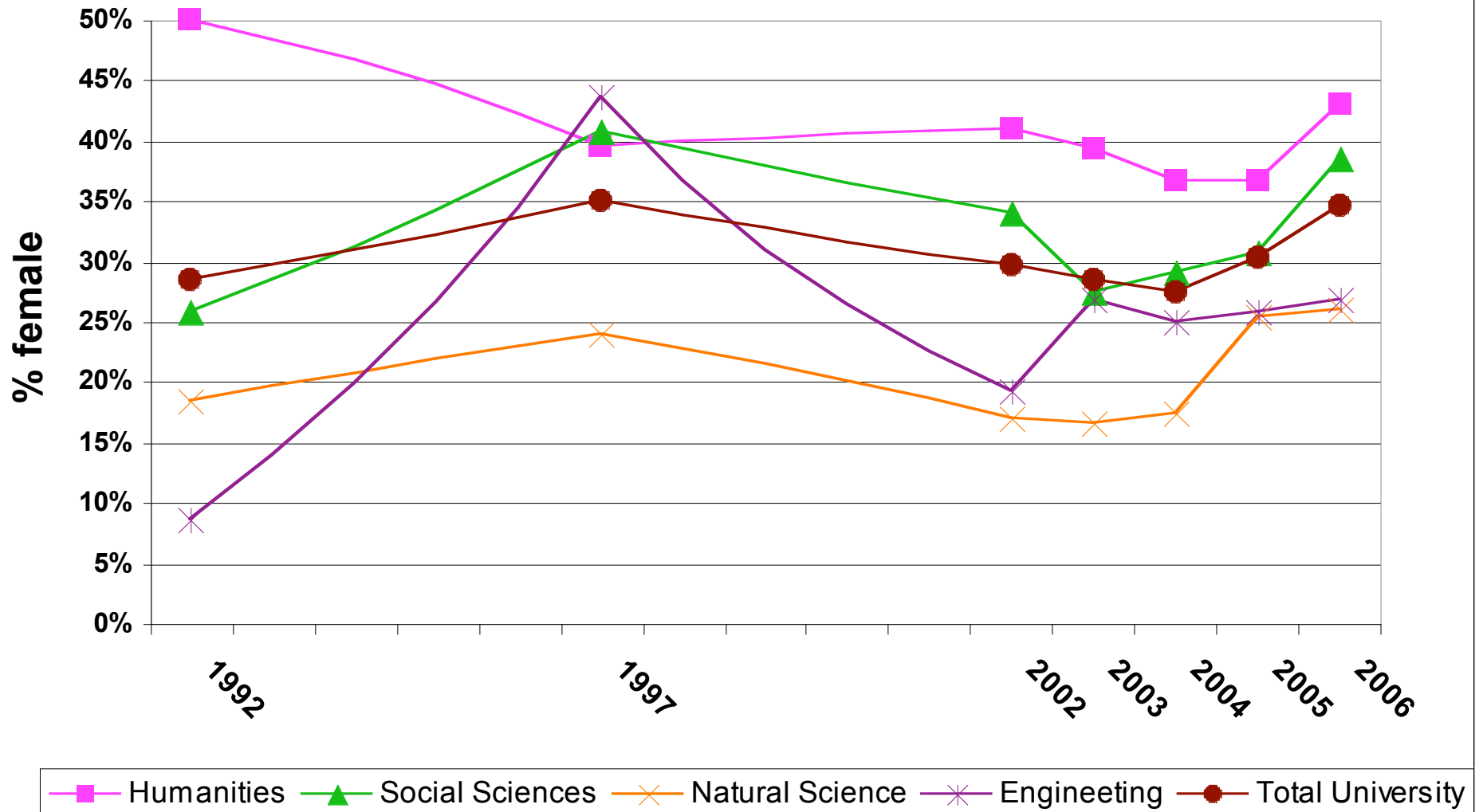
% Representation of Female Faculty by Division Full, Associate and Assistant Professors



