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# Report of the School of Architecture and Planning

Reports of the Committees on the  
Status of Women Faculty

**March 2002**

**Massachusetts Institute of Technology**

## **Statement from the Dean of the School of Architecture and Planning**

The following report describes the current representation and conditions of women on the faculty of the School of Architecture and Planning, and analyzes trends over the last decade.

The report is the outcome of a meticulous study conducted by a committee chaired by Professor Terry Knight. I am extremely grateful to all the members of the committee for tackling this difficult issue with rigor and sensitivity.

The report contains a great deal of interesting and useful detail, but the bottom line is simple and clear. The current situation is unacceptable, and we have some work to do to change it. Despite the considerable efforts that have been made to improve the situation of women faculty in our school, and despite the encouraging progress that has been made in some areas, we still need to achieve some substantial improvements.

The charge of the committee was to examine conditions internally, not to compare conditions at the School of Architecture and Planning with those in similar schools elsewhere. The data that we do have suggest that we are doing reasonably well by comparison with our peers, but we can take small comfort in that. The relevant goal is that of completely eliminating gender inequities in all their forms.

This will require more than good intentions. Successful policies will depend upon a detailed understanding of the structure and magnitude of the problem. This report establishes an excellent empirical foundation for moving forward, it makes some sound recommendations, and I encourage everyone who is concerned with this pressing problem to read it with care.

William J. Mitchell  
Dean, School of Architecture and Planning  
8 March 2002

**REPORT OF THE COMMITTEE ON WOMEN FACULTY  
IN THE SCHOOL OF ARCHITECTURE AND PLANNING  
MIT**

**Women Faculty in the School of Architecture and Planning, 1990-2001:  
Numbers, Circumstances, and Experiences**

March 2002

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## Executive Summary

In the spring of 2000, a Committee on Women Faculty was established in the School of Architecture and Planning. It was constituted at the request of the Provost and the Dean of the School of Architecture and Planning, following the release of the pioneering 1999 School of Science study of women faculty and its striking findings. The members of the committee included six senior faculty: two each from the Department of Architecture, the Department of Urban Studies and Planning, and the Program in Media Arts and Sciences. The charge of the committee included the preparation of a report for the Dean to

- assess the status and equitable treatment of women faculty in the School—the assessment to be made through data collection and interviews, and
- make recommendations for improving the status and equitable treatment of women faculty, and increasing the proportion of women faculty in the School.

The committee requested data on tenured and tenure-track faculty from various departmental, School, and Institute sources. The data that were made available to the committee ranged over different time periods, between the academic years 1990 and 2001. This information was supplemented with interviews of all department heads, and with current and former faculty. The committee organized the material it collected into four areas: Faculty Numbers, Salary, Recognition and Resources, and Faculty Experience. The first three areas focus mostly on quantifiable aspects of the “equitable treatment” of women. The fourth area focuses on the less easily quantifiable “status” of women faculty. In these four areas, the committee found different gender issues in the three different departments, and some issues that were school-wide.

The committee completed its report in the fall of 2001. This report is a condensed version of the original report. It is important to note that the committee’s findings are based on data from a limited period of time. The committee did not attempt to explain the equities or inequities it found. Indeed, the responsibility, sources, or causes for both equities and inequities may be connected to conditions that existed prior to the period studied, and that are difficult to change in a few years. Moreover, the results of actions taken to improve gender equity during the period studied, or more recently in 2002, may not be immediately observable.

### Faculty Numbers

The overriding issue, school-wide, was one that was known at the start of the study—the low proportion of women faculty. In 2001, the proportion of women faculty in the School was just under 20%. The committee found that a dozen years earlier, in 1990, the proportion of women faculty was almost identical. After 1990, the proportion of women began to increase, reaching a high of just over 25%, but then declined to previous low levels. By contrast, during the same time period, the proportion of women students in the School increased significantly—at the graduate level from just over 30% to just over 40%, and at the undergraduate level from about 50% to just over 60%.

Since the original study was concluded, the numbers and proportions of women faculty have increased. This year (2002), the proportion of women faculty in the School rose to 24%. Next year, it is projected to increase to about 25%, reaching the highest level of the previous decade. (In one department, the proportion of women faculty will exceed previous high levels.)

The committee identified possible contributing factors to the low numbers and proportions of women faculty in the 1990-2001 period of study. Recruitment, hiring, and tenure patterns in the three departments appeared to be jointly implicated. The

number of job offers to women, school-wide, was significantly lower than the number of job offers to men in recent years. However, all offers made to women were accepted. This statistic may indicate that departments are making attractive offers to the women candidates that they do locate, or that women perceive the department, School, or Institute as a good place to be. Committee members met with department heads to discuss individual departmental recruitment and hiring policies. These discussions indicated that Institute programs for recruiting women faculty have had varying effectiveness at the department level. "Target-of opportunity" appointments have been used successfully to increase the numbers of women faculty at the senior level. And the Provost's research fund for new women hires has apparently been an attractor in bringing in junior women. But Institute affirmative action search policies have generally not resulted in special efforts to recruit and hire women.

School-wide, the tenure success rate for women has been lower than that for men. But there are considerable differences among departments. In one department, no woman has been tenured for over two decades. In another, the tenure success rate is high and is the same for women and men. The committee did not look at promotion rates of women after tenure—that is, to Full Professor—because only four women were promoted to Full in the history of the School, and only one of these is still on the faculty. Further, there have been no women in the history of the School promoted through all of the ranks from Assistant Professor to Full Professor.

The committee conducted interviews with former junior women faculty who left before their tenure review, to gain some insights into circumstances possibly related to low tenure rates for women in some departments. Former junior men were also interviewed to see which issues might be gender-specific. The interviewees had mixed experiences, but also had important concerns in common. All felt that women with families were disadvantaged with respect to their careers. Mentoring was generally perceived as inadequate. Most women commented on the need to form important alliances with senior faculty in order to succeed. But as young women they found it difficult to establish mentoring relationships with powerful, senior faculty who are mostly men. In general, women reported that difficulties for women arise as a result of the predominantly male culture and cumulative personal experiences and events, not because of any particular individuals or actions.

### Salaries

The committee was given access to just one year (academic year 2000) of salary data for tenured and tenure-track faculty. The data did not include faculty administrators (all men at the time) who are given extra compensation. The committee was also given annual salary increases averaged by year, department, and gender, over an 11-year period from 1991 to 2001. In the 2000 salary data, the committee found a marked imbalance between women's and men's salaries, school-wide, in relation to faculty rank. One-third of the women faculty in the School were the lowest salary earners in their rank and department. Almost three-quarters of the women faculty in the School were earning below the midpoint of the salary range in their rank and department, compared to about one-half of the male faculty. Some of the low salaries for women may be related to the generally lower paid fields in which these women work, or to their time in rank. On the other hand, the highest earner in the School was a woman. The average salary increases between 1991 and 2001 were higher overall for women than men in one department. In the other departments, average salary increases were roughly the same for women and men.

### Recognition and Resources

The committee had access to very limited information pertaining to faculty recognition and resources. The committee examined data on awards, service, and workspaces—specifically, the Provost’s HASS Awards, funded chairs, Institute committee membership, and faculty office, research, and support spaces. Relevant faculty numbers in these areas were extremely small in some cases. Conclusions about gender equity were thus difficult to make, but there were some areas of concern. In recent years, the success rate of women applicants for HASS awards has been significantly lower than that of men applicants, but the average award amount to women was the same or higher than that for men. There were some space inequities in one department, and questions about possible inequities in others. The committee found no inequities in the distribution of junior and senior chairs. No senior women have had permanent, senior chairs, but it appeared that there were no women in the pool of eligible faculty when these chairs became vacant. Still, this emerged as a strong area of concern for women faculty in the faculty interviews.

### Faculty Experience

Interviews with women faculty were conducted to gain an understanding of the nature and quality of women faculty lives in their departments, the School, and the Institute. Almost all of the junior and senior women faculty in the School were interviewed, along with a comparable number of male faculty—in total, just over 1/3 of the entire faculty.

Interviewees reported positive aspects of their lives at MIT. For example, many felt that they were moving toward their goals at MIT. Most found their teaching loads manageable and appropriate. Many felt that the climate for women faculty was probably better at MIT than elsewhere. But many interviewees raised issues that hampered their ability to lead fulfilling and productive lives at MIT. Some issues were not gender-specific and were school-wide. These included dissatisfaction with mentoring, and with quality of life issues such as managing work and family responsibilities, and the extreme pace and pressure of work. Important issues specific to women were also raised. Some were voiced very strongly by significant numbers of the women interviewed. Women expressed feelings of exclusion from key departmental decision-making, dissatisfaction with the awarding of senior chairs, and described general difficulties for women in a mostly male environment. Women’s perceptions of the climate for women were confirmed by some of the men interviewed.

### Recommendations and Next Steps

The committee made detailed recommendations based on its findings. Some of the main recommendations were to

- establish more effective policies for finding and hiring women faculty
- rethink mentoring practices
- increase the influence of women faculty in key decision-making
- appoint women as Department Heads and administrators
- create new funded, permanent chairs for women
- recognize and reduce the stress of managing work and family/personal responsibilities
- correct salary inequities and establish annual salary equity reviews
- create a more productive climate for women faculty

The committee felt that key factors in making long-term, permanent progress in gender equity are awareness and monitoring. As a first step in awareness, the committee recommended that the report be distributed to department heads, and that the main departmental findings be presented and discussed within each of the three departments.

The committee also made recommendations for establishing a permanent school-wide system for reviewing and assessing gender equity on a regular basis.

The report ends with data from the academic year 2001. This academic year, more women have been appointed to the faculty, and offers to women have been made for appointments next year. If the increasing proportions of women graduate students in the School are indicative of a national trend, then there is a growing pool of potential women candidates for faculty positions. Increasing the number of women faculty may help to solve many of the gender problems that the committee identified. Department Heads have also made active efforts in recent years to improve the working environment and influence of women faculty—for example, by correcting low salaries, by appointing women to important committees, and by finding opportunities for recognizing and providing resources for women faculty. The results of these efforts may not be immediately apparent, or observable in the committee's findings. Change does not happen fast, or as expected. And as this report suggests, the responsibility for improvement rests not just with a few departmental and School administrators, but with all members of the academic community, women and men alike.

## 1 Introduction

In the spring of 2000, a Committee on Women Faculty was constituted at the request of the Dean and Provost. The committee members included six senior faculty: two each from the departments of Architecture, Urban Studies and Planning, and Media Arts and Sciences (technically a program, but henceforth referred to as a department). The charge of the committee was two-fold:

- To prepare a report for the Dean including:
  - An assessment of the status and equitable treatment of women faculty in the School—the assessment to be made through data collection and interviews.
  - Recommendations for improving the status and equitable treatment of women faculty, and for increasing the proportion of women faculty in the School.
- To decide the mission and constitution of a permanent committee on women faculty for the School.

The committee responded to the first part of the charge with a report that was completed in the fall of 2001. The report was submitted to the Dean and then to the Provost. This report is a condensed version of the original report. Confidential material has been summarized, and appendices have been omitted. We (the committee) will consider the second part of the charge in the coming months.

At the time our committee was formed, centralized and consistent records on our faculty did not exist. Thus, the first task of the committee was to decide what data might be relevant for our study. We considered a diversity of information on our tenured and tenure-track faculty, from numbers of faculty to compensation to academic duties to awards to work space. In discussions with the Assistant Dean, Diane McLaughlin, we narrowed down our initial list of data. The Assistant Dean and the Project Administrator for the Women Faculty Committees, Marsha Orent, then collected data from a variety of department, School, and Institute sources. The data they gathered ranged over different periods of time, between the academic years 1990 and 2001, depending on what information was available. (An academic year is referred to here by the end year of the 12-month period beginning in July of one year and ending in June of the next year.)

The Assistant Dean compiled some data in an extensive historical database of faculty in each department since 1990. The committee also worked with the Assistant Dean to develop another database on current faculty. This database includes detailed information on individual faculty including degrees granted, years of hire, promotion, and administrative positions. The Dean's Office plans to update this database yearly. We supplemented these databases with other data and with interviews of department heads, and current and former faculty.

We organized all of the material that was made available to us into four areas: Faculty Numbers, Salary, Recognition and Resources, and Faculty Experience. This report is organized accordingly. The first three areas focus mostly on quantifiable aspects of the "equitable treatment" of women. The fourth area focuses on the less easily quantifiable "status" of women faculty. In these four areas, we found different gender issues in the different departments, and some issues that were school-wide.

The overriding issue school-wide was one we were aware of at the start of our study—the low proportion of women faculty. However, we also found that between 1990 and 2001 the numbers of women faculty began to rise but then declined to previous low levels. We found possible contributing factors to these low levels in recruitment, hiring, and tenure patterns in the three departments. We note, however, that our data end with the academic year 2001. In this academic year, a number of new women faculty have been hired, and the proportions of women faculty in all departments has increased. In two departments, the proportions of women faculty are expected to approach or exceed the highest levels of the previous decade.

School-wide there were salary imbalances, to the disadvantage of women faculty, in the one year of salary data that was made available to us. There were also some inequities in recognition and resources, though these were difficult to judge given the very limited information available to us. There were some significant issues with regard to the experiences of women faculty. Examples included dissatisfaction with mentoring, difficulties managing work and family responsibilities, lack of influence in important departmental decision-making, dissatisfaction with the awarding of funded chairs, and general difficulties for women in a mostly male environment.

In each of the four areas of concern, we made recommendations based on our findings. Our general recommendations, by headings only, are listed in section 7, page 61, together with the page locations where details of the recommendations are given.

We recognize that our findings are based on data from a limited period of time. We did not attempt to explain the equities or inequities we found. Indeed, the responsibility, sources, or causes for both equities and inequities may be connected to conditions that existed prior to the period studied, and that are difficult to change in a few years. Moreover, the results of actions taken to improve gender equity during the period studied, or more recently in 2002, may not be immediately apparent, or observable in our findings.

## 2 Faculty Numbers

This section of the report examines some trends in the numbers, hirings, and promotions of women faculty (tenured and tenure-track) over a 12-year period, from the academic year 1990 to the academic year 2001.

Within this period, the proportion of women faculty rose from under 20% to just over 25% and then back down to under 20%. Within this small proportion of women, the proportions of junior and senior women reversed over the 12-year period. In 1990, there were roughly twice as many junior women as senior women. In 2001, there were roughly twice as many senior women as junior women. The increase in the number of senior women is the result of recent “target-of-opportunity” appointments of senior women and the promotion to tenure of some junior women. The decline in the number of junior women is attributable in part to the low number of job offers made to women in recent years. It is also attributable in part to low tenure rates of women faculty. Interviews with former junior women indicated that these low tenure rates may, in turn, be attributable to a range of factors—from poor mentoring practices to difficulties balancing family and work demands to general, adverse climates for junior women in predominantly senior male departments.

The negligible increase in the proportion of women faculty over the twelve years is in contrast with a significant, roughly 10% increase in the proportion of women students at both the undergraduate and graduate levels over the same time period.

### 2.1 Proportions and numbers

In the academic year 2001, there were 74 faculty (tenured and tenure-track) in the School. The three departments had somewhat comparable numbers of faculty: 21 in Media Arts and Sciences (MAS), 28 in Architecture, and 25 in Urban Studies and Planning (DUSP). Twelve years earlier, the School had fewer faculty—62 total. The buildup in faculty occurred primarily in MAS. MAS was established in 1985 and is the youngest of the three departments. MAS had only 12 faculty twelve years prior. Architecture and DUSP each had 25.

The proportions and numbers of women faculty in the School and in each of the departments each year from 1990 to 2001 are shown in Figures 1 through 8. (Faculty who hold joint appointments in different departments are counted only once in their home departments.) The numbers of women faculty school-wide over this period are small—between 10 and 17. Changes in numbers and proportions of women faculty are not dramatic. Even so, they are significant to note. The proportion of women school-wide rose from 18% in 1990, to 26% in the mid-90s, and then back down to 19% in 2001. The increasing proportion of women in the mid-90s corresponds to an increase in numbers of women, and a very slight decrease in the numbers of men. However, the subsequent decline in the proportion of women corresponds to an increase in the numbers of men and almost no change in the numbers of women.

This school trend is an amalgamation of somewhat different trends in each department. In Architecture, the proportion of women peaked (28%) in 1995, but then steadily declined. In DUSP, the proportion of women peaked (27%) in the late 90s, but then dropped back to earlier levels. In MAS, the proportion of women peaked in the early 90s (33%) and then declined. In all three departments, there is roughly the same trend in recent years up until 2001: the number of men has increased but the number of women has stayed more or less the same. This trend is most striking in MAS over the entire 12-year period (see figure 8). In all departments, the relatively constant number of women

in recent years reflects more or less equal numbers of leavings and hirings of women (1 or 2) each year, not the same women each year.

Since the original report was completed, the numbers and proportions of women faculty have increased. In this academic year (2002), the proportion of women faculty in the School increased to 24%. Next year, it is projected to increase to 25%, approaching the highest level of the previous decade. In Architecture, the proportion of women faculty increased to 23% this year. Next year, it is expected to be 26%, approaching the highest level of the previous decade. In DUSP, the proportion of women faculty increased to 28%, exceeding the highest level of the previous decade. It is expected to be the same next year. In MAS, the proportion of women faculty increased to 22%, and is expected to be the same next year.

