## REPORT OF THE

PROVOST'S ADVISORY COMMITTEE ON THE STATUS OF WOMEN FACULTY

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Stanford University

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# Provost's Advisory Committee on the Status of Women Faculty 

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## Executive Summary

## Background of the Report

Over the past quarter century, Stanford University has made substantial progress in increasing the representation of women in faculty and leadership positions, and in improving the climate for women on campus. However, ensuring gender equity in the academic workplace remains a challenge for higher education in general and Stanford in particular. To assess the University 's progress on these issues, in 2001 Stanford 's Provost, John Etchemendy, appointed a Provost's Advisory Committee on the Status of Women Faculty (PACSWF). His charge to the Committee was to consider how Stanford University can enhance its ongoing efforts to increase the representation of women in the professoriate and to address the professional wellbeing and success of women faculty.

The creation of this Committee was part of a series of initiatives under the leadership of President John Hennessy and Provost John Etchemendy to promote diversity and to address the factors that have historically disadvantaged female faculty. Appointment of this Committee followed a conference, in January 2001, of the presidents of nine leading research universities, including Stanford, to address gender equity for female faculty in science and engineering. The university presidents who attended the joint conference pledged to evaluate their own university' s progress on this issue and to share their findings.

Over the past three years, Stanford's Committee has conducted an extensive review of University policies and practices concerning women faculty. That review has revealed a wide range of gender-related initiatives and significant recent progress in increasing women's representation in faculty and leadership positions. The Commitee has also collected the first comprehensive University data in three areas. A Subcommitee on Recruitment and Retention obtained information from each school concerning formal and informal practices related to search committees and retention efforts. A Subcommittee on Compensation, Resources, and Recognition compiled detailed quantitative data on non-salary forms of compensation and support such as research accounts and laboratory space. A Subcommittee on Quality of Life designed a questionnaire for all faculty concerning issues such as professional satisfaction, workload, academic climate, discrimination, harassment, and work/family concerns.

In order to facilitate sharing of information regarding gender equity initiatives at other colleges and universities, a website database was created by the Robert Crown Law Library. That site, http://universitywomen.stanford.edu, now includes links to policies, reports, and resources relating to women faculty throughout the nation, as well as links to other materials and websites. This review of other universities' practices and initiatives helped to inform PACSWF's own recommendation, set forth below.

## Major Findings

## Recruitment and Retention

University policy requires all faculty searches to engage in affirmative action to increase the diversity of applicant pools. However, practices concerning the composition and procedures of search committees vary widely across the schools. Some, but not all schools reported efforts to ensure diversity in committee membership and to reopen searches that had not produced a sufficiently diverse candidate pool. Practices regarding retention also varied, particularly concerning how the school responded to outside offers.

## Compensation, Resources and Recognition

Since the late 1990s, the University has systematically reviewed base salary information to identify any apparent gender inequities and to take appropriate corrective action. The Committee therefore found it unnecessary to address this issue, and focused its attention on other forms of compensation and support. To that end, it obtained detailed information from each school concerning: offer salaries, start-up offers, research accounts, laboratory space, and moving-rental allowances. The Committee also analyzed the more limited data available concerning summer salaries, retention packages, and special arrangements regarding teaching loads and housing subsidies.

Taken as a whole, the findings reflect a mixed and complicated picture. In a number of categories, the data reveal no significant disparities by gender. For example, initial offer salaries, start-up funds, laboratory space, and moving and rental allowances exhibit no gender disparities in most of the schools. On the other hand, disparities of varying magnitude appear in a number of categories in several schools, although there is no distinctive pattern by category or by school. Some, but not all, of the gender differences appear to be statistically significant. For example, in a small number of schools or divisions, men on average receive higher initial offer salaries than women and larger start-up funds, although this may reflect the different seniority levels at which male and female faculty are hired. In a number of instances where no statistical significance appeared, the apparent disparity seems attributable to the presence of a few male high-outliers, or to the simple fact of small numbers of womenCespecially as new senior hires in certain schools or fields.

But even where no statistical significance emerges, several major concerns remain. The first is that the overall pattern of difference is unidirectional. Where disparities occur, virtually all involve men receiving higher compensation or support than women. This pattern suggests that additional individualized analysis is necessary to determine whether there is a reason unrelated to gender, such as seniority, subfield, or research needs. A related concern is that irrespective of the merits of particular cases, in circumstances where all of the most highly compensated faculty are male, that general pattern may unintentionally reflect and perpetuate gender stereotypes.