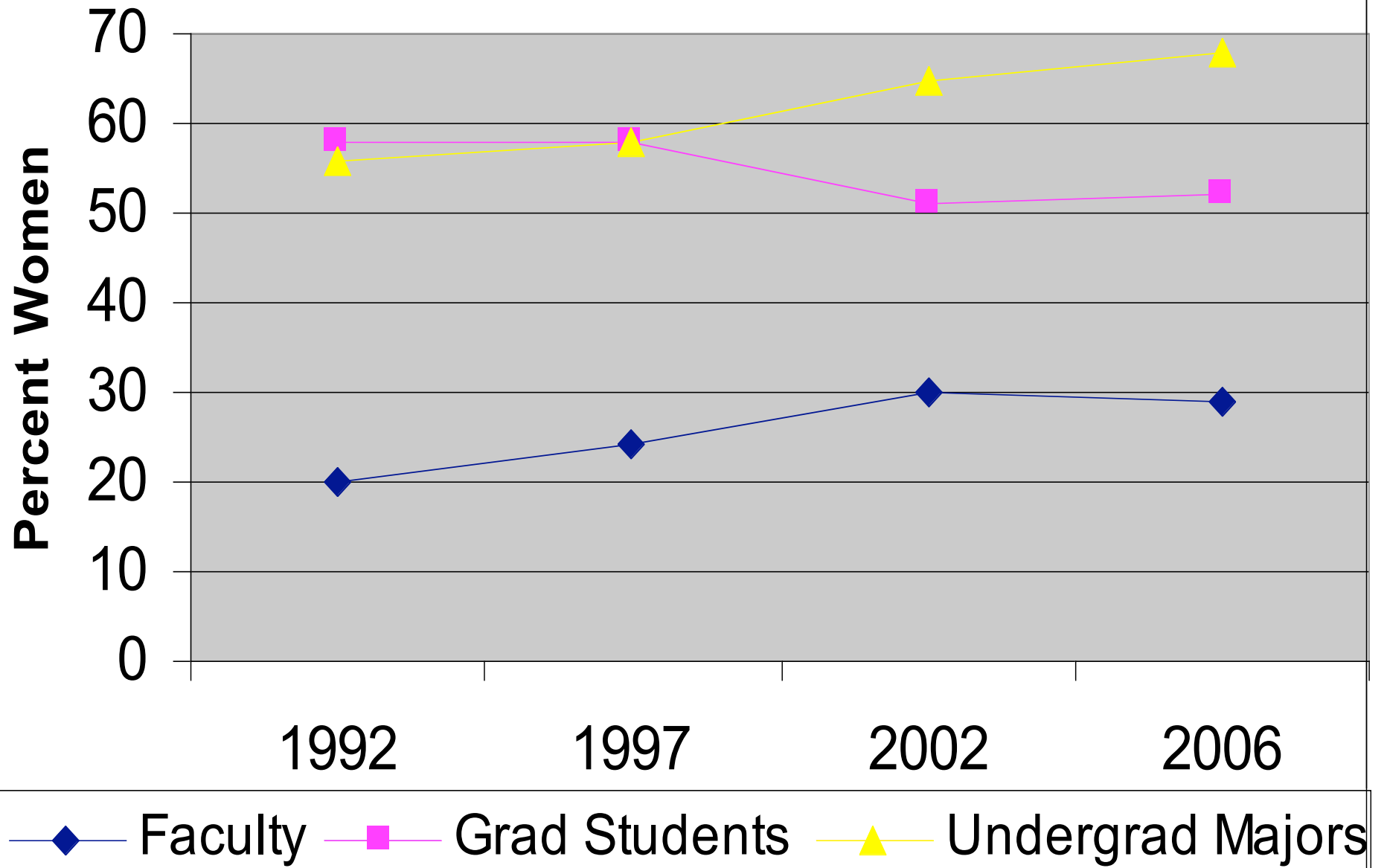
% Representation of Female Faculty by Division Tenured Faculty