### Proportions of Women and Men Faculty School

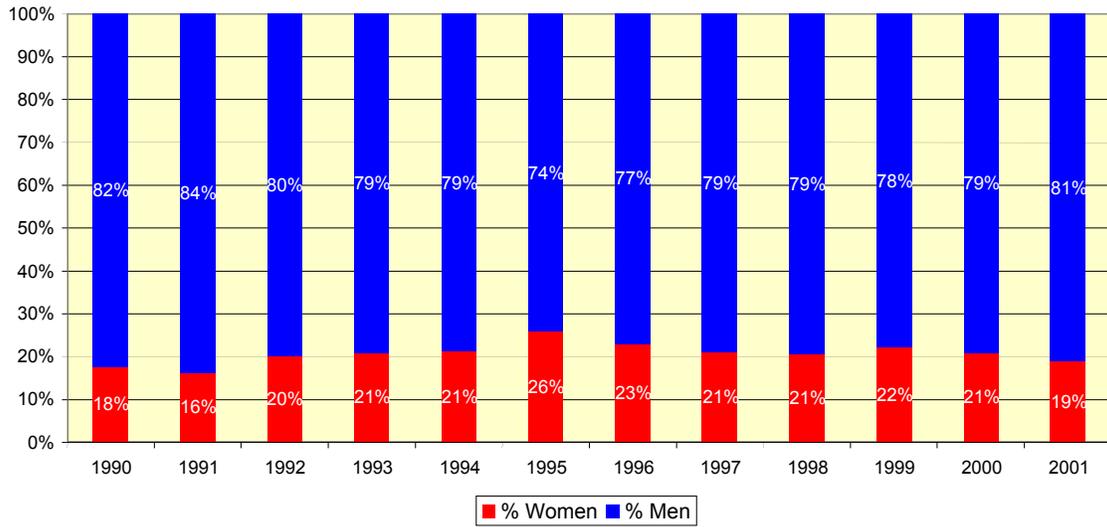


Figure 1

### Numbers of Women and Men Faculty School

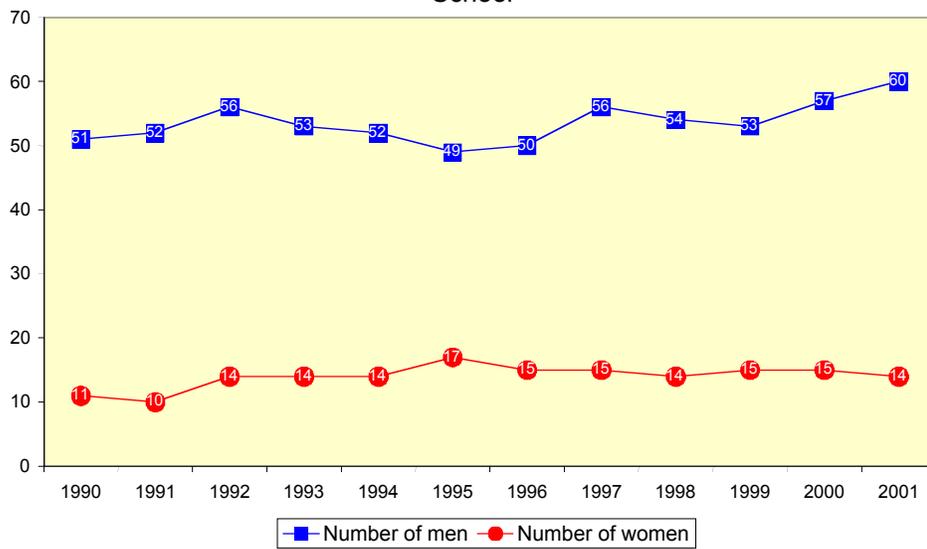


Figure 2

### Proportions of Women and Men Faculty Architecture

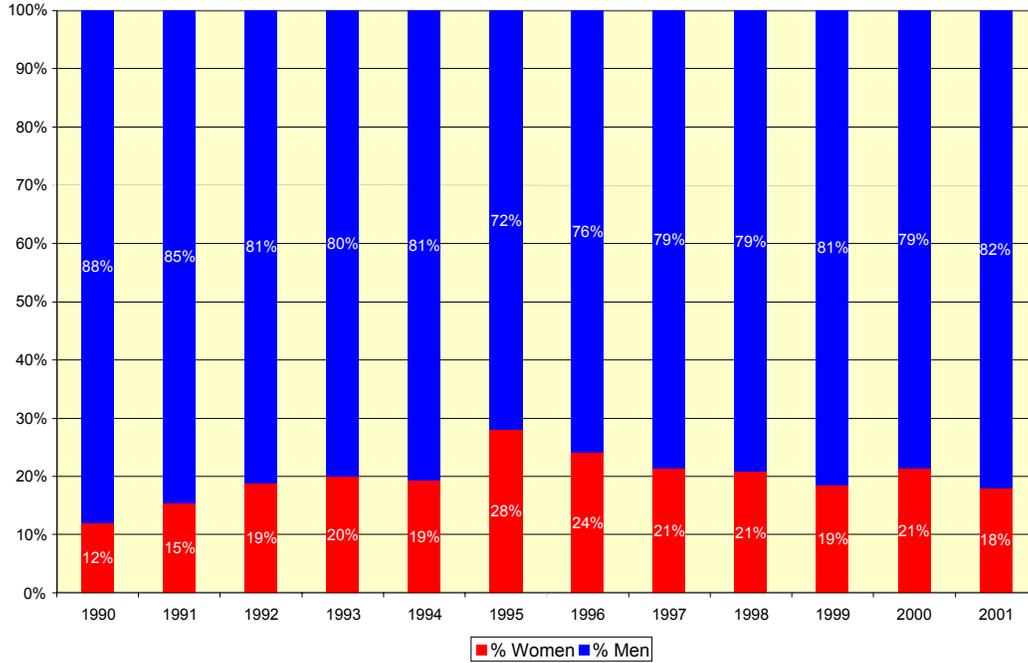


Figure 3

### Numbers of Women and Men Faculty Architecture

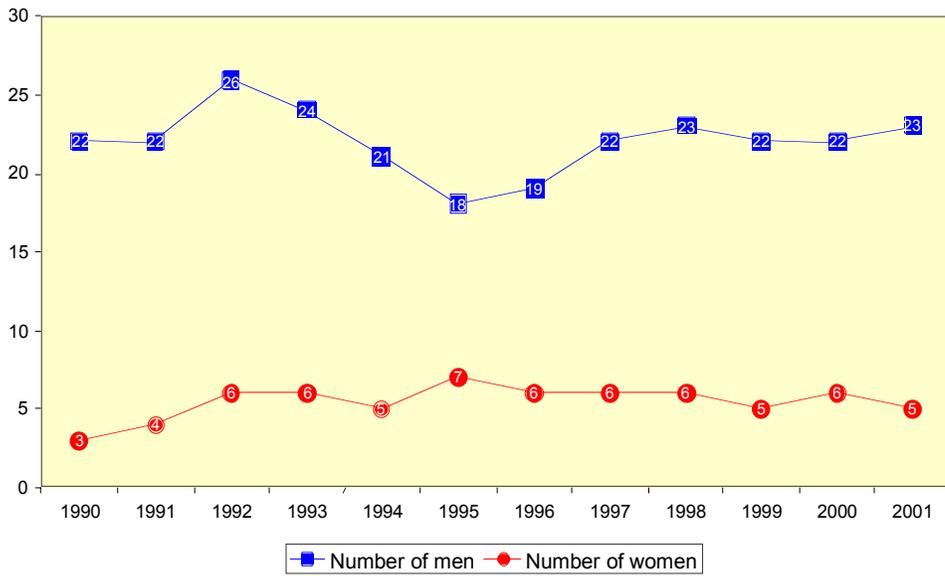


Figure 4

### Proportions of Women and Men Faculty DUSP

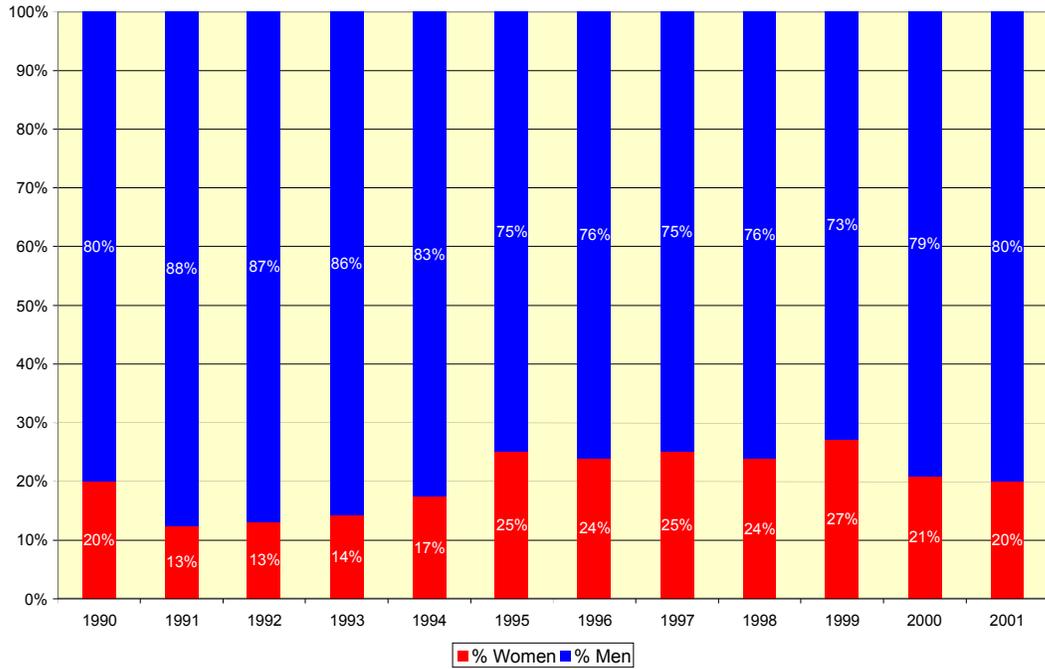


Figure 5

### Numbers of Women and Men Faculty DUSP

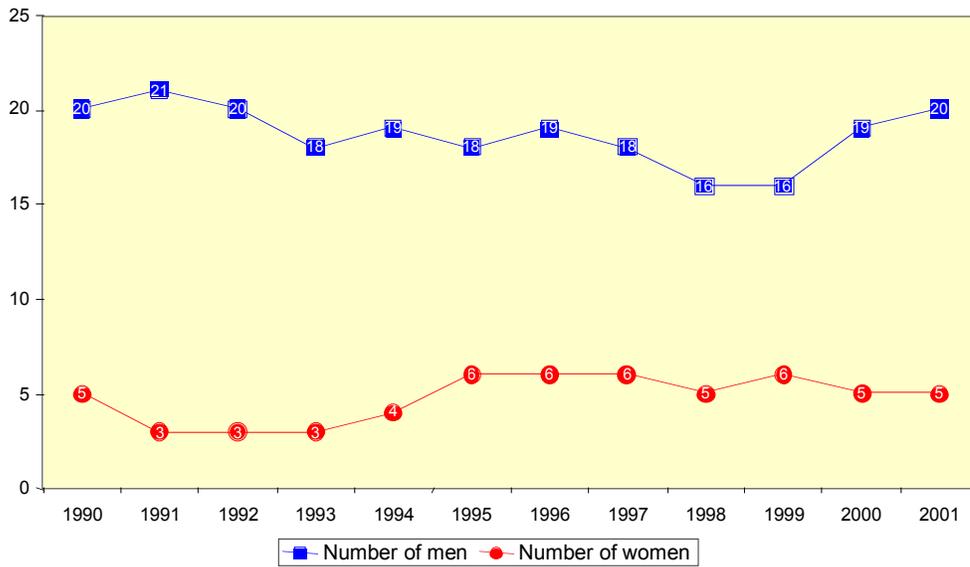


Figure 6

### Proportions of Women and Men Faculty MAS

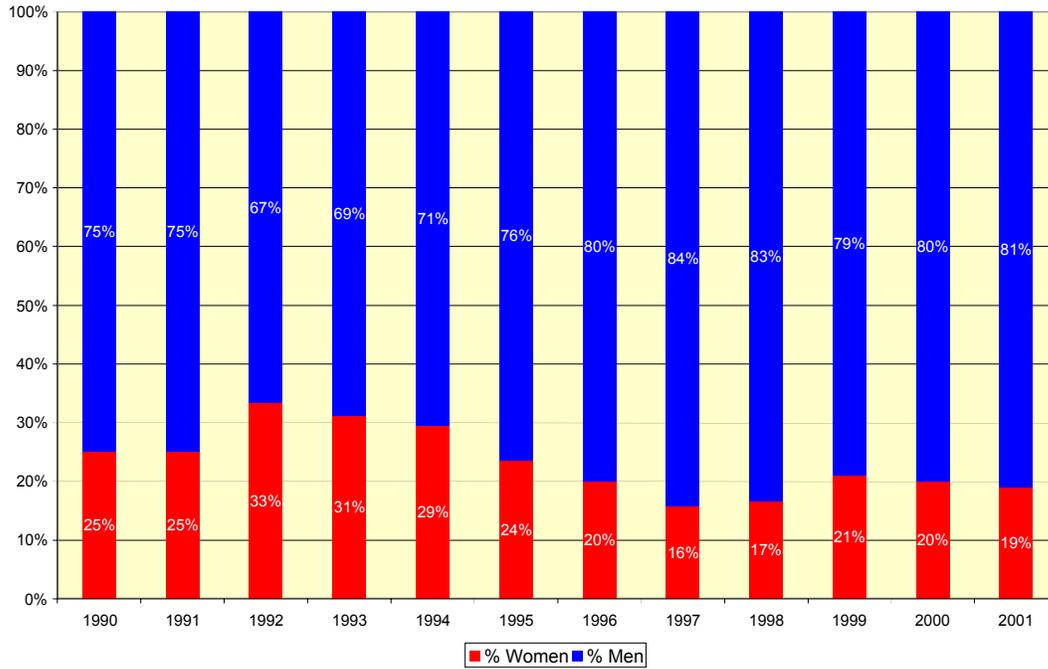


Figure 7

### Numbers of Women and Men Faculty MAS

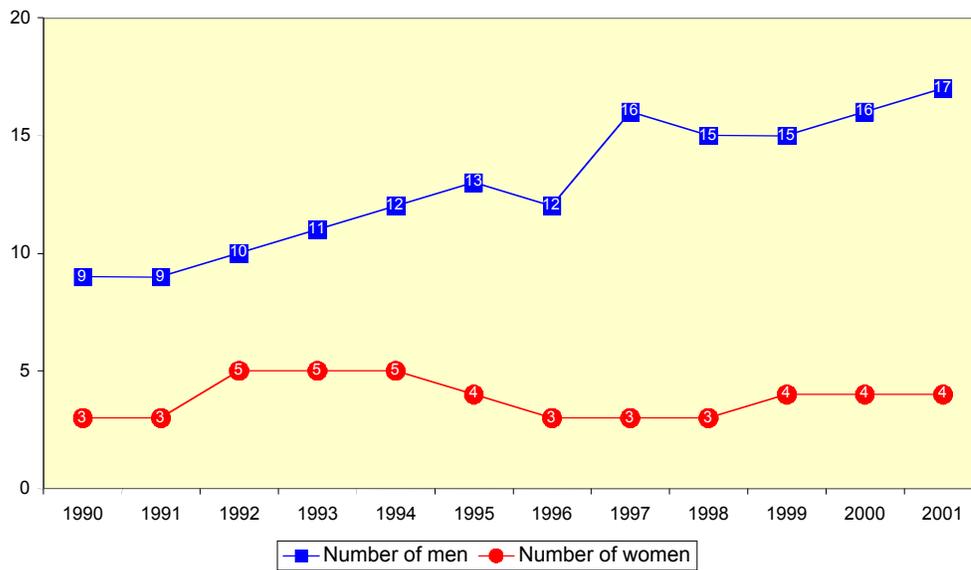


Figure 8

## 2.2 Rank distribution

Figures 9 through 12 show the distribution of senior (tenured) and junior (untenured) faculty by gender, each year between 1990 and 2001 for the School and for each department. The overall proportion of women is about the same in 1990 and 2001—around 19%. Within this percentage, however, the proportions of junior and senior women reversed over the 12-year period. The proportion of senior women school-wide doubled from 6% to 12%. This reflects the recent promotions of several women from junior to senior, and the appointments of senior women. The proportion of junior women decreased over the 12-year period. The proportion of senior men and the proportion of junior men school-wide remained more or less constant over the 12-year period. Senior men dominated the faculty at around 50% throughout the entire time period.

Architecture and DUSP show the strongest contrasts in the distribution of faculty by rank and by gender. In Architecture, the proportion of senior women almost tripled between 1990 and 2001, from 4% to 11%. However, senior men dominated the faculty over the entire time period. The proportion of senior men rose to its highest level of 61% in 2001. In DUSP, the proportion of senior women doubled between 1990 and 2001, from 8% to 16%. However, senior men made up over 50% of faculty over the entire time period.

As noted earlier (page 11), the numbers of women faculty have increased since 2001. In all three departments, the proportions of women and men faculty in the junior and senior ranks have changed accordingly.