## Quality of Life

After reviewing studies by several other universities, the Subcommittee developed a survey for all faculty focusing on the following major areas: academic workload, perceptions of workplace climate and opportunities, work/family conflicts, spouse/partner opportunities, and overall satisfaction. The response rate for this survey was $49 \%$ ( 839 completions out of 1,717 faculty) and respondents were sufficiently representative of the faculty population accross categories such as gender, race, ethnicity, rank, and school.

Three broad conclusions stand out from this analysis of gender and the quality of faculty life at Stanford. One involves the similarities between women's and men's experience. For the faculty as a whole, there are no significant gender differences in measures of their overall satisfaction. For both women and men, work climate and sense of inclusion are two of the major factors affecting faculty assessment of their professional life. Male and female faculty also agree on what they consider the most positive aspects of the Stanford environment the quality of students and colleagues, and the Bay Area location. Women and men similarly pointed to the same negative aspects of the Stanford experience, primarily the financial stresses associated with living in the Bay Area.

A second key finding is that female faculty generally had more concerns about quality of life than their male colleagues. Women generally rated their work climate less favorably than men, were less likely to feel included and valued, and were more likely to report perceptions of gender discrimination. Women also experienced greater workload pressure, especially related to advising and mentoring, and this experience was particularly pronounced among women of color. So too, female faculty were more likely than their male colleagues to report work/family stress, and were particularly concerned about the availability and affordability of quality childcare.

The third key finding involves the significant differences in general satisfaction and workplace experiences among women faculty depending on their rank, ethnicity, and school or division within the University. Female faculty in the Social Sciences and Clinical Sciences expressed a lower level of general satisfaction than male faculty in these divisions. By contrast, women in Natural Sciences and Engineering are as satisfied as their male colleagues, reflecting similar perceptions of their work climate, sense of inclusion, pay equity, and workload reasonableness.

In general, the picture for women at Stanford is a positive one, and faculty satisfaction rates are similar to most of those available from other peer institutions. However, the survey also identified areas requiring attention from the University's central administration and from its schools and departments that serve as the basis of detailed Commitee recommendations.

## Implications of the Findings

In recent years, Stanford has made impressive progress in increasing the representation and advancement of women faculty, and in addressing issues of gender equity. Yet despite such progress, significant concerns remain. None are unique to Stanford, but they all suggest a need
for ongoing attention and further initiatives Taken together, the Committee's findings underscore several key issues: the low representation of women, particularly women of color, in certain fields and among the most highly rewarded full professors; the frequency of perceived disadvantages due to gender; the lack of inclusiveness and undervaluation of women's contributions in certain disciplines and schools; and the difficulties of reconciling personal and professional needs, compounded by financial pressures and inadequate childcare options.

## Recommendations

The findings of the Committee lead to recommendations in key areas concerning recruitment and retention practices; compensation, resources, and recognition; and faculty quality of life.

## Recruitment Practices

Search committee chairs, department chairs, deans, and the Provost' s Office should all assume responsibility for ensuring a diverse search committee and candidate pool. Special outreach efforts and targeted funds should be used to increase appointments of women in departments and divisions where they are underrepresented. More systematic information should be collected concerning the composition of candidate pools, the gender ratios of offers and acceptances, and the reasons for unsuccessful recruitment and retention efforts. Attention should be given to the adequacy of hiring packages in areas that pose special concerns for women, such as childcare, spouse/partner employment, family leave, and reduced schedules.

## Retention Strategies

Although policies on retention are difficult to formalize, schools should devise explicit strategies for providing adequate individual support and recognition, and for ensuring some measure of horizontal equity among faculty. The University also should take steps to dispel perceptions that outside offers are the only way to gain appropriate rewards. Faculty should be appropriately rewarded for their productivity and contributions regardless of their mobility or their interest in pursuing outside offers. Yearly meetings between the chair or the dean and individual faculty members are advisable so that faculty members can voice concerns and receive appropriate feedback.

## Compensation and Support

The Provost and deans should monitor salary and non-salary forms of compensation and support to ensure appropriateness and equity. The schools should, as part of their standard record keeping, establish databases for information on non-salary compensation and support. The Provost' s Office should assemble this information in centralized tables, graphs, and summaries, and should evaluate it on a regular basis.