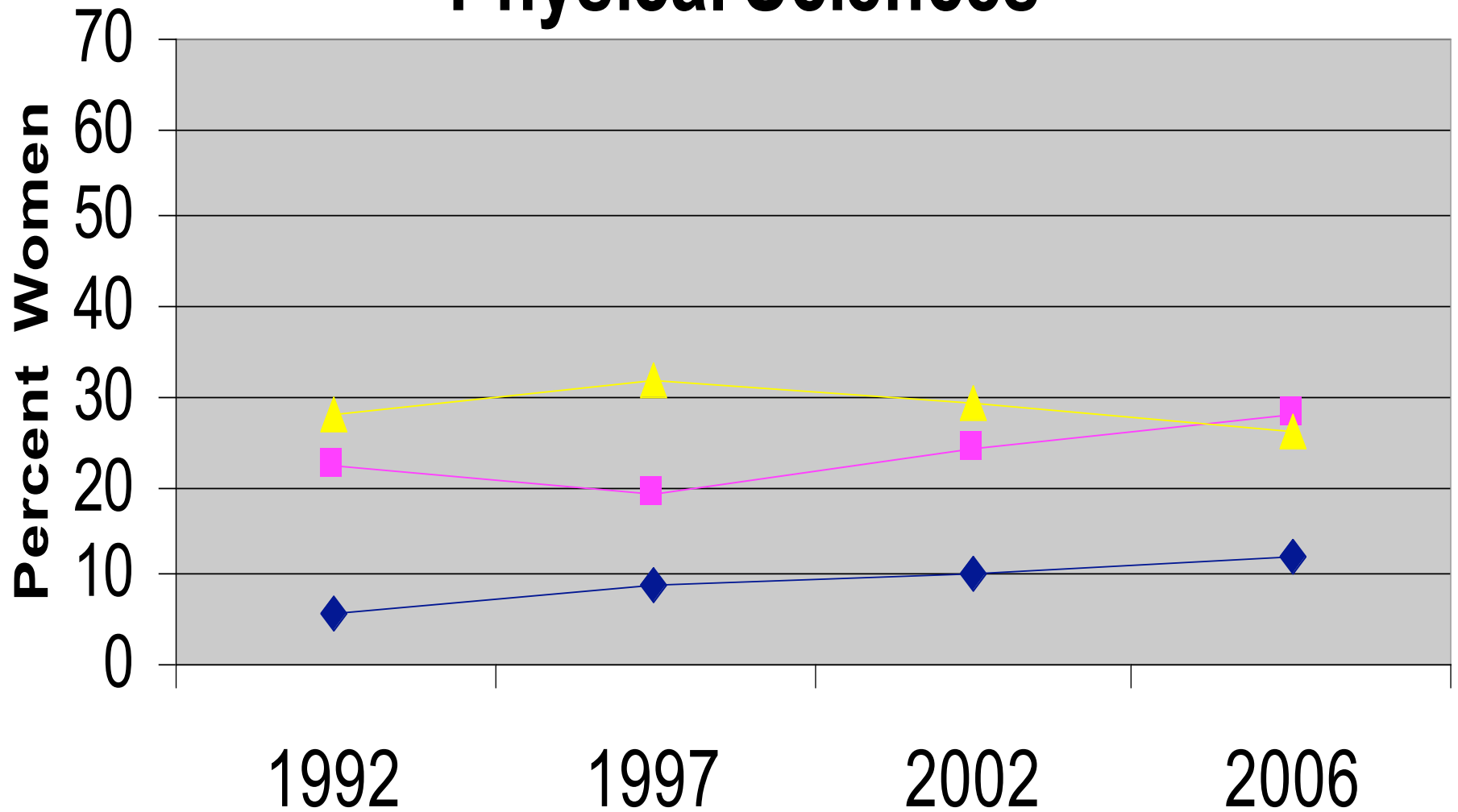
% Representation of Female Faculty by Division Assistant Professors