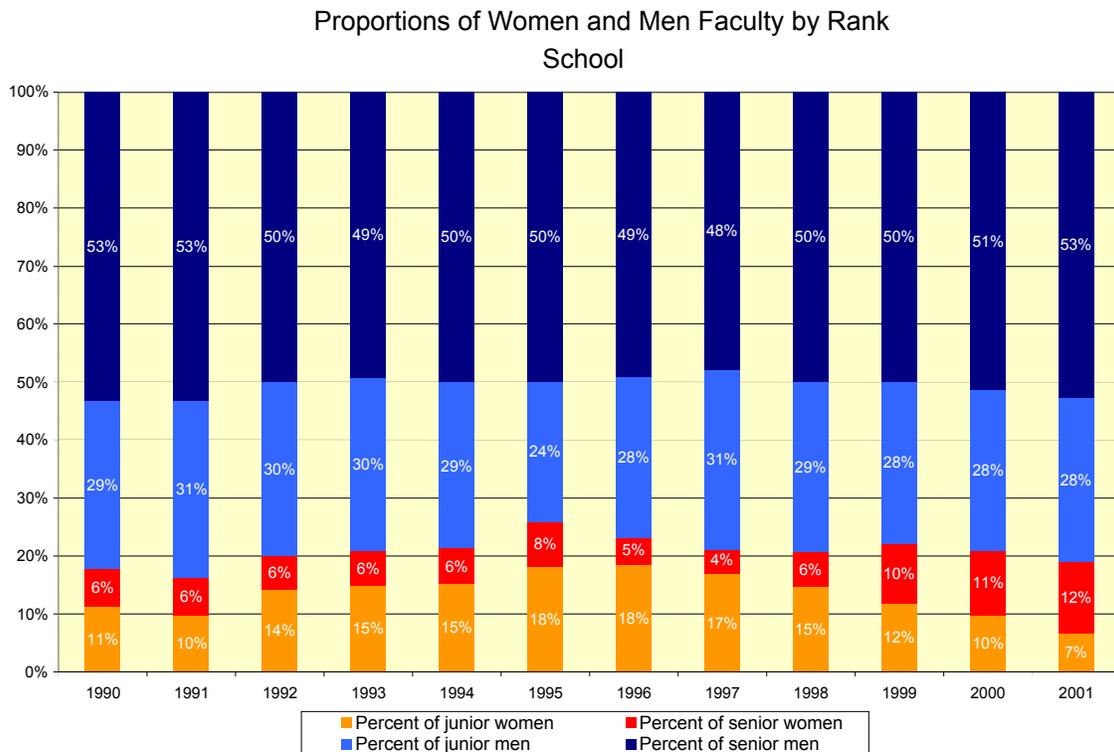


Figure 9

### Proportions of Women and Men Faculty by Rank Architecture

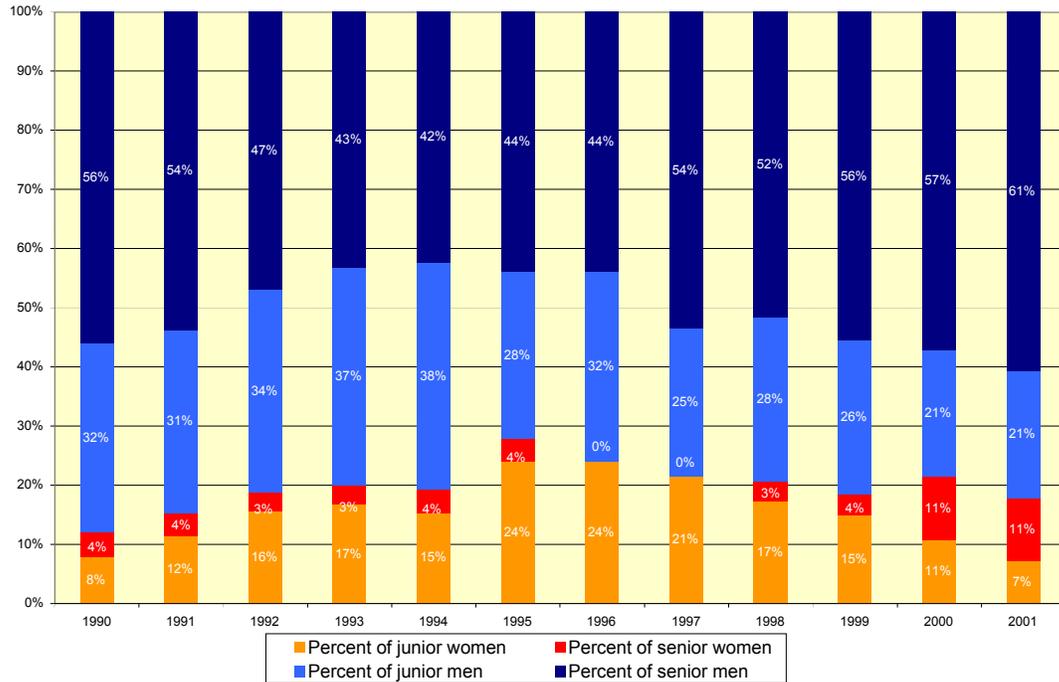


Figure 10

### Proportions of Women and Men Faculty by Rank DUSP

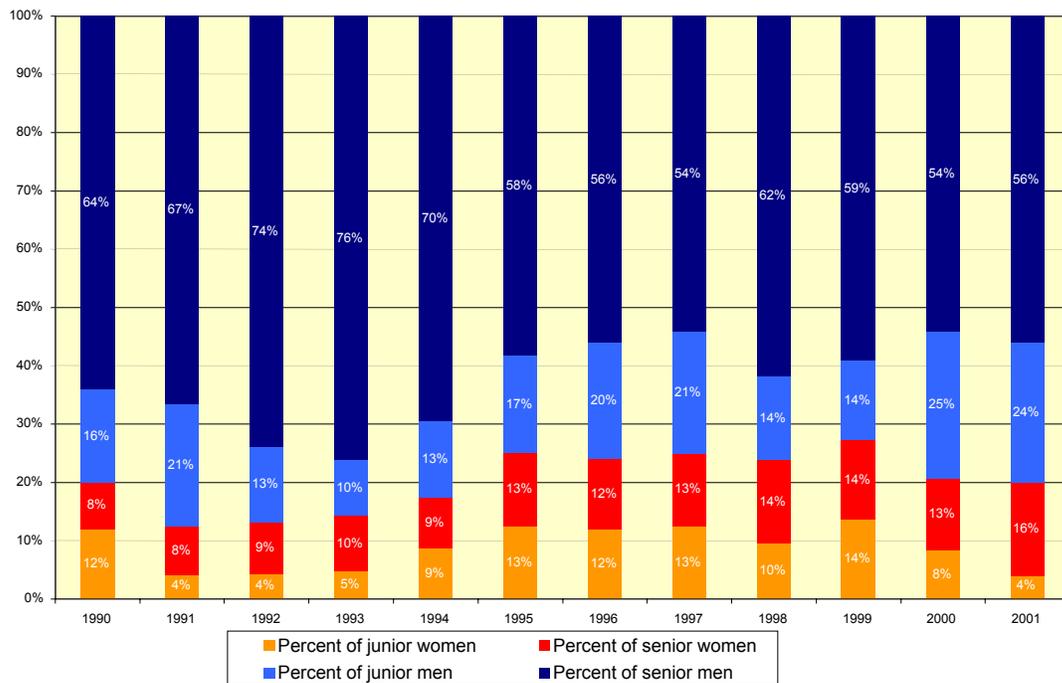


Figure 11

Proportions of Women and Men Faculty by Rank  
MAS

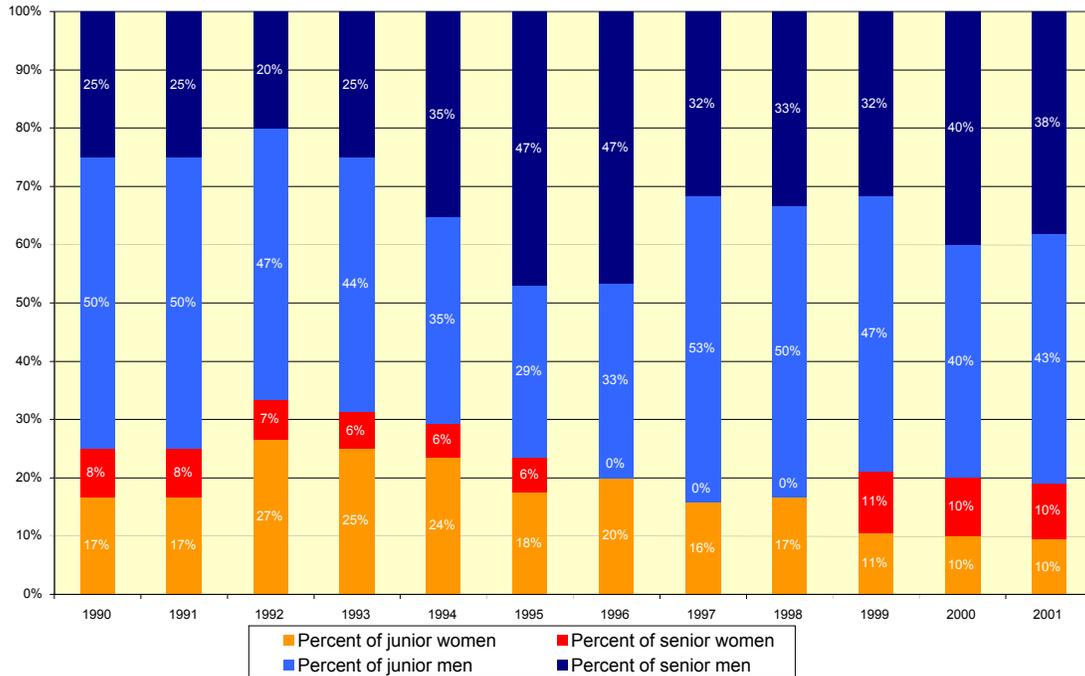


Figure 12

### 2.3 Pipeline

The pipeline refers to the numbers of people moving through the academic “pipe”, from undergraduates to graduates to faculty. Pipeline data for women in the School and in each department between 1990 and 2001 are shown in Figures 13 through 16. (For those unfamiliar with pipeline terminology, the women at each stage in a pipe are generally not the same as those in the previous stage.) The proportion of women declines as women “advance” through the pipeline. The proportion of women students in the School is high. Over the 12-year period, the proportion of women undergraduate majors increased from 50% to over 60%. (This figure does not include MAS which has no undergraduate majors.) At the graduate level, the proportion of women also increased steadily from just over 30% to just over 40%. The most significant increases occurred in Architecture and, to a lesser extent, in DUSP. In MAS (for which we have data only since 1994), the proportion of graduate women also increased but was still low in 2001—25%.

At the faculty level, the proportions of women school-wide are significantly lower than the proportions of women students over the 12-year period. As the proportion of women students increased between 1995 and 2001, the proportion of women faculty decreased. The gap between women faculty and women students widened. However, the proportion of women faculty has risen in 2002 (see page 11), and the gap may now be narrowing. And if the increasing numbers of women graduate students in the School are indicative of a national trend, then there is a growing pool of potential women candidates for faculty positions.

Proportions of Women Students and Faculty  
School

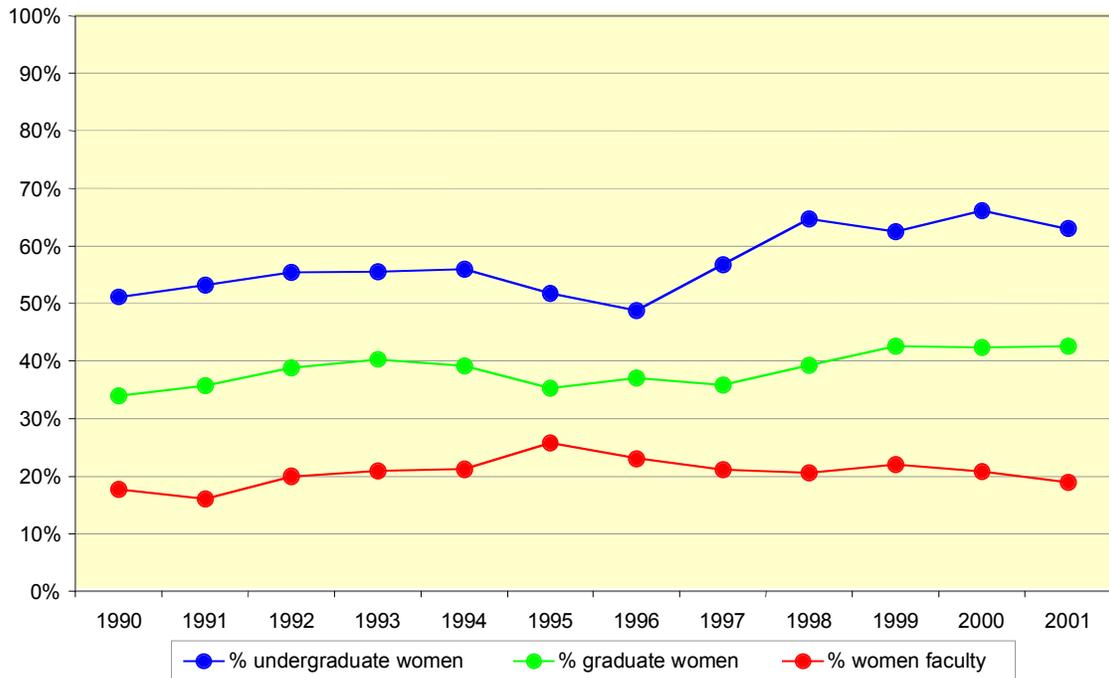


Figure 13

Proportions of Women Students and Faculty  
Architecture

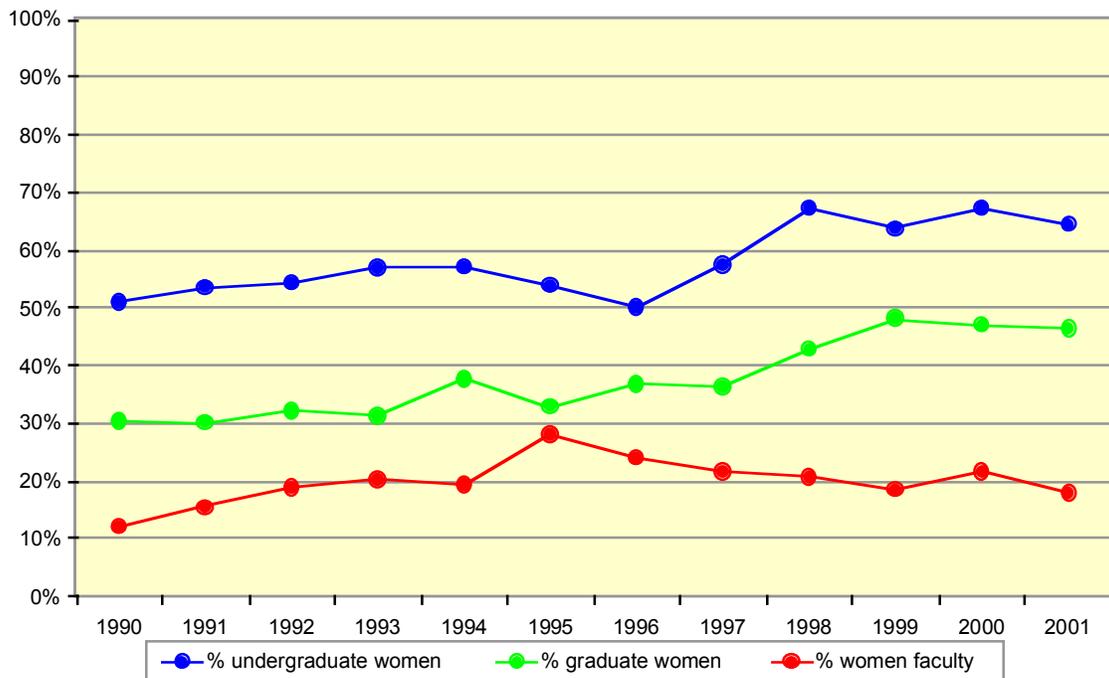


Figure 14

### Proportions of Women Students and Faculty

DUSP

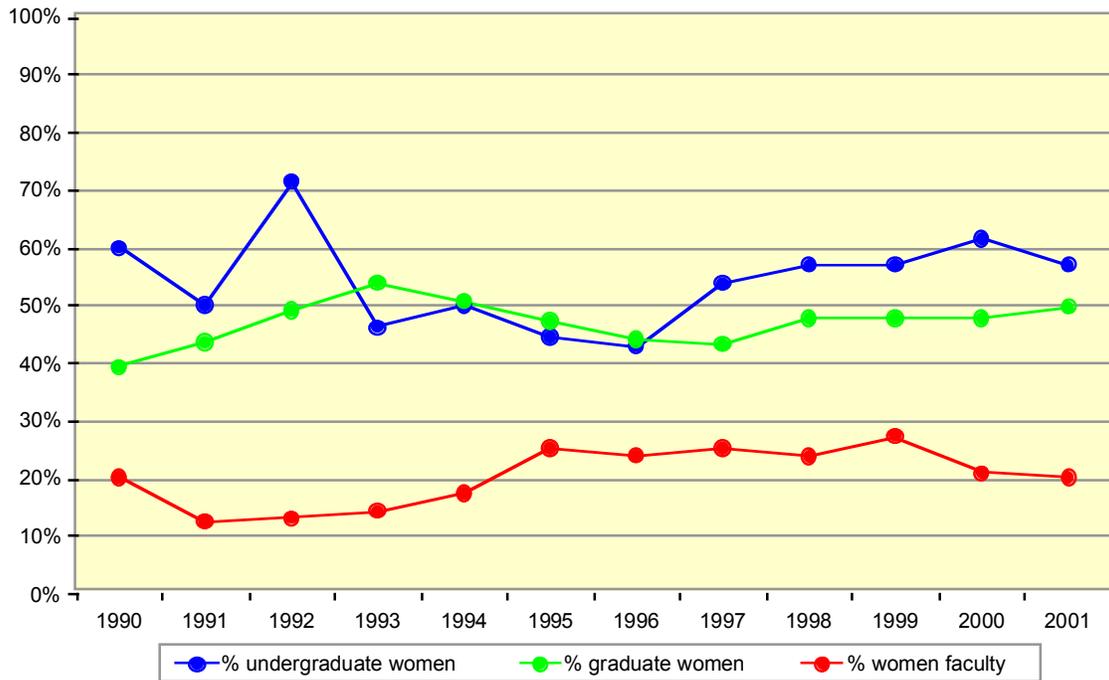


Figure 15

### Proportions of Women Students and Faculty

MAS

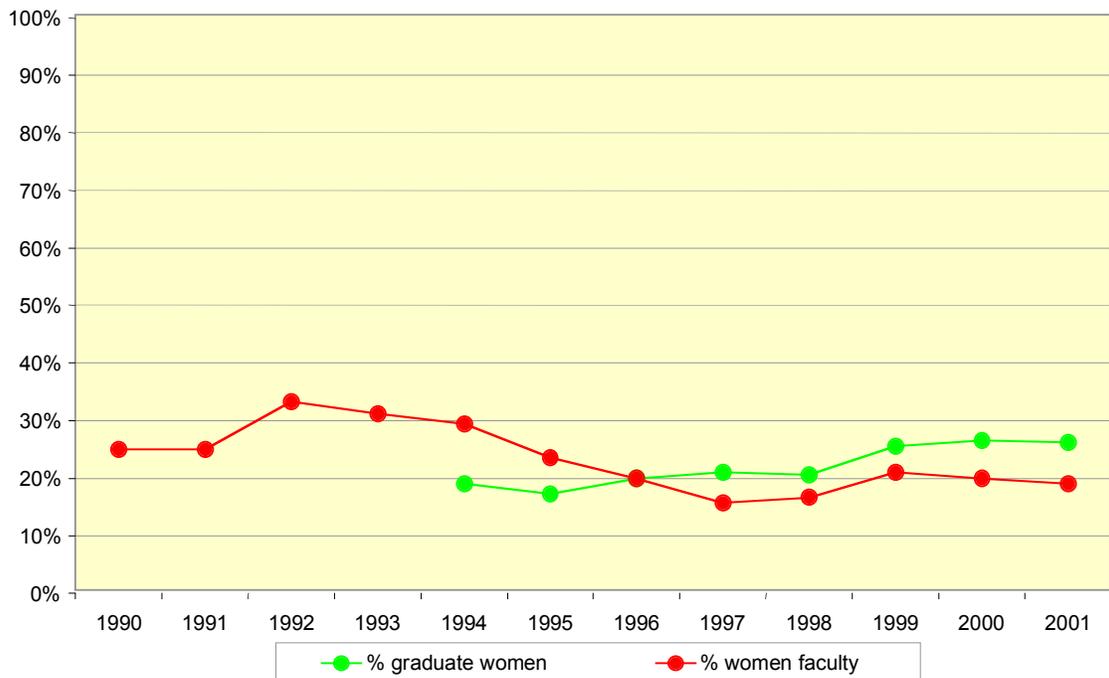


Figure 16

The low numbers and proportions of women faculty in the School reflect patterns of recruitment, hirings, and promotions of women over the past several years.

## 2.4 Recruitment and Hiring

### Recruitment

Figure 17 shows the numbers of job offers made to women and to men school-wide each year from the academic year 1994 to the academic year 2001. (The numbers of offers made by department were not available.) This 8-year period corresponds roughly to the period of decline in the proportion of women faculty in the School.

In this period, the numbers of offers made to women were mostly lower than the numbers of offers made to men. More offers were made to women in only two years. In these two years, the differences between the numbers of offers made to women and the numbers of offers made to men were minimal—offers to women and offers to men differ by just 1. When more offers went to men, the differences are much greater. In two years, no offers were made to women at all.

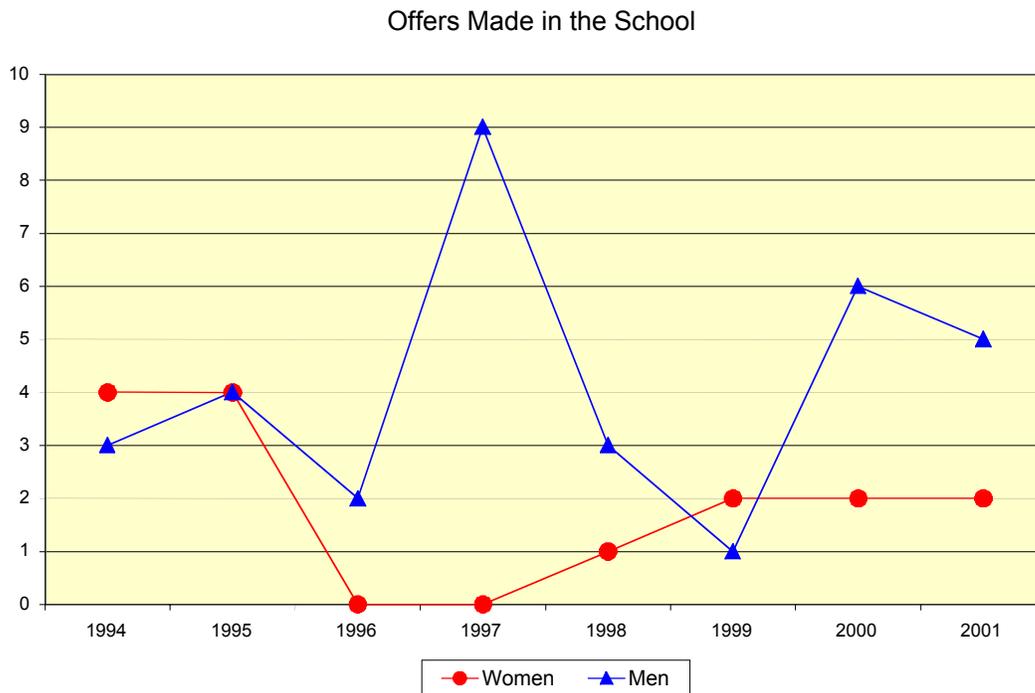


Figure 17

Figures 18 and 19 show the numbers of offer acceptances for women and men in the same time period. Not all offers made to men each year were accepted, but the acceptance rate was high. However, all offers made to women each year were accepted. The School is reaping the maximum benefit of offers made to women. The low numbers of women in the School thus do not appear to be a result of women not wanting to come to the School.

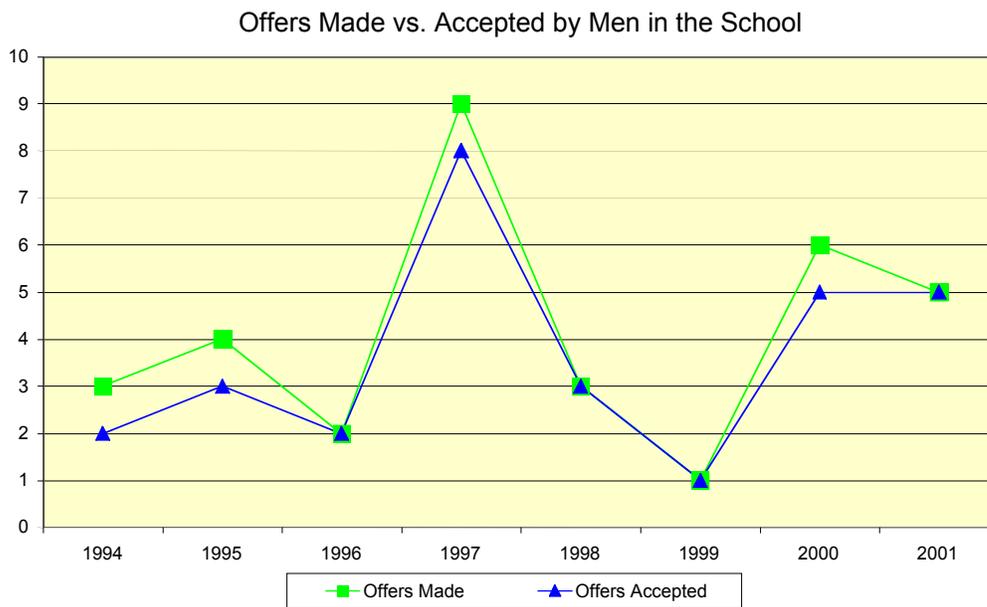


Figure 18

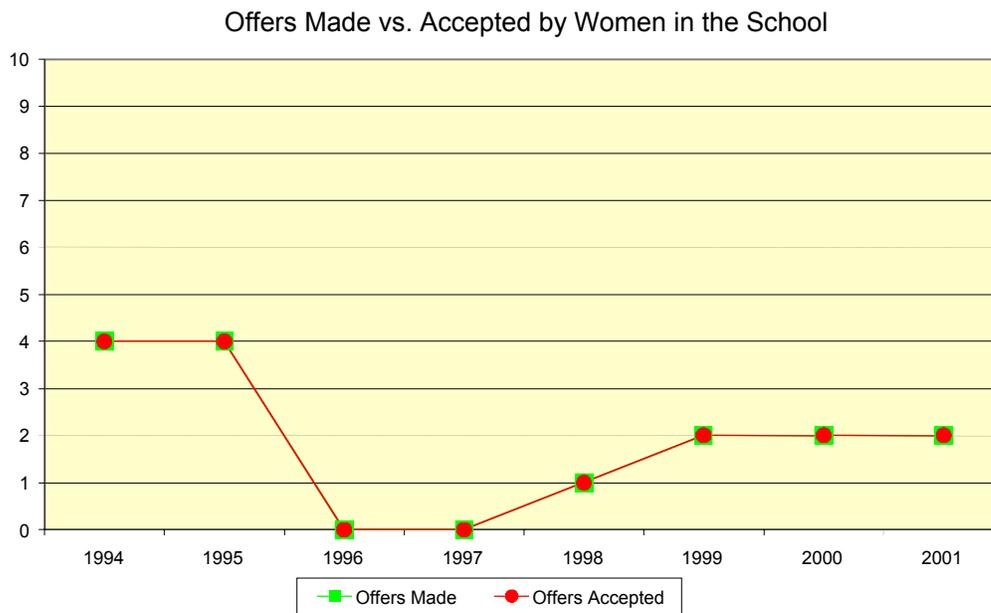


Figure 19

## Rank of Hire

Figure 20 shows the ranks at which current women and men faculty (that is, faculty as of the academic year 2001) were hired.

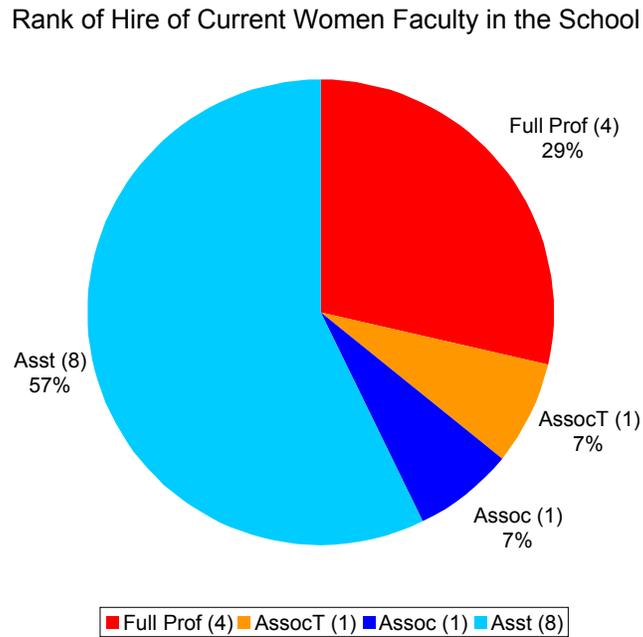
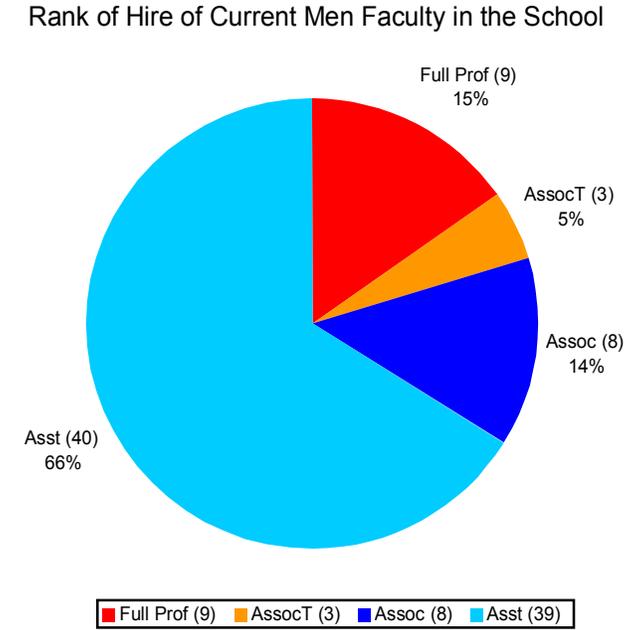


Figure 20

The proportions of women and men hired at the Assistant level are similar. So too are the proportions of women and men hired at the Associate with tenure level. There are greater differences in the proportions of women and men hired at the Associate without tenure level and at the Full level. These differences may have some indirect impact on the numbers of women in the School.

Junior faculty hired at the Associate level may have an increased likelihood of achieving tenure. These faculty have the same eight years to tenure as faculty hired at the Assistant level. However, they begin with more experience and background than faculty hired at the Assistant level. They may be better able than new Assistant professors to begin the kind of work necessary to achieve tenure. Of the eight men hired at the Associate level, five are now tenured. The other three have not yet come up for tenure. The one woman hired at the Associate level is now tenured. No new women have been hired at the Associate level. The gender disparity in Associate level hires is most prominent in MAS. In the past 10 years, three of the current male faculty were hired at the Associate level. No women were hired at this level. All of the current women faculty were hired at the assistant level.

It may be useful to track the tenure rates of faculty hired at the Associate level versus the Assistant level. If the tenure rate for the former is higher than that for the latter, then women may be at a disadvantage if they continue to be hired at a lower level than men.

The higher proportion of women hired at the Full Professor level reflects efforts by the School to increase the number of women through "target of opportunity" appointments. These are appointments of outstanding senior women and minorities in faculty slots created especially for them and funded by the Provost. (That is, they are not appointments in positions already open in a department.) These appointments do increase the number of women faculty, but they do not compensate for the low tenure rates of junior women in some departments. Although they have increased the proportion of senior women in the school, the proportion of junior women has dropped at the same time.

#### Hiring Policies: Department Head Interviews

The Institute has initiated a number of policies to recruit and retain women (and minority) faculty. In 1991, the Provost laid out an aggressive program, with Institute funding, for attracting women faculty. Different initiatives were established:

- A visitors and lecturers fund (\$50,000 annually) is available to bring in outstanding women, some of whom might be candidates for faculty positions.
- For departments with less than 25% women faculty, target-of opportunity appointments can be made.
- For departments with less than 25% women faculty, the department will receive \$30,000 annually for five years for each open slot filled by a woman. Out of this money, a discretionary allowance of at least \$15,000 will go to the woman faculty member each year.
- A 5-year chair, the Ellen Swallow Richards Professorship, will be available to outstanding, new senior women.

The Institute has also established an affirmative action "serious search" policy to motivate the recruitment and hiring of women and minorities. The essence of this policy is that departments must make and document serious efforts to recruit women and minorities for an open position, and if no short-listed woman or minority is hired, reasons must be given.

Two members of the committee met with the Heads of Architecture, DUSP, and MAS to discuss hiring practices and policies. We wanted to gain some insights into how Institute policies are implemented in each department, what departmental hiring practices exist, and how hiring policies might affect the numbers of women in the School.

#### *Visitors fund*

Department Heads either did not know about this fund or primarily used other funds to bring in visitors and lecturers. This fund appears to be an under-used resource.

#### *Target-of-opportunity appointments*

This program has been used aggressively by Architecture and by DUSP. In 2001, two of the three senior women in Architecture were opportunity appointments, and three of the four senior women in DUSP were opportunity appointments. (This year another opportunity appointment was made in DUSP). No opportunity appointments have been made in MAS because the department has a policy of not hiring at the senior level.

Despite the Architecture and DUSP opportunity appointments, the Heads of these departments expressed some concerns with this type of appointment. Both Heads felt that outstanding women cannot be hired outright. They must be a good fit with the department. This narrows the pool of women. One Head observed that hiring outstanding senior women might jeopardize the promotions of junior women faculty in the same area. In both departments, opportunity appointments at the tenured Associate level are rarely considered. They are perceived as difficult to make. One Head felt that it might be difficult to make a case for a woman to be outstanding at the Associate level. One Head observed that potential candidates at this level probably have been promoted recently elsewhere and might not want to go through the promotion process again. Only one opportunity appointment has been made at the tenured Associate level.

#### *Funds for open position appointments of women*

These funds come automatically with the appointment of a woman in an open position. In all three departments, they have been used only for junior appointments. All recent senior appointments have been opportunity appointments. The Department Heads did not feel that this program is a strong incentive to recruit women—excellence is always the main criterion in recruiting. However, the funds do seem to be an incentive for women to accept offers (see section 2.5 Junior Faculty Exit Interviews and section 5.2 Faculty Experience: Findings).

#### *Ellen Swallow Richards Professorship*

This chair has been awarded to one senior woman in DUSP. The Architecture Head expressed interest in using this chair, but noted that the emphasis on natural sciences and engineering is a problem. MAS does not hire at the senior level so this chair is irrelevant in hiring women.

#### *Serious search policy*

All of the Heads indicated that their departments followed serious search requirements. However, two Heads observed that the effectiveness of the policy—the true seriousness of a search—depends on having committee members who are aggressive in pursuing women (or minorities). Otherwise, there may be no special efforts to recruit women. In other words, it is possible to comply with serious search requirements, without actually making serious efforts. One Head thought that the policy was not really effective, that searches and appointments depend on personal contacts and leads.

### *Departmental hiring practices*

Each of the departments has different hiring practices.

In Architecture, search committees are composed mostly of faculty in the same discipline area as the open position. Positions may be constrained by curricular needs. Assistant Professor appointments are decided by the search committee and the Head. They are not reviewed by the entire tenured faculty. All other appointments are reviewed by the entire tenured faculty.