Life Sciences

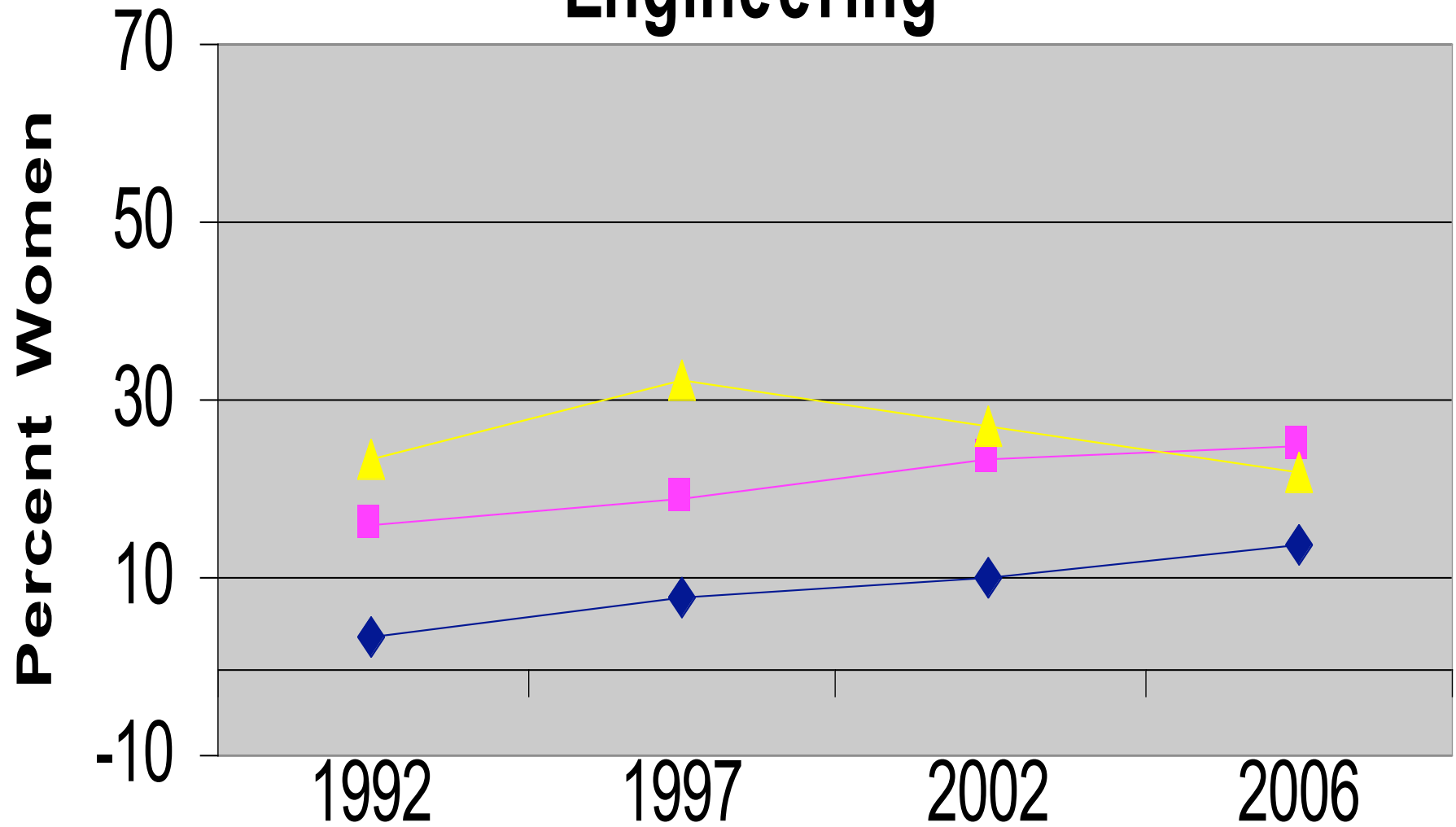


Physical Sciences



◆ Faculty ■ Grad Students ▲ Undergrad Majors

Engineering



◆ Faculty ■ Grad Students ▲ Undergrad Majors

Hiring, 1992-2002

- **Lots of opportunities: 517 faculty members were hired in this period; about half of the 702 faculty members in 2002 came to Princeton in the previous decade**
- **28% of newly hired assistant professors & 20% of newly hired associate and full professors were women**
- **Progress uneven: 2 depts hired no women**
 - 8 hired <20%
 - 7 hired 20-33%
 - 12 hired 33-50%
 - 3 hired >50%
- **First question everyone asks:**
Is this a function of pipelines?

How are individual departments doing?