In DUSP, the search process for any level appointment includes the entire faculty at all stages. Search committees are composed of a range of faculty from different discipline areas. The goal of a search is to find the best person in a broadly defined area unconstrained by curriculum. Candidates are reviewed by all of the tenured faculty. In previous years, there were many “inside” appointments of former students. Because of the dissension this sometimes caused among faculty, this practice has been stopped.

In MAS, the search process is broad and inclusive. Search committees are the entire faculty. In building itself, this relatively new department is looking for the best people in broadly defined areas. In previous years, there have been several “inside” appointments, but this practice has been stopped. Appointments are made only at the junior level so that the faculty are promoted and “grown” within the department.

## **2.5 Tenure and Promotion**

### Tenure Rates

The calculation of tenure rates for a given time period is based on the total number of junior faculty that are eligible for tenure review in that time period. The success rate is the percentage of that group that received tenure in the time period. The failure rate is the remaining percentage of the group that either left before a tenure review or were denied tenure. In the following discussion, “tenure rate” refers to tenure success rate unless otherwise noted.

Figures 21 through 24 show the tenure success and failure rates for women and men from 1991 to 2001 by School and by department. The school-wide tenure rate for men (33%) is higher than that for women (22%). However, these rates are amalgams of very different rates in each of the departments.

In Architecture, the tenure rates for women and men are almost equal—27% for men and 25% for women. The tenure rate for women represents the recent tenure of two women in 1999. Before then, the tenure rate for women was 0% going back to 1987 when one woman was tenured (and left immediately after receiving tenure). One of the women recently tenured is the first woman in the history of the department to be tenured in the area of design. The other woman moved to another department after receiving tenure, but still holds a joint appointment with Architecture.

In DUSP, the tenure rate for women is 0%. It has been 0% for 23 years. The tenure rate for men is 33%.

In MAS, the tenure rates for women and men are equal—50%. The tenure rate for women represents the tenure of two women in 1996.

School Faculty Tenure Rates 1991 to 2001

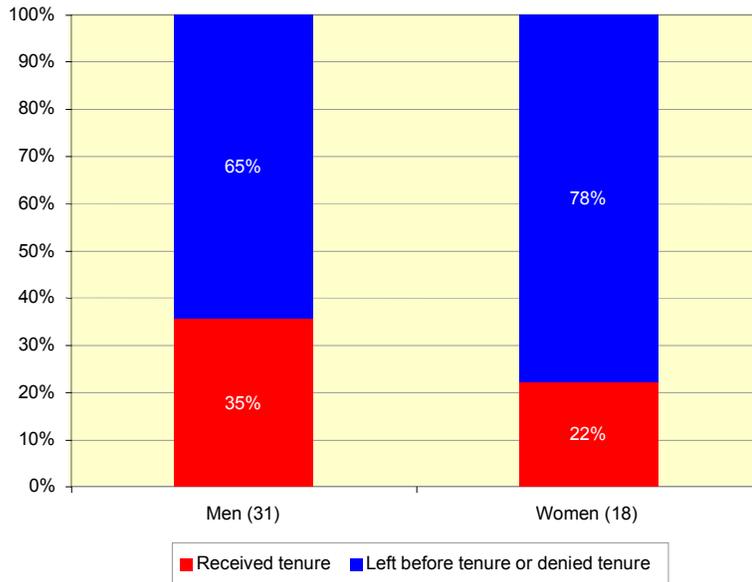


Figure 21

Architecture Faculty Tenure Rates 1991 to 2001

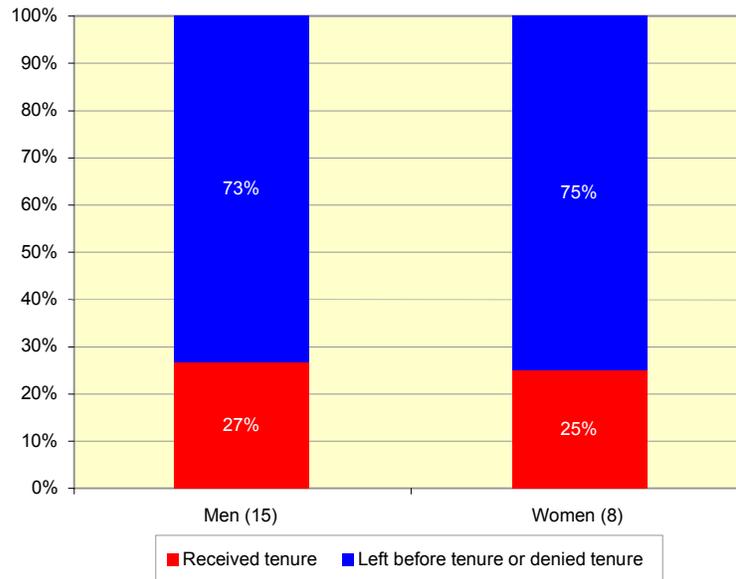


Figure 22

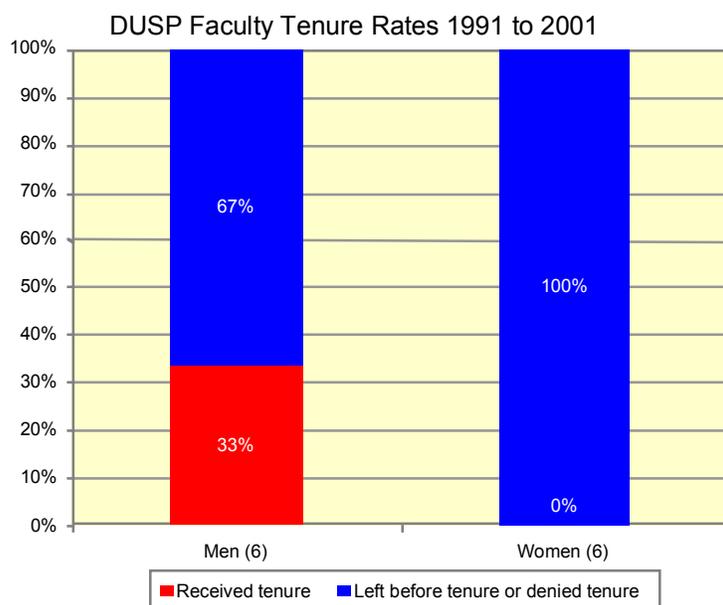


Figure 23

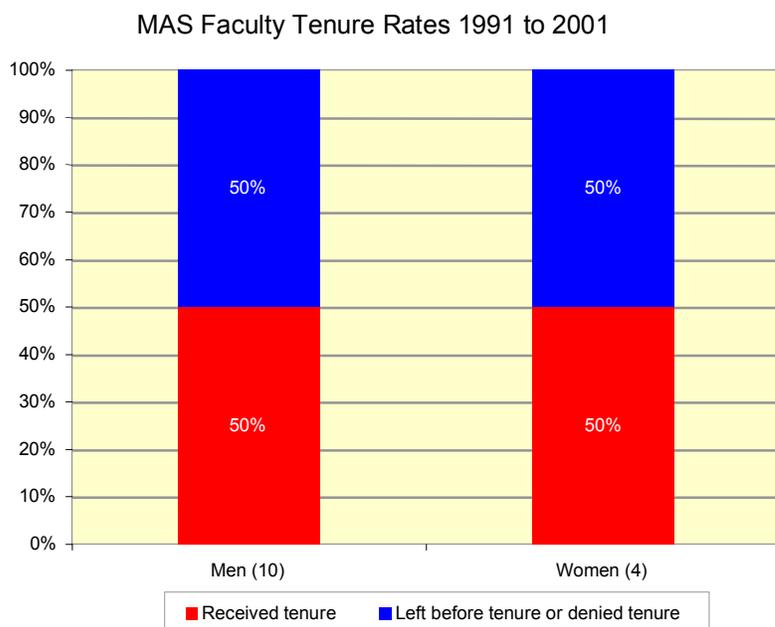


Figure 24

Promotion to Full Professor

The promotion to Full Professor is the next most important promotion after the promotion to tenured Associate Professor. There have been only four promotions of women from tenured Associate Professor to Full Professor in the School. *There have been no women in the history of the School promoted through all of the ranks from Assistant Professor to Full Professor.*

### Junior Faculty Exit Interviews

Because of the low tenure rates for women in DUSP and, until just recently, in Architecture, the committee decided to interview former junior women faculty in the two departments. We wanted to gain some insights into possible causes for the low tenure rates, and some understanding of the kind of support junior women faculty get (or perceive they get) in the promotion and tenure process. A very small number of women in DUSP and in Architecture were interviewed. The committee also decided to interview former junior men to see whether issues raised by women might or might not be gender-specific. A very small number of former junior men in DUSP were interviewed. Unfortunately, none of the former junior men in Architecture we approached for interviews were available at the time.

The committee developed a detailed protocol for the “exit” interviews, similar to the one used for the interviews of current faculty. Dr. Christie Baxter, our interviewer for the current faculty interviews, also conducted the exit interviews.

This section of the report summarizes information in the original report. In order to protect the anonymity of interviewees, only nonidentifiable issues are discussed and only nonidentifiable interview responses are provided.

Women and men interviewees reported mixed, positive and negative experiences. Women and men reported positively on:

- *Teaching and service loads*  
Most women and men felt that their teaching and service loads were fair and appropriate. Some praised the accommodations (reduced teaching/service) for junior faculty instituted in their departments.
- *Provost’s research fund*  
Most women mentioned the Provost’s \$15,000 annual research fund (for women hires) as a reason for coming to MIT or as a great benefit to their work here.

On the other hand, several areas of discontent emerged:

- *Promotion process and environment*  
Women and men alike perceived the promotion process as “political” or biased. Responses included:  
“[I was told by colleagues that] there were likely to be political barriers to my getting tenure”.  
“I became aware that it [getting tenure] was unpredictable, based on the politics.”  
“The standards were noble, but only if they were applied fairly. But they were not applied evenly.”  
“There is a lot of discretion about how senior faculty influences a young person’s career . . . [promotions are often dependent upon] personal ties and the clout senior faculty are willing to put behind it”.

Some women described negative experiences with senior male colleagues that impeded their goals or changed their outlook on getting tenure.

For example:

“[My] expectations about working with senior faculty were wrong . . . [I] felt excluded from [my department]”.

“I found barriers to doing what I hoped to do. . . . In particular, a senior male colleague made it difficult to develop my own research program.”

One of the women reported that a senior male colleague confided that:

"The standards for women and men were different and that things were stacked against the women."

- *Work and family*

Women and men alike reported difficulties finding enough time to do their work. However, all commented on the larger burden women bear and the larger sacrifices women must make with respect to family life if they are to succeed as academics. For example, one woman discussed the time she did put into childcare and noted: "I knew that I wasn't putting in the time junior faculty have to put in to make tenure, and I was working as hard as I could".

Some men with families noted how their wives' greater share of family responsibilities enabled their work:

"As a man I had the flexibility of saying, at any point in time, that for the next two days, I need to focus on my next presentation, or on my paper that needs to be published, or that I need to go to a conference. I don't think this would be as easily available to women faculty. Their role as mothers would be more prescribed."

"Because my wife was willing to take much of the family responsibility, it was easier than it might have been."

But one man observed that the family responsibilities of parents, regardless of gender, need to be taken into consideration in the tenure process:

"The more the tenure process moves from quantity to quality, the less they look at numbers of publications, they would be serving the gender cause. Involved parents simply have fewer hours of the day or week than single or uninvolved parents. As a result, it is not that we produce work of lesser quality, but we might produce fewer articles and books. As long as they take that into consideration, they would be treating involved parents, whether male or female, like single or uninvolved parents."

- *Mentoring*

Women and men alike described dissatisfactions with mentoring. Some reported being given explicit standards for tenure and good departmental support:

"The department tried to be very straight [about tenure standards]."

"The department did a good job [giving tenure goals]."

"The department did everything it could possibly do to help me through the process."

But some felt otherwise:

"They [senior faculty] seemed to be secretive about standards of quality."

"I never got a clear idea of what was expected other than vague concepts."

Some felt that they did not get enough guidance or counseling on ways to achieve tenure goals:

"There was no device that could be taken as some kind of activity plan. There was nothing to follow through on."

"[I] did not always know how to follow through on it [advice]."

For women, mentoring was especially problematic. Most women commented on the need to form important alliances with senior faculty in order to succeed. But as young women they found it difficult to establish mentoring relationships with powerful, senior faculty who are mostly men. For example, one woman commented: "It [getting mentoring] is harder when you are young and a woman and there are older men around you."

- *Gender climate*  
 In general, women reported that difficulties arise for women as a result of the predominantly male culture, not because of particular individuals, actions, or events. Respondents said, for example:  
 “If there were differences, it was because some men cannot see women as their colleagues in very subconscious ways. It is a very male culture. That makes it hard for some women, myself included, to enjoy it.”  
 “The culture was male, corporate, and strange to me. In my department, where senior men are dealing with junior women, it is harder for the women to be outspoken.”  
 “There are ways that being a man or a woman mattered . . . [A senior male colleague] felt that it was a very political department, and he recounted conversations that he had with male faculty in the men’s room. For the first time it occurred to me that having a separate bathroom might affect my career.”  
 “MIT was trying to attract women. . . that helps you get the job, but not to keep it.”  
 “Everyone at MIT acted in good faith. No one tried to be other than helpful – but there were missed opportunities, and there were times when gender worked against one.”  
 “It [being a woman] definitely makes a difference. The issue is larger than any individual. It is just the culture.”

## 2.6 Summary and Recommendations

There was a persistent, low number of women faculty in the School in the time period studied. The proportion of women faculty did not change significantly, while the proportion of women students increased. The Provost’s programs for recruiting women faculty, begun in 1991, have at varying effectiveness at the department level. Possible evidence of this is the low numbers of job offers made to women, in comparison to men, over the past several years. And the low number of women persisted despite the 100% acceptance rate of offers to women.

However, two Provost programs that seem to have made a difference in recruitment are the research funds for new women faculty and the target-of-opportunity appointments. Our interviews with former and current faculty indicate that the research funds are a definite incentive for women to come to MIT. The target-of-opportunity appointments increased the number of senior women. But at the same time, the number of junior women dropped. A few women were promoted to senior, but others left before tenure and were not replaced in large enough numbers.

The two older departments in the School—DUSP and Architecture—have poor histories of tenuring women. In Architecture, the tenure rate has improved recently. Our exit interviews with former junior faculty in DUSP and Architecture revealed possible sources for low tenure rates. Several women and men reported that mentoring is inadequate. Some said that the standards for tenure are spelled out, but guidance in reaching those standards is not adequate. Women felt that the demands of family life are difficult or impossible to reconcile with the demands of academic life. Women also reported general negative consequences or pressures of being a woman in a predominantly senior, male department.

The male culture of a department can be changed by increasing the number of women in the department. However, bringing in senior women from outside, as has been done successfully in recent years, is not enough to help junior women. Junior women do not have role models for promotion, that is, senior women recently tenured within the

department. By contrast, junior men have role models. They see others just like them—men—who have made it in their department in recent years.

The women interviewees from DUSP were hired before completing their PhDs. They spent their beginning year(s) in the department working to complete their dissertations. These women lost valuable time counted toward tenure. It is important to note here that ten of the eleven current faculty that were tenured in DUSP had completed their PhDs prior to their appointments.

The trend of hiring some junior men, but no junior women, at the Associate level may also skew tenure rates in favor of men.

Since the end of this study, the numbers and proportions of women faculty have increased. In order to keep progress going, and in view of some of our findings, we make the following recommendations:

### **Find and Hire More Women Faculty**

These recommendations concern the effective communication of Institute recruitment programs to departments, and the expansion of these programs where appropriate. They also concern the hiring of junior faculty, and the nature of faculty searches in general.

- An Institute or school-wide system should be established to work with Department Heads, and their departmental steering committees or councils, on the Provost's programs for hiring women faculty, and to advise them on ways to implement these policies. The Provost's Visitors Funds, target of opportunity appointments at the Associate with tenure level, and the serious search policy are now underutilized or ineffective.
- Department Heads, or their steering committees, should in turn communicate information about the Provost's programs to senior faculty—the people who need to look actively for women candidates for faculty positions.
- The departmental percentage (25%) of women faculty that determines eligibility for the Provost's programs should be increased for some programs where appropriate. For example, if the pattern in some departments of hiring women mostly at the senior level continues, the percentage of women faculty in these departments may surpass 25%. But, at the same time, these departments may still have a disproportionately low number of junior women and no longer have access to the automatic Provost funds for junior women appointments.
- The Provost's target-of-opportunity appointments should apply at the junior, as well as the senior level. Broadening the eligibility of this appointment would help increase the number of junior women faculty in the School. It would help MAS, in particular, since this department does not hire at the senior level.
- Under certain circumstances, consideration should be given to the balance of senior and junior women in a department when appointments of women faculty in regular, open positions are made. For example, when a department has few or no junior women, priority should be given to junior hiring.
- Departments have recently stopped hiring PhD candidates. This should be established as a School practice. Ideally, junior faculty should have one or more years of research or design experience prior to their appointments. This practice

might narrow the pool of women candidates for faculty positions, but it might also increase the chances of junior women achieving tenure.

- Every effort should be made to hire junior women and junior men in equal numbers at the Associate level.
- Faculty searches should not rely solely on personal leads and contacts. When a search committee is comprised mostly of male faculty, personal leads and contacts may lead to mostly male candidates.
- Faculty searches should be as intellectually broad as possible, and as inclusive of all departmental faculty as possible. Broad searches increase the pool of women candidates. Broad search committees and reviews of candidates by the full faculty allow for more checks for the inclusion of women candidates.

### **Mentor and Promote Junior Women**

- Departments should establish new, more effective mentoring systems that take into account the successes and failures of previous mentoring practices. Departments could offer incentives to senior faculty to take on the time commitment necessary for effective mentoring.
- In order to monitor and assess possible issues underlying the low tenure rates for women in DUSP and (until just recently) Architecture, exit interviews with junior women in these departments should be continued until the tenure rate for women improves.

### **Monitor the Promotions of Women to Full Professors**

- Only four women in the history of the School were promoted from tenured Associate Professor to Full Professor. The promotions of current women tenured Associate Professors should be monitored to make sure that they occur in a timely way.

### **Recognize Family Responsibilities**

- Department Heads should communicate to all faculty, on a regular basis, clear and accurate information about the new Institute family support policies. Department Heads should openly support women, and men as applicable, who use these policies, in order to avoid potential stigmas resulting from the use of these policies.

### **Create a Productive Climate for Women Faculty**

- The climate for women faculty will likely be improved if the recommendations above and those given elsewhere in this report are implemented.
- The climate of a department is dependent in part on the attitudes and actions of the Department Head. The Department Head should communicate to the faculty, and to senior male faculty in particular, that gender bias will not be tolerated and that the department will be fully supportive of its women faculty. However, in the end, the climate of a department is the responsibility of all faculty. The dissemination of the results of this study to faculty, together with regular, formal reassessments and public discussions of the status and treatment of women faculty, should help

educate all faculty about important gender issues. All faculty may then be more willing and able to create a productive climate for women faculty.

### 3 Salary

The committee analyzed and compared the 9-month salaries of all Rank List 1 women and men faculty in the School. Three sets of data were provided to us:

- the 9-month salaries of Rank List 1 faculty—by department, rank, and gender—for the academic year 2000
- the annual salary increases for Rank List 1 faculty—averaged by gender, department, and year—from the academic year 1991 to the academic year 2001
- the Institute Faculty Salary Review, Departmental Equity Listing, for the academic year 2000

To round out our understanding of salary, two committee members met with the Department Heads to discuss faculty salaries in their departments. They also met with the Dean to discuss faculty salaries school-wide.

There are some substantial differences between the salary levels in the three departments that are field-related. Because of these departmental differences, most of the salary analyses were done within departments, and not school-wide.

We found imbalances between women's and men's salaries, to the disadvantage of women, in two departments. School-wide, the percentage of women who were low earners in their rank was significantly higher than percentage of men who were low earners in their rank.

#### 3.1 Department Head Interviews

Two committee members met with the heads of MAS, Architecture, and DUSP to discuss departmental practices for setting faculty salaries and deciding amounts of annual increases. The individual faculty salaries from the 2000 data were also reviewed with each Department Head.

Department Heads gave varying reasons for salary differences and varying criteria for salary increases within their departments.

In MAS, differences between salaries were attributed mostly to seniority, that is, rank and years in a rank. Salaries were mostly level otherwise. Efforts have been made to compensate for any past, field-related differences in salaries.

In Architecture, differences between salaries were often attributed to field. Architecture faculty come from a variety of backgrounds and engage in different kinds of research and practice—visual arts, art and architectural history, architectural design, computer science, and engineering. Salaries vary substantially according to outside (academia) compensation in these fields. An important criterion given for salary increases was departmental teaching and service, sometimes outweighing other factors such as international standing in field.

In DUSP, differences between salaries were attributed to field, international standing (sometimes "star" status), and seniority. Criteria for increases included academic performance, outside offers, and citizenship (service and other contributions to department life).

Because the number of women in each department is so small, it is difficult to tell whether different departmental criteria for salaries impact women's salaries and men's

salaries differentially. In Architecture, however, the setting of salary by field may adversely affect some women's salaries, as well as.

### 3.2 Salary Data Analysis

The 2000 salary data were correlated with other faculty data. For each department and for the entire School, plots by gender were made of

- salary versus age
- salary versus post highest degree age (years since highest degree)
- salary versus academic age (years since first academic appointment)
- salary versus MIT age (years since MIT appointment)

For each of these "by age" plots, separate plots were made to identify faculty rank, target of opportunity appointments, and "inside" appointments (faculty with MIT degrees).

- salary distribution within rank

These plots show the position of each person's salary with respect to other faculty in the same rank and department. The lowest salary in each rank in a department is given as 0, the highest as 1. Each person's salary is calculated as a percentage of 1, that is, as a percentage of the highest earner in her/his rank. Where there is only one person in a rank, that person's salary is set at .5, or the midpoint of the salary range in that rank.

- average, maximum, and minimum salaries by rank

The maximum and minimum salaries give the range of salaries for women and for men within a rank. To see how women's and men's salaries differed at the high and low ends of salary ranges, the differences between women's and men's minimum salaries, and the differences between women's and men's maximum salaries in each rank were calculated. The percentages of these differences were also calculated (by dividing the difference between the maximum (minimum) man's salary and maximum (minimum) woman's salary by the lower of these two salaries).

The departments also provided data on

- average annual salary increases (not including promotion increases) by gender from the academic year 1991 to the academic year 2001

The Dean's Office provided

- the Institute Faculty Salary Review, Departmental Equity Listing, for academic year 2000.

This last set of data is discussed in a separate section below.

All of the information above was examined thoroughly. In the end, the most relevant data were salary in relation to age and rank, salary in relation to rank alone, the magnitudes of differences between women's and men's maximum and minimum salaries (averages were not meaningful because of small numbers), and the average annual salary increases.

Most of the findings in the original report are given by department, and refer to confidential salary information. Thus, findings are only summarized here, and departments are not identified.

#### Departmental findings

In two departments, we found that a significant number of women were earning less than men in the same rank and of the same approximate age. Some of these inequities may be attributable in part to the fields in which the women work, that is, fields with low "market" compensation. Some may be attributable to time in rank. In the third department, we found no inequities. The highest earner in one department, and school-wide, was a woman.

In two departments, the average salary increases for women and men were roughly the same over the 1990 to 2001 time period. In one department, the average salary increases for women were higher than those for men.

#### School findings

Some strong gender differences in salaries were evident when the three departments were looked at together.

There was a marked imbalance between women's and men's salaries in relation to rank. The school-wide salary distribution plot is shown in Figure 25. Most women's salaries are below the midpoint of the salary range in their rank and department, whereas men's salaries are more evenly distributed. 73% of women fall below the midpoint compared to 54% of the men. Also striking are the numbers of women and men that are the lowest earners in their rank and department. 33% of the women are the lowest earners in their rank, compared to 10% of the men.

At the high end, the percentages are more comparable. 13% of the women are highest earners, compared to 17% of the men. (However, the margin of difference between one of the women highest earners and the highest male earner in the same rank is slim.) The top earner in the school is a woman. The low, absolute number of women highest earners compared to men is not surprising. It can be seen, in part, as a consequence of the low number of women in the School.

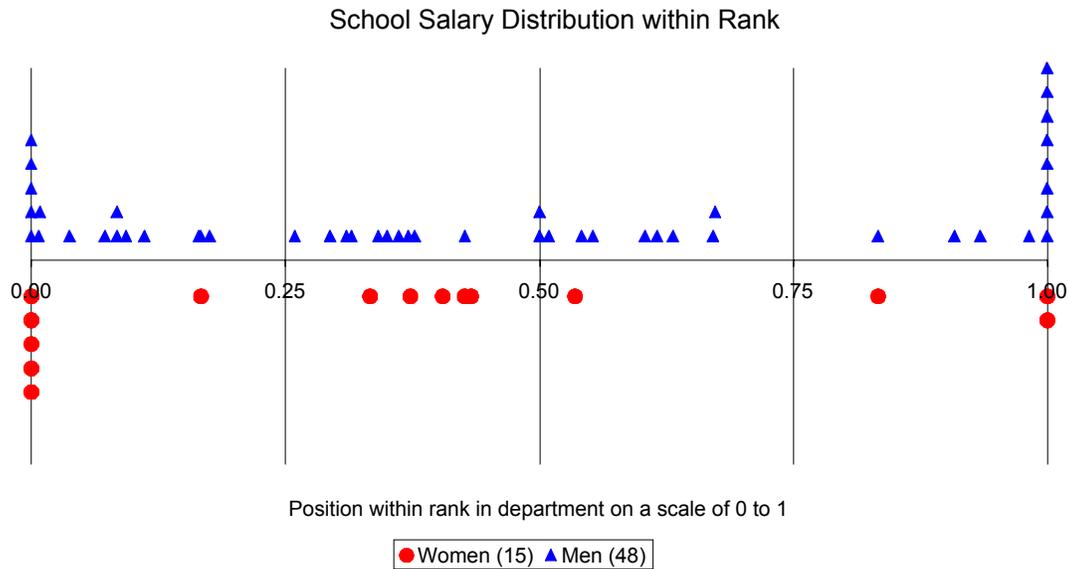


Figure 25

The Institute Faculty Salary Review

The Institute Faculty Salary Review, Departmental Equity Listing, is a yearly review of women and minority salaries compiled by the Institute. It is the only such review known to this committee. It appears to have flaws as a method for assessing salary equity. It certainly did not reveal anything substantive about salaries in the School.

The Listing compares each woman’s and minority’s salary with the average salary in the person’s rank and department. In order to make this comparison, adjustments are made to each women/minority salary according to the deviation of the woman/minority’s age from the average age in the rank and department, and a corresponding assumed annual salary increase. This age-adjusted salary is then related to the average salary. Specifically, each woman/minority’s age-adjusted salary is divided by the department average salary, to provide an “age-adjusted position” and a dollar amount by which the woman/minority salary is above or below the average. (The details of the calculation are given in an Institute memo.)

Calculations for three hypothetical women faculty are shown in Figure 26.

Faculty	Gender	Age	Salary	Average age of department without incumbent	Age difference from the average age	Average salary of department without incumbent	Salary difference from average salary	Age adjusted salary	Age-adjusted position	Amount above/below average salary
1	F	56	\$125,000	58	-2.00	\$94,000	31,000.00	\$135,200	1.44	\$41,200
2	F	60	\$102,000	58	2.00	\$94,000	8,000.00	\$94,305	1.00	\$305
3	F	63	\$101,000	58	5.00	\$94,000	7,000.00	\$83,015	0.88	-\$10,985

Figure 26

There are shortcomings in this method of review.

First, only women and minority salaries are reviewed. The age-adjusted positions of non-minority men are not calculated. However, one very high earner in a rank could push the age-adjusted positions of all faculty in the rank down or below average. The converse is also true. Inequities between men and women cannot be determined without seeing the age-adjusted positions of all faculty in a rank.

Second, small differences in the actual ages of faculty can result in large absolute differences in their age-adjusted salaries. See, for example, Faculty 2 and Faculty 3 in the sample calculations in Figure 26. The two women are only three years apart in age. Their salaries differ by only \$1,000. However, one woman's salary adjustment results in a salary \$300 above average, the other in a salary \$11,000 below average. Without a thorough understanding of the underlying calculation method, it would be easy to misconstrue the large below-average salary of one of the women, and the small above-average salary of the other.

### **3.3 Summary and Recommendations**

In 2000, there were imbalances between women's salaries and men's salaries to the disadvantage of women in two departments. The school-wide imbalance of salaries within rank is striking. If the all male, non-Rank List 1 faculty in the School—Department Heads, Research Center Directors, and Institute administrators—were included in our data, the imbalance between women's and men's salaries would likely be even more striking. In addition to missing some male faculty from our data, we have only a one-year snapshot of salaries, a small number of women in this snapshot, and a large number of variables that affect salary from field to seniority to performance to service.

The longer-range data on salary increases show a balance between women and men in two departments, and an advantage to women in one department. However, we have only the averages of annual salary increases which would mask individual inequities if they exist here.

It is difficult to determine the sources of the salary imbalances that we did find. We cannot say that bias plays any role in these imbalances. Nonetheless, these imbalances need to be understood and corrected where necessary. Our recommendations are to:

#### **Review and Correct Inequities in Current Faculty Salaries**

- The Dean should review current faculty salaries using the methods of analysis in the original report and correct any inequities.

#### **Establish a School-wide System for Monitoring Salary Equity**

- The one existing Institute-wide system we know of (the Institute Faculty Salary Review) is inadequate and potentially misleading. Analysis methods like those used in the original report should be used every year, and the results reviewed by the Department Heads and the Dean, before salary raises are decided.
- The Dean and the Department Heads should examine factors that might play a part in the lower salaries of women, from field to performance. The field factor is one that affects salaries in more ways than gender. It causes salary inequities between departments, and between Schools. However, when field-related inequities exist

within a small department and when these inequities correlate with gender, then faculty morale, collegiality, and ultimately, performance may be at risk. The Dean and Department Heads should make every effort to equalize salaries among different fields within a department.

## 4 Recognition and Resources

The committee had access to very limited information pertaining to faculty recognition and resources. Under this heading we included information on awards, service, and workspaces—specifically, HASS awards, funded chairs, Institute committee membership, and faculty office, research and support spaces. Relevant faculty numbers for some of this material were very small. Conclusions about gender equity were thus difficult or impossible to make in some cases. From the information we had, we found that the distribution of awards and spaces was not equitable in some cases.

### 4.1 HASS Awards

The Provost's HASS Award is given to faculty in support of projects in the areas of humanities, arts, and social sciences. Awards are made annually. Priority is given to projects with few other sources of funding. Proposals in the range of \$3,000 to \$20,000 are considered.

The awards are made by a committee consisting of the Provost, the Associate Provost for the Arts, the Dean of the School of Humanities, Arts, and Social Sciences, and Dean of the School of Architecture and Planning. This committee carries responsibility for making awards and determining their amounts. Responsibility for encouraging and soliciting applications for awards is carried by the School.

The Dean's Office compiled data on this award for seven years, from the academic year 1995 to the academic year 2001. (Prior years were no longer on file.) Data were provided for Architecture and DUSP. MAS projects do not satisfy eligibility requirements for HASS awards.

For each of the seven years, the following information was compiled by rank and gender for DUSP, for Architecture, and for the two departments together: number of requests, number of awards, total amount of awards requested, average amount requested per person, total amount of awards given, and average amount of award received per person. Because the numbers of awards requested and made each year are very small, the meaningfulness of the averages we had was very limited. Our appraisal and findings were based on data for the two departments together. Data for 2000 were excluded since there were no women applicants in that year.

#### Findings

- In every year except 2000, the percentage of awards requested by women faculty was lower than the percentage of awards requested by male faculty. (See Figure 27, HASS Award Chart 1.)
- In every year except 2000, the percentage of the awards requested by women faculty was equal to or higher than the percentage of women faculty in the two departments. (See Figure 27, HASS Award Chart 1). Conversely, the percentage of the awards requested by male faculty was mostly less than the percentage of male faculty in the two departments.
- In every year except 2000, the percentage of awards received by women faculty was lower than the percentage of awards received by male faculty. (See Figure 27, HASS Award Chart 1.)

- In all but one year, the success rate (number of applicants versus the number of recipients) of women faculty was lower than the success rate of male faculty. (See Figure 27, HASS Award Chart 2.) The lower success rate is most notable in one year (1996) when there were high numbers of women and men applicants. However, the numbers of applicants in most other years are low, so it is difficult to generalize from these numbers.
- The percentage of the total dollar amount awarded to women was mostly higher or comparable to the percentage of the total awards that women received. (See Figure 27, HASS Award Chart 1). In other words, the average award amount to women was either higher than, or comparable to, the average award amount to men in most years. (See Figure 27, HASS Award Chart 3). In only one year (1999), the average award amount to women was appreciably lower than the average award amount to men.
- The percentage yield based on the average amount requested versus the average amount awarded was comparable for both women and men faculty. The yield for women was lower than that for men in only one year (1998). (See Figure 27, HASS Award Chart 3.)

### HASS Awards

Chart 1

	1995	1996	1997	1998	1999	2000	2001
Number of awards requested by women faculty as % of total number requested	44% (N=4)	41% (N=7)	23% (N=3)	25% (n=2)	38% (N=3)	-	33% (N=3)
Number of awards received by women faculty as % of total awards	43% (N=3)	20% (N=1)	14% (N=1)	33% (N=2)	29% (N=2)	-	20% (N=1)
Total dollar amount awarded to women faculty as % of total dollar amount awarded	54%	19%	19%	37%	24%	-	18%
% of women faculty in SAP (less MAS faculty)	27% (N=13)	24% (N=12)	23% (N=12)	22% (N=11)	22% (N=11)	21% (N=11)	19% (N=10)

Chart 2

	1995		1996		1997		1998		1999		2000		2001	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Number of awards requested	5	4	10	7	10	3	6	2	5	3	8	0	6	3
Number of awards received	4	3	4	1	6	1	4	2	5	2	4	0	4	1
Percentage of total awards received	80%	75%	40%	14%	60%	33%	67%	100%	100%	67%	50%	0%	67%	33%

Chart 3

	1995		1996		1997		1998		1999		2000		2001	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Average amount requested	12,987	15,214	18,335	16,988	14,250	16,407	14,188	19,959	17,731	14,838	16,942	0	19,235	19,496
Average dollar award received	7,133	11,207	15,563	15,000	13,333	19,000	15,005	17,500	13,920	11,250	10,625	0	11,250	10,000
Percentage yield	55%	74%	85%	88%	94%	116%	106%	88%	79%	76%	63%	0%	58%	51%

Figure 27

## Conclusions

In recent years, women have taken advantage of HASS awards at a greater rate than men. They applied for awards in proportions higher than their proportions on the faculty. This may indicate that a greater percentage of the women faculty (in DUSP and Architecture) than the men faculty (in DUSP and Architecture) engage in research with few other sources of funding—a main criterion of the award. Or, women may simply be more apt to seek out and utilize this well-publicized source of Institute funding.

However, a greater percentage of awards went to men in every year from 1995 to 2001, and the success rate for women applicants was less than the success rate for men in all but one year. On the other hand, the average award amounts to women were greater than, or approximately the same as, the average award amounts to men in all but one year.

The significance of these findings needs to be judged in relation to the overall low numbers of faculty applicants and recipients of HASS awards.