Utilization Factors

D.J Nelson, U of Ok

$$\frac{\% \text{ women faculty at Princeton in 2002}}{\% \text{ women PhDs 91-96}}$$

Small UF (<0.5):	11 departments
Medium UF (.5-.75):	7 departments
High UF (>.75):	low % women in faculty & PhDs: 7 departments
High UF (>.75):	high % women in faculty & PhDs: 7 departments

**% Women Assistant Professors in 2004 and % Women Ph.D.'s in the
United States and Princeton University in 1995-97 and in 2001-03**

Division	% Women Asst Prof Oct 03	% Women Asst Prof Oct 06	% Women US PhD's 1995-97	% Women PU PhD's 1995-97	%Women US PhD's 2001-03	%Women PU PhD's 2001-03
Hum	39%	43%	56%	46%	50%	53%
Soc Sci	27%	39%	36%	29%	44%	41%
Life Sci	37%	38%	47%	56%	50%	56%
Phys Sci	0%	20%	23%	20%	27%	22%
Eng	27%	27%	11%	16%	17%	20%

Humanities: Architecture, Art and Archeology, Classics, Comparative Literature, East Asian Studies, English, Germanic Languages and Literatures, Music, Near Eastern Studies, Philosophy, Religion, Romance Languages and Literatures, Slavic Languages and Literatures

Social Sciences: Anthropology, Economics, History, Politics, Sociology

Life Sciences: EEB, Molecular Biology, Psychology

Physical Sciences: Astrophysics, Chemistry, Geosciences, Mathematics, Physics

Engineering: Chemical Engineering., Civil and Environmental Engineering, Computer Science, Electrical Engineering, Mechanical and Aerospace Engineering

There Aren't Always Gender Differences

- **Tenuring rate is equal for men and women in most groupings; women actually receive tenure at a higher rate than men in the social sciences**
- **Women don't take longer to achieve tenure and promotion to associate professor but they do take longer to achieve promotion to full professor**
- **Salary is close to equal once it is adjusted for years since Ph.D., department, and rank**
- **No evidence for disparity in distribution of resources but it turns out to be very difficult to gather these data from departments in a systematic way, so we had limited data**

Climate

- **Mentoring: among current assistant profs, 33% women vs 64% men report being mentored**
- **Departmental leadership: 62% tenured women vs 89% tenured men report serving in important departmental positions**
- **Collegiality: 29% women vs 52% men rate departments as collegial**
- **Job satisfaction: 39% women vs 63% men are very satisfied with jobs while 7% women and 0% men reported being dissatisfied**

Family Issues

- **Two body problem**

 - 0% women vs 30% men married to someone who doesn't work
 - 85% of women vs 48% men married to someone who works fulltime

- **Tenure extension policy was controversial (and has since been changed), although workload relief policy was not**

- **Daycare is serious problem for men and women: 55% women and 37% men adversely affected by day care situation**

- **Schedule conflicts: 45% of men and women with young children had work vs family schedule conflicts**

More Information

The 2003 report on the Natural Sciences and Engineering and the 2005 report on the Humanities and Social Sciences at Princeton, along with all their supporting data in appendices, are on the Dean of the Faculty website

- http://web.princeton.edu/sites/DOF/publs/GTF_Report/GTF_report_coverpage.htm
- http://web.princeton.edu/sites/DOF/publs/GTF_Report_HumSocSc/GTF_HumSocSc_report_coverpage.htm

Hiring results for four departments with low UF

% women PhDs:	# of hires	# women hired
61%	18	3 of 18 (17%)
36%	11	2 of 11 (18%)
20%	18	1 of 18 (6%)
24%	10	1 of 10 (10%)

Hiring results for three departments with high UF

51%	15	7 of 15 (46.7%)
37%	11	5 of 11 (45.5%)
18%	9	3 of 9 (33%)
11%	10	4 of 10 (40%)

Representation of women in faculty, 1992 vs 2006

	1992	2006
Physical Sciences	6%	12%
Life Sciences	24%	29%
Engineering	3%	14%
Humanities	26%	34%
Social Sciences	19%	25%

Representation of women, 2006

	Faculty	Graduate Students	Undergraduates
Physical Sciences	12%	28%	26%
Life Sciences	29%	52%	67%
Engineering	14%	25%	22%

Faculty