## **4.2 Funded Chairs**

There are two kinds of chairs at the Institute:

- Senior chairs which typically go to senior (tenured) faculty. These are usually renewed every five years, but are often for life.
- Junior chairs, also called career development chairs, which go to junior faculty. These are typically for a 3-year, non-renewable period.

Funds given for a chair can follow three paths:

- Given directly to a particular department. For example, the Ford Chairs are housed in DUSP.
- Given to a particular school where it is controlled by the Dean. The Dean can assign it to faculty in any department, unless there are specific stipulations.
- Given to the Institute. This means that it is centrally controlled. The Institute can assign it to a faculty member in any department, unless there are specific stipulations. Or, the Provost can assign it to a particular department. This chair can be junior (career development) or senior.

Each year, the Assistant Provost for Administration, Doreen Morris, sends to the Deans a list of the centrally controlled chairs that are open. The Deans submit nominations for these chairs, and the Provost decides which faculty will fill the vacancies. When the term of a chair holder expires, the chair is open for reassignment. The Schools and departments have the right to solicit and choose faculty themselves. However, these choices must still be approved by the Dean and Provost.

The following methodology was used to assess the distribution of chairs in the School.

The Dean's Office provided a list of all chair holders from the academic year 1990 to the academic year 2001. Each chair was then designated as centrally controlled by the Institute, belonging to the School, or belonging to one of the three departments. For chairs held in 1990, the year of the initial appointment was also indicated. We limited our appraisal to Architecture and DUSP. In MAS, there is ready access to career development chairs and they are distributed widely across all men and women junior faculty.

For the period beginning with 1991, we noted as juncture points each occasion when a chair was vacated, and each occasion when a new chair became available in the School. A total of 26 junctures were noted. At junctures where male faculty were appointed, an examination was made of all available women faculty in that particular year who might be eligible for the chair in the context of the field specified, if any. (We did not consider women faculty already holding a chair in that year as eligible.)

This analysis did not take into account possible changes in the terms of eligibility of, or the field associated with, a chair at the time a chair was vacated. In some cases, there were ambiguities about the terms of eligibility of chairs. Such changes and ambiguities could have had an effect on the eligible pool from which a new candidate could be selected.

#### Findings

- Over the 10-year period there were 26 juncture points.
- At 7 junctures, the available chair was filled by a woman.
- Of the remaining 19 junctures when the available chair was filled by a man, there seemed to be only one instance when a woman appeared to meet the specification of field for the chair.

#### Conclusion

We did not find indications of gender inequity in the distribution of chairs in the School from the data we had at hand. Still, the fact remains that no women faculty in the School have had permanent, senior chairs.

### **4.3 Institute Committees**

The President's Office supplied the committee with data on Institute committee membership from the academic year 1990 to the academic year 2000. See Figure 28. Numbers in the tables are totals over the 10-year period.

Most often, there were no women faculty from our School on Institute committees. Out of 15 Institute committees, women from our School were members of only 4 committees over the entire 10-year period. The numbers of our School's women faculty on each of these committees, out of the total number of women faculty on each committee, are as follows:

The Committee on Faculty Administration: 1 of 6 women  
The Committee on Graduate School Programs: 1 of 10 women  
The Killian Award Committee: 2 of 8 women  
The Edgerton Award Selection Committee: 1 of 9 women

On the other hand, male faculty from our School were represented on 13 of the 15 committees. The low representation of our women faculty on Institute committees is, in part, a reflection of the low number of women in our School.

School Representation on Institute Committees  
1990 – 2000

**I. Committee on Academic Performance**

	Male	Female	
SAP	1	0	1
Other Schools	25	5	30
N =	26	5	31

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**III. Committee on Curricula**

	Male	Female	
SAP	1	0	1
Other Schools	29	6	35
N =	30	6	36

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**V. Faculty Policy Committee**

	Male	Female	
SAP	3	0	3
Other Schools	29	13	42
N =	32	13	45

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**VII. Committee on Graduate School Programs**

	Male	Female	
SAP	7	1	8
Other Schools	76	10	86
N =	83	11	94

Note: 13% of SAP members were female.  
9% of women on the committee were from SAP.

**IX. Committee on Nominations**

	Male	Female	
SAP	5	0	5
Other Schools	21	9	30
N =	26	9	35

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**XI. Committee on Student Affairs**

	Male	Female	
SAP	2	0	2
Other Schools	23	4	27
N =	25	4	29

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**XIII. Committee on Undergraduate Admissions & Financial Aid**

	Male	Female	
SAP	0	0	0
Other Schools	23	4	27
N =	23	4	27

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**XV. Edgerton Award Selection Committee**

	Male	Female	
SAP	1	1	2
Other Schools	24	9	33
N =	25	10	35

Note: 50% of SAP members were female.  
10% of women on the committee were from SAP.

**II. Committee on Corporate Relations**

	Male	Female	
SAP	2	0	2
Other Schools	23	2	25
N =	25	2	27

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**IV. Committee on Discipline**

	Male	Female	
SAP	0	0	0
Other Schools	19	6	25
N =	19	6	25

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**VI. Committee on Faculty Administration**

	Male	Female	
SAP	2	1	3
Other Schools	24	5	29
N =	26	6	32

Note: 33 1/3% of SAP members were female.  
17% of women on the committee were from SAP.

**VIII. Committee on the Library System**

	Male	Female	
SAP	4	0	4
Other Schools	19	5	24
N =	23	5	28

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**X. Committee on Outside Professional Activities**

	Male	Female	
SAP	3	0	3
Other Schools	26	3	29
N =	29	3	32

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**XII. Committee on the Undergraduate Program**

	Male	Female	
SAP	1	0	1
Other Schools	38	10	48
N =	39	10	49

Note: 0% of SAP members were female.  
0% of women on the committee were from SAP.

**XIV. Killian Award Selection Committee**

	Male	Female	
SAP	3	2	5
Other Schools	30	8	38
N =	33	10	43

Note: 40% of SAP members were female.  
20% of women on the committee were from SAP.

Figure 28

## 4.4 Space

The Committee looked at the allocation of office and other spaces to faculty members in each of the three departments in the School for the academic year 2001. Information was obtained from The Institute Data Warehouse, and from Departmental Administrators and Assistants.

The square footage for all types of space associated with an individual's activities was obtained. The total space allocated to each faculty member is the sum of the square footage of the following spaces:

- Individual office space
- Graduate student, teaching assistant, or research associate office space/divided by the total number of faculty members in the program group
- Individual studio space (if dedicated)
- Sponsored research office space
- Closet and office staff space (MAS only)

### Findings

Because of the confidentiality of some information, the findings in the original report are summarized here.

We found some inequities in space allocations, to the disadvantage of women, in one department. In another department, women's spaces were at or below the median space allocation. However, differences in spaces in this department may be attributable to research needs. In one department, a woman had the largest space.

Both MAS and DUSP have recently undergone space changes. Thus, the numbers in the original report are already out of date. Many faculty in DUSP now have smaller spaces than previously. The MAS space changes will be short-lived. MAS will make a large move when their new building is complete.

## 4.5 Summary and Recommendations

Our findings on awards, chairs, committees, and space are mixed. There were some areas of concern. We recommend the following:

### **Continue to Track HASS Awards**

- A disproportionately high number of women faculty have applied for HASS awards in recent years. Nonetheless, a lower percentage of the awards have gone to women than men. In addition, the success rate of women applicants is lower than that of male applicants. The School should continue to track the distribution of HASS awards with an eye toward possible sources for the high rate of women applicants and the low success rates of women, and possible connections with other gender issues.

### **Find Permanent Chairs for Senior Women**

- The distribution of chairs over the past 12 years appears to be equitable. However, no senior women in the School have ever had permanent chairs. This was a major concern for DUSP senior women in our interviews (see section 5.2). This may be a consequence of chairs becoming vacant at inopportune times for women, or of

changes in eligibility requirements for chairs when they become vacant. In any case, the Dean and the Department Heads should work with the Institute administration to find permanent chairs for senior women in the School.

### **Appoint Women Faculty to Institute Committees**

- There have been few women faculty from our School on Institute committees. The Dean and the Department Heads should actively find, encourage, and recommend women faculty for appointments to these committees. At the same time, care should be taken to not overburden the few women in the School with a disproportionate share of committee service.

### **Monitor Space Allocations and Correct Inequities**

- The inequities we found in one department should be corrected.
- The current allocation of spaces in DUSP should be reviewed, and the upcoming allocation of new MAS spaces should be looked at closely.

## 5 Faculty Experience

Interviews of faculty were conducted to gain an understanding of the nature and quality of women faculty lives within their departments, the School, and the Institute. The interviews were used to access information that is essentially experiential, subjective, and not easily quantifiable. They were also used to get some information difficult to retrieve from department or School records. Almost all of the women faculty in the School were interviewed, together with a comparable number of male faculty—in total, just over 1/3 of our entire faculty.

The interviews covered the following topics:

- career and life stage on coming to MIT
- decision to come to MIT
- goals
- connections with other faculty
- participation in decision-making
- experiences with special requests, considerations
- considerations of leaving
- experiences with incentives, awards
- teaching responsibilities and experiences
- advising responsibilities and experiences
- committee and administrative responsibilities and experiences
- balancing work and family/personal responsibilities
- perceptions of general gender climate

We were very fortunate to have Suzanne de Monchaux, a social scientist with considerable expertise and experience, and a Research Affiliate in the School, assist us in the design and analysis of the interviews.

### 5.1 Methods

The interviews were designed to provide a portrait analysis of the women faculty, rather than a formal, statistical analysis. We did not have specific hypotheses that we were testing, other than some based loosely on findings from the School of Science report. Instead, we developed categories of questions broad enough to capture a full range of faculty experiences from the time of hire to the present, from personal experiences to professional ones.

#### Faculty interviewed

The committee decided to interview all of the women faculty, both junior and senior. There are few long-time senior women in the School. At the time the interviews were conducted, seven of the ten senior women had been senior at MIT three years or less. They were either hired recently at the senior level, or were promoted to senior recently. We included the five junior women faculty because we were already tapping into the recent, junior women faculty experiences of recently promoted senior women, and because some current junior women faculty had expressed an interest in the work of the committee and an opportunity to have their voices heard.

In order to make the findings of the women faculty interviews more complete, the committee decided to interview a comparable number of male faculty. For each woman faculty member, the committee identified a “matching” male faculty member. Matches were made with respect to as many variables as possible—for example, age, career stage, time at MIT, field, family status. Male faculty responses were not intended to be

compared directly with women faculty responses, or to be analyzed in their own right. Rather, male faculty responses were intended as a gauge for whether issues raised by women might or might not be gender-specific.

In advance of the interviews, the committee sent an email to the entire school faculty with information concerning the work of the committee and the planned interviews. A second email was sent only to those faculty we proposed to interview. This second email contained more information about the interview process, and the handling of confidentiality.

All of the women faculty, except two, were eventually interviewed. (One woman was not available at the time of the interviews. The other declined to be interviewed.) Matching male faculty for all of the interviewed women, were also interviewed. In total, thirteen women and thirteen men were interviewed—just over 1/3 of our School's faculty.

#### Interviewer

The interviews were conducted by Dr. Christie Baxter, a Principal Research Scientist in DUSP, and an experienced interviewer. The committee decided to use an interviewer who was not a member of the committee and not a faculty member for several reasons.

We wanted to maximize the openness of faculty responses, and minimize the self-censorship or distortions that can occur in personal interviews, especially ones connected to charged topics such as gender equity. We felt that an interviewer outside of the committee and the faculty would best serve this purpose.

In particular, we knew that junior faculty could not be asked to discuss certain issues with senior faculty who might have some influence in future promotions or other decisions. We also felt that senior faculty interviewees might not feel comfortable or be open in discussing certain issues with colleagues, for a variety of personal or professional reasons. Additionally, a non-faculty interviewer might be viewed by faculty interviewees as better able to maintain confidentiality of responses.

We wanted to maintain a consistent approach in all the interviews. This would be difficult to do with multiple (committee) interviewers.

Christie Baxter was known by some of the faculty interviewed in DUSP. However, we decided that this would not be a significant impediment to the candor of these faculty in the interviews.

Baxter documented the interviews using handwritten notes and tape recordings.

#### Interview protocol

The committee developed a detailed interview protocol. The protocol begins with a brief summary of the work of the committee, and the intentions and aims of the interviews. Measures for protecting the anonymity of responses are then discussed. Fourteen questions follow. The questions were carefully constructed to avoid leading or suggestive words and phrases. Questions were tightly focused so that responses from different faculty could be compared easily. With one exception, questions were framed in gender-neutral terms. Questions were organized so that the two most personal or gender-specific questions—concerning patterns of life and work, and observations of gender climate—were asked toward the end of the interview. At the conclusion of the interview, faculty were given an opportunity to raise any issues not covered in the interview.

The protocol was designed so that the interview would last between 1 and 1 1/2 hours. In order to assess the effectiveness and clarity of the questions, and the overall timing of the protocol, it was tested on a senior male faculty member in the school. (The protocol could not be tested on a woman faculty because all women faculty were to be included in the actual interview process.) After the test, the questions were revised slightly.

### Analysis

The committee was divided into three analysis teams. Each team was assigned to read and summarize the responses from all the interviewees in one department. Each analysis team was composed of two people, neither one in the respondents' department, and each one in a different department. (That is, the analysis team for department X was comprised of one person from department Y and one person from department Z.) Each team was given the responses from a department sorted by individual and sorted by question. Responses were sorted by individual so that each individual's story could be read as a whole. Responses were sorted by question to compare responses from different individuals. Responses were identified only by the gender and rank (senior or junior) of the respondent.

The committee developed a standard format for summarizing all of the responses from a department. The format is in four parts. The first part provides for short summaries of responses by question. The second part provides for summaries of significant gender (women's) issues. The third part provides for summaries of significant nongender issues. The committee felt that if strong faculty issues emerged that were gender-neutral, it would be important to document these in our report. The fourth part is optional, and provides a place to give any general findings not covered by the first three parts.

The second and third parts covering significant issues (gender and nongender) were divided into categories to facilitate recommendations by the committee. Issues were sorted according to whether they related to

- a formal departmental, School or Institute policy
- an informal practice (may likely be a departmental practice, but include School or Institute practices if they come up)
- Department, School, or Institute culture, atmosphere, expectations
- personal experience, expectations, needs
- other

Analysis teams were asked to give summaries that would not identify individuals, and to use supporting, nonidentifiable quotes where possible. They were also asked to give numbers of women and men who raise any issue, to give an informal "weight" to responses. In the end, a number of very pertinent responses had to be rephrased or omitted in the summary forms because they could be identified with individuals.

The analyses of the responses were undertaken with an awareness of the possible biases inherent in the interviews. For example, statements of facts might be statements of perceptions of facts, women and men may respond differently to certain questions, and importantly, there may be relevant stories that were self-censored.

Before the team analyses of the interviews began, our interviewer, Christie Baxter, gave us a short overview of all of the interviews. This was important for us because Baxter was the only person to see all of the responses from all three departments, and was thus in a position to observe cross-departmental issues.

## 5.2 Findings

Baxter's overview of the interviews included concerns that emerged across gender, rank, and department:

- **Confidentiality and editing of responses**  
Several respondents—women and men, junior and senior—edited their responses in different ways (by asking to retape or revise responses, asking not to be taped, indicating that they had stories that they could not tell)
- **Life/work**  
Several respondents indicated that balancing family or personal lives with MIT work cannot be discussed openly and generates high levels of stress
- **Nongender issues**  
Several respondents suggested that other pressing issues, such as minority issues, need to be analyzed.
- **Distribution of findings**  
Several respondents wanted the report of the committee, and results of the interviews, to be made available to the faculty.

A detailed synopsis of the team findings for each department was given in the original report. The full team summaries for each department were given in an appendix to the report. In order to protect the anonymity of interviewees, the findings are given in brief here. Issues are not identified with specific departments. The main gender (women's) issues, as well as non-gender issues, are described. If the Institute wishes to increase the number of women faculty and to create an attractive working environment for women faculty, *any* issues of concern to women are important to consider, regardless of whether they are also important to men. For similar reasons, both negative and positive experiences are described.

### Nongender issues

Women and men respondents, school-wide, reported on positive aspects of their lives at MIT. These included:

- **Goals**  
Many respondents said they were moving towards their career goals. Responses included:  
"MIT can open doors and take you places you did not expect to go."  
"[My] goals have evolved and become clearer."
- **Teaching**  
Nearly all of the respondents said that their teaching assignments were manageable and appropriate.

Women and men respondents also reported difficulties. Most of the issues raised were school-wide, a few were departmental. The main issues included:

- *Mentoring*  
Many respondents described inadequate mentoring. But perceptions of mentoring varied. For example, in one department, all of the senior respondents said that they mentor junior faculty, but all of the junior respondents said that they were not mentored.
- *Inclusion of junior faculty in decision-making*  
A significant number of junior women and men (in some departments, all junior women and men) expressed disappointments with the way decision-making is done, or said that they do not have enough influence in decision-making.
- *Incentives*  
Several women and men respondents (both junior and senior) questioned the fairness or openness of the distribution of resources and incentives. Responses included:  
“The hardest thing about being at MIT is finding out what you can get and who to ask.”  
“It is a mystery how money is doled out.”  
“Information should be more public . . . should be spelled out.”  
“I do not believe my department has distributed these resources in a fair way.”
- *Pace and pressure of work*  
The extreme pace and pressure of work at MIT or within their department was an issue for women and men respondents:  
“I guess the philosophy here is to burn rather than to conserve.”  
“There is not enough time. . . Things are spinning out of control.”  
“I do not have enough time and energy to do everything.”  
“The correct answer here is 100 percent goes to MIT.”  
“Right now, I give MIT 90 percent of my time—counting sleep.”
- *Committee overload and inefficiency*  
For several respondents, the pace and pressure of work appears to be exacerbated by committee overload and inefficiencies. Excessive demands on time, during and after normal work hours, coupled with the ineffectiveness of some committees were concerns. Responses included:  
“We need to streamline the administrative responsibilities of the faculty. The [committee x] does not need 12 members.”  
“[There are] too many committees. Issues repeat themselves.”  
“It [committee x] is very nice, but not very effective. This is because all of the energy has been taken out by email protocols.”
- *Work versus family/personal responsibilities*  
The pace and pressure of work are apparently compounded by, or related to, the stress of balancing work and family responsibilities. Responses from both women and men included:  
“This is an extraordinarily un-family-friendly environment.”  
“What is hard are not choices between family and work, it is humanity versus work.”  
“[My department] encourages an unhealthy attitude toward balancing your life and work.”  
“This place is family neutral. That means family blind.”

"This job structure is crafted for a bachelor existence."  
 "[We] need to think beyond a model of bachelorhood."  
 "My personal life is a nonentity now."  
 "Given the former [my career], I can do little with the latter [my personal life]. It just doesn't exist anymore."  
 "I try to have dinner with my kids, but that is not happening."  
 "This semester is crazy, with all the evening meetings and lectures. This week I won't see my family any nights. That pains me."  
 "There are days when I wonder if I am doing the right thing, if I am sacrificing my kids' education. I am sacrificing my own health and sleep. I work 80 to 100 hours per week and I got sick . . ."

- Nondiscussability of family*

On top of their difficulties managing work and family life, many respondents reported that family was not a discussable issue in their department. Women and men alike felt uneasy, stigmatized, or unable to discuss family issues openly within their department. Responses included:

"In this department, children are a taboo subject. You don't talk about it in public."  
 "No one talks about family issues. It is almost as if no one is married or has an outside relationship."  
 "Family realities are not fully acknowledged in the department . . . I have to apologize for my family."  
 "It is as if families do not exist . . . The message is it's your problem. No one told you to have a family."  
 "When I say this [I can't make a meeting because of family], I get the feeling that the Department Head thinks this is not a valid reason, that he thinks, this is a choice that you made, and that's your problem".
- Financial concerns*

Several respondents raised concerns about their salary in relation to quality of life issues, for example, the high cost of living in Boston, and the high cost of childcare. Responses included:

"I am worried about the financial aspects of this job."  
 "Part of it is an economic issue. The salary gives us few options."  
 "So the big thing is salary, not time."  
 "The biggest problem is that there is not enough money for childcare."

### Gender-specific issues

A number of strongly voiced gender issues emerged from the interviews. Some were departmental, some were school-wide. The main issues included:

- Distribution of permanent chairs*

Some senior women expressed unhappiness with the distribution of permanent senior chairs. They remarked that chairs always go to men or that the process of allocating chairs is not fair:

"When permanent chairs come up, they have always gone to men."  
 "The process of allocating chairs at the Institute level is not transparent, [it is] unobjective, and subject to personal influence."
- Decision-making*

Some senior women described a lack of influence or marginalization in key decision-making in their department. It is significant to note that women voiced this concern in spite of the actions of Department Heads to appoint women to important committees. It may be that committee membership is not enough to prevent

marginalization. Some women seemed to attribute their lack of influence to personal qualities. For example:

"I feel I have been unable to affect a lot of decisions. I'm not good at it."

Others attributed their lack of influence to departmental culture—in particular, to the existence of an unofficial, core group of male decision-makers:

"The core group [of decision makers] is the department heads and former department heads. They still have a tremendous amount of control and power, and they are all men. Even men who have not been department heads have more influence. Women can still be invisible in this department."

"There is a corrupt core of networking and social connections that run things. That corruption is fundamentally a guy thing."

Some senior men's perceptions of decision-making were equally strong as the women's. However, their feelings of inclusion are opposite to those of the women. These men described having great influence in decision-making. For example, one senior man remarked that:

"I have never felt the least bit excluded from the decisions I wanted to influence . . . I can't think of an instance in which I was disappointed, where I deserved to be heard and wasn't."

Another spoke similarly and confirmed the women's sense of an inside group of decision-makers:

"I always felt involved in departmental decision making. I never felt on the outside . . . If you are an insider in the department, you are involved in decision-making."

- *Gender climate*

The final interview question, concerning the general climate for women and men at MIT, elicited strong responses from many respondents. Women and men described definite, but not easily definable, differences in the climate for women and men.

Some women said it is *subtle*:

"There is a gender problem, but it is hard to define. . . . It's very subtle."

"There are the subtle things, when I unexpectedly face a stereotype."

Some women described *difficulties being heard*, especially in meetings:

"I have found that you need to be loud and assertive to survive . . . Some might think I was bossy."

"I go out of my way not to ask for things. My personal needs should not be seen as a sign of weakness. I am very aware I am in a male-dominated world."

"At faculty meetings, if I make a point and a man makes a point, a man will follow up by saying, 'as [male X] said . . .' It is not deliberate, it is unconscious."

"At meetings the guys talk. When it comes to me to make comments, they say 'it's time to move on'."

"If a woman is on a committee, the men think they can break in when she is speaking."

"Maybe I am less articulate and less able to get my needs across than others, or maybe as a woman I do it in a different way."

Some women described *feeling invisible* or having *low status*:

"There is an invisibility of women within projects. If you work with a man, your work is not recognized. It happens all the time."

"As a woman at meetings at MIT, I feel like a second class citizen. But I don't know if it is because I am from [my department], which has low status, or a women."

Some women described *biases in search and hiring*:

"They say they want to attract women and minorities, but men always pop up on top."

"It bothers me when it comes to appointments. You have a mediocre guy and a woman. When they talk about the guy, they talk about his degrees. When they talk about the woman, they say she hesitates when she speaks, that she's too heavy, that she won't fit."

"If they [the men] decide to hire a woman, they can pull it off. But a woman can't do that for another woman."

Some male respondents supported the women's views that gender makes a difference at MIT. They corroborated women's remarks and felt that women were at some disadvantage. Men said, for example:

"Having a heavy concentration of men at the top contributes to the problem. We need the will to hire women. But if men are making the decision it's a closed decision . . . The default is to hire a man."

"The real problem is that there are not enough women."

"Things are different for men and women. Part of my sense that this is true comes from what I observe or hear about how women faculty are engaged in the department. More is just what I sense."

"To succeed, you have to scream and yell. In search, there is a lot of horseplay, and women may find this harder to do."

"Men excused the decisions [regarding denials of tenure for women] because they were talking about women."

"There is not such an enormous amount of discrimination that a woman genius could not get tenure. But what about the others? Politics etc. can play a big role with them. There women are at a disadvantage."

"Yes, there are ways that MIT treats men and women differently. Some are unconscious."

- *Gender climate at MIT relative to other places*

When asked about the general climate for women at MIT, most respondents (women and men) said that MIT is probably a better place to be than other universities. But some thought that MIT should be doing even better. Responses included:

"It is pretty good compared to other places."

"Overall, however, it is pretty good. It is pretty good compared to other places."

"With respect to [number of tenured women] in other schools, we are doing very well."

"MIT is pretty bad on the women's side, but it may be worse at other universities . . . I have never felt that the Institute wanted to solve the problem. The trouble is the Institute provides carrots, but it leaves the discretion with individual departments."

### 5.3 Summary and Recommendations

Each of the three departments has a unique culture with different women and men faculty profiles. However, many issues raised in the interviews cut across the three departments and across gender. Ambiguities and inadequacies in mentoring were a shared concern. There were pressing work and family, pace and pressure issues common to women and men.

Issues specific to women were voiced very strongly and unequivocally. Some are similar to issues raised by women in the School of Science interviews. The issue of marginalization is important to understand and to watch. The School of Science report found that the marginalization of women faculty increased as women progressed

through their careers at MIT. Most of the senior women in our School are newly senior. Departments should be proactive in creating a climate for women in which marginalization disappears, or never materializes, for new senior women as they move on in their careers. A good working climate for women can only help in the recruitment and retention of women, thereby increasing the numbers of women, which in turn may lessen or prevent problems of marginalization. A good working climate for women requires that all issues of concern to women regardless of whether they apply to men, be dealt with.

The committee makes the following recommendations.

### **Brief Department Heads on Interview Findings**

- The implementation of our recommendations depends on the active involvement of the Department Heads. The Dean should brief Department Heads on the findings for their departments so that they can better understand issues of concern to their women faculty.

### **Establish Effective Departmental Mentoring Practices**

- Departments should review their current and past mentoring policies and practices. New mentoring practices should be established that offer *alternatives* for faculty with different preferences or needs—for example, tenure workshops, individual mentors, mentors from outside a department, group reviews, and so on. Mentoring is especially important in Architecture and DUSP—departments with histories of low tenure rates for women.

### **Increase Participation of Women Faculty in Departmental Decision-Making**

- Junior women (and men) faculty in all three departments reported feeling excluded from important department decisions. Department Heads should work toward achieving a balance between overloading junior faculty with committee responsibilities and excluding junior faculty from important departmental decisions. Senior faculty should monitor the balance between committee involvement and exclusion for the junior faculty they mentor.
- Senior women reported a lack of influence in key decision-making, and that decisions are made by an inside group of men.

Department Heads should take steps to prevent the division of faculty into “insiders” and “outsiders”, or, at least, lessen perceptions of such a division. Women should continue to be asked to chair or be members of influential department committees. These committees should be the actual settings for decision-making, and not facades for decisions carried out by a few individuals in private meetings, or by the Department Head. Follow-up actions by committee chairs on decisions made in meetings should be reported openly to all committee members so that members know that their inputs are effective and valued.

People differ in their styles of communication—gender may play a role in these differences. Committee chairs and Department Heads should make efforts to solicit, listen to, and acknowledge contributions of women.

Women Department Heads and administrators are rare at MIT. No woman faculty has headed a department in our School, or held an administrative position. The

Dean should make efforts to find capable and qualified women to serve as Department Heads and administrators.

### **Make Changes to Incentives and Rewards Systems at the Institute, School and Department Levels**

- Some junior women (and former junior women, see section 2.5, Junior Faculty Exit Interviews) reported very positively on the Provost's annual research fund. Currently, the award is available only for women hired in open positions. One target-of-opportunity woman reported that her negotiations faltered when she learned she would not get this award. The Institute should consider giving this award to all new women faculty.
- Women (and men) reported concerns with the openness and the distribution of incentives and funding. Department Heads should actively and openly inform faculty of the availability of departmental resources, perhaps on a regular, annual basis. Department Heads should actively find and encourage eligible faculty to apply for awards. Information on funding and awards for junior faculty should be given in mentoring or tenure workshops.
- Senior women were dissatisfied about the allocation of permanent chairs. The Dean and Department Heads should work with the Institute administration to find permanent chairs for senior women in the School.

### **Reduce the Stress of Balancing Work with Family/Personal Responsibilities**

The pace and pressure of work, and the difficulties of accommodating both work demands and family responsibilities were major concerns in all three departments. For some women (and men), these difficulties are apparently exacerbated by outside practice responsibilities, committee overload and inefficiency, financial concerns, and the inability to discuss family issues openly.

- Department Heads should streamline committees, wherever possible, and appoint effective chairs. Committee chairs should make efforts to schedule meetings during normal working hours so that faculty with families can attend easily.
- The challenges of balancing work and family/personal demands can be alleviated by creating an atmosphere in which family/personal responsibilities can be discussed comfortably in a department. This atmosphere can be created from the bottom up, beginning with an awareness, within departmental program groups or discipline areas, of the family/personal responsibilities of its members. Recognition of the family/personal responsibilities of faculty within small groups can then be transferred up to the level of the full faculty, and to departmental councils or steering committees.

- The Institute should consider making some financial contributions toward childcare to relieve some of the financial burden on faculty with children. Even a small contribution might have a disproportionately positive effect in terms of symbolic value.
- In the Architecture department, the triple demands of an outside practice, an academic career, and a family are difficult or impossible to manage, especially for junior faculty. The Dean, the Department Head, and senior faculty should review this problem and make every effort to find solutions.
- We repeat here our recommendations from the previous section on Faculty Numbers:

Department Heads should communicate to all faculty, on a regular basis, clear and accurate information about the new Institute family support policies. Department Heads should openly support women, and men as applicable, who use these policies, in order to avoid potential stigmas resulting from the use of these policies.

### **Create a Productive Climate for Women Faculty**

Women (and men) in all three departments felt that the climate for women is different than that for men, usually to the disadvantage of women. Many differences are subtle and seemingly unconscious. We repeat here our recommendations from the previous section on Faculty Numbers:

- The climate for women faculty will be likely improved if the recommendations above and those given elsewhere in this report are implemented.
- The climate of a department is dependent in part on the attitudes and actions of the Department Head. The Department Head should communicate to the faculty, and to senior male faculty in particular, that gender bias will not be tolerated and that the department will be fully supportive of its women faculty. However, in the end, the climate of a department is the responsibility of all faculty. The dissemination of the results of this study to faculty, together with regular, formal reassessments and public discussions of the status and treatment of women faculty, should help educate all faculty about important gender issues. All faculty may then be more willing and able to create a productive climate for women faculty.

## 6 Conclusions

Our study of the status and equitable treatment of women faculty in the School identified several areas where women faculty were at a disadvantage. We found inequities in all four parts of our study—in numbers, salary, recognition and resources, and experience. Some of these inequities were substantial.

We offer no explanations for the inequities we found. Some may have come about through inattention or ignorance, others through insensitivity or inappropriate expectations. Some inequities may be the result of conscious bias. Though we lack explanations, it is still possible to eliminate inequities and to improve the status of women faculty.

Some inequities relating to the numbers of women faculty and to women's salaries are relatively straightforward to fix. Our recruitment data suggest that women want to join the faculty here. If this is so, then we need to work harder to find women and to offer them positions here. And, if the increasing percentage of women students in our School (now close to 50% at the graduate level in two departments) is indicative of a national trend, then the pool of potential candidates for women faculty should not be a problem. Salary inequities can be corrected at the level of the Dean. Ways of improving the status of women may be less straightforward, though many problems would likely disappear with more women on the faculty. The status of women faculty can also be improved by educating all faculty on important gender issues and changing the attitudes of faculty.

Our report ends with data from the academic year 2001. This academic year (2002), more women have been appointed to the faculty, and offers to women are now being made for appointments next year (2003). In all three departments, the proportions of women faculty have improved. In Architecture and in DUSP, the proportions of women faculty have this year, or will next year, exceed 25%. This is good news. However, we caution against undue optimism. Our data from the past dozen years show periods of short-term improvements. Years of growth in the numbers of women were followed by years of decline. In 2001, we were back to where we started in 1990. We need to implement policies that will guarantee permanent improvements, and we need to be vigilant in monitoring progress.

The focus of this report is the status and treatment of women. However, from our interviews we found serious problems of concern to men and women faculty alike. These problems are difficult to ignore. Quality of life issues (for example, excessive work demands, and difficulties balancing work and family responsibilities), mentoring, and the distribution of incentives were issues important for both men and women. These issues should be followed up in an initiative separate from this one.

Our concluding recommendations are:

### **Brief Department Heads and Faculty on this Report**

- Real and lasting improvements will begin by educating all faculty about the important gender issues and inequities we identified in this report.

### **Establish a Committee to Work Out the Details and Implementation of Our Recommendations**

- Some of our recommendations are general, and need further elaboration. A committee should be charged with working out the details of our recommendations and their implementation, in consultation with Department Heads and the Dean. This committee should also be responsible for tracking the progress of gender equity in the School, with the aid of a review system as suggested below. The Committee on Women Faculty could be made a standing committee for this purpose.

### **Establish a Permanent, School-wide System to Review Gender Equity on a Regular Basis**

- A permanent review system should be established to assess gender equity in the School on a regular basis—perhaps every 3 to 5 years. This system should be mandated at the Institute level, and not subject to the discretion of changing Deans or Department Heads. Many of the analysis methods used in this report could be part of a regular review system. Reviews should be made available to the faculty and discussed. To help with these reviews, the faculty database created for this report should be updated yearly.

### **Establish Policies for Rewards and/or Sanctions for Departments that Show Improvements/ Decline in Gender Equity Issues**

- Some incentives for improvements in gender equity already exist. The Provost's annual research fund is one example. Additional rewards, or perhaps sanctions, should be devised as incentives for departments to improve the status and treatment of their women faculty.

## 7 List of Recommendations

### Faculty Numbers

- Find and Hire More Women Faculty (p. 32)
- Mentor and Promote Junior Women (p. 33)
- Recognize Family Responsibilities (p. 33)
- Create a Productive Climate for Women Faculty (p. 33)

### Salary

- Review and Correct Inequities in Current Faculty Salaries (p. 39)
- Establish a School-wide System for Monitoring Salary Equity (p. 39)

### Recognition and Resources

- Continue to Track HASS Awards (p. 46)
- Find Permanent Chairs for Senior Women (p. 46)
- Appoint Women Faculty to Institute Committees (p. 47)
- Monitor Space Allocations and Correct Inequities (p. 47)

### Faculty Experience

- Brief Department Heads on Interview Findings (p. 56)
- Establish Effective Departmental Mentoring Practices (p. 56)
- Increase Participation of Women Faculty in Departmental Decision-Making (p. 56)
- Make Changes to Incentives and Rewards Systems at the Institute, School and Department Levels (p. 57)
- Reduce the Stress of Balancing Work with Family/Personal Responsibilities (p. 57)
- Create a Productive Climate for Women Faculty (p. 58)

### General

- Brief Department Heads and Faculty on this Report (p. 59)
- Establish a Committee to Work Out the Details and Implementation of Our Recommendations (p. 60)
- Establish a Permanent, School-wide System to Review Gender Equity on a Regular Basis (p. 60)
- Establish Policies for Rewards and/or Sanctions for Departments that Show Improvements/ Decline in Gender Equity Issues (p. 60)