The areas of potential gender disparity noted by the Commitee should be further analyzed in conjunction with the schools to determine whether appropriate individualized factors explain the apparent differences. This review should include not only differences that appear statistically significant, but also other disparities that may reflect the presence of high outliers. Base salary
and other forms of support and compensation should be examined to ensure that Stanford is not unnecessarily or improperly reacting to external offers, and that overall compensation and support is awarded on the basis of need and merit.

## Academic Climate, Work-Family Policies, and Related Issues

The Provost's Office, the deans, and other appropriate administration officials and faculty committees should undertake further inquiry and initiatives regarding concerns raised by the Quality of Life survey results, including experiences of harassment and discrimination that do not result in formal complaints. The Provost's Office should provide administrative and financial support for a Faculty Women's Forum that would offer opportunities for women across the University to discuss shared interests and concerns, including gender-related issues and research.

The University should improve its childcare options. Additional information should be collected to identify strategies for dealing with access, affordability, quality, schedules, and coverage for emergencies and school breaks. The Provost's Office should establish and publicize a dependent care fund to subsidize temporary childcare expenses for travel related to research, conferences, and related professional development needs.

The University should also reassess the adequacy of its policies concerning family leave, reduced teaching and clinical load, and tenure clock extension. The implementation of these policies should be monitored to ensure that options available in principle are not discouraged in practice.

## Accountability, Research, and Analysis

The University should continue to have a faculty panel and senior level administrative position that focus on gender equity concerns. Data should be collected on a regular basis regarding gender equity and quality of life. The University should also encourage and participate in collaborative research with other institutions to gain better understanding of gender equity challenges and responses. Efforts should be made to assess the relative effectiveness of particular gender equity strategies (e.g., reduced workloads and extended family leaves, formal mentoring programs, and diversity and harassment training).

# REPORT ON THE STATUS OF WOMEN FACULTY 

## Introduction

In 2001, the Provost of Stanford University, John W. Etchemendy, appointed a Provost's Advisory Committee on the Status of Women Faculty (PACSWF) to assess the University's progress toward gender equity. His charge to the Committee was to "consider how Stanford University can enhance its ongoing efforts to increase the representation of women in the professoriate and to address the professional well-being and success of women faculty." The Committee was also requested to "report and make recommendations to the Provost on an ongoing basis."

The creation of this Committee was part of a series of initiatives to ensure gender equity and to improve the academic climate for women at Stanford. Under the leadership of President John L. Hennessy and Provost Etchemendy, the University has made major strides in seeking to understand and address the factors that have historically disadvantaged female faculty.

Appointment of this Committee followed a conference in January 2001 of the presidents of nine leading research universities, including Stanford, to address women's underrepresentation in academic science and engineering. That conference was prompted by MIT's highly publicized report on the unequal status of their women science and engineering faculty. ${ }^{1}$ The university presidents who attended the joint conference pledged: to work within their institutions to promote diversity, gender equity, and family-friendly policies; to evaluate their university's progress; and to share their findings (Appendix IA).

To emphasize Stanford's commitment to diversity and equal opportunity, in May 2001, President Hennessy and Provost Etchemendy also released a "Statement on Faculty Diversity" (Appendix IB). It was subsequently endorsed by the Board of Trustees.

In this context, Stanford's Committee determined that its first task was to review the University's policies and practices concerning women faculty. That review, summarized in Parts I.B and I.C below, revealed a wide range of gender-related initiatives and significant recent progress in increasing women's representation in faculty and leadership positions. However, it also became clear that the University lacked adequate systematic data in three key areas: practices regarding recruitment and retention; non-salary forms of compensation, resources, and recognition; and faculty concerns about their quality of life. Subcommittees in each of these areas then began designing strategies to obtain additional information. The Subcommittee on Recruitment and Retention sent a survey to each school concerning its formal and informal policies and practices related to search committees, compensation, and retention efforts. The Subcommittee on Compensation, Resources, and Recognition requested detailed quantitative data from each school on offers, retentions, research accounts, laboratory space, moving/rental allowances, and summer support. The Subcommittee on Quality of Life designed a survey for all faculty concerning issues such as professional satisfaction, workload, academic climate,

[^0]discrimination, harassment, and work/family concerns. More complete discussions of each of the Subcommitees' methodologies and findings are set forth in Parts II-IV below.

In addition, the Committee as a whole met with various groups and central administration staff, including the Faculty Women's Caucus, lawyers from the Office of the General Counsel, and the Director of the Sexual Harassment Policy Office. The Committee Chair, Law Professor Deborah L. Rhode, and its Special Liaison, Patricia Jones, Professor of Biological Sciences and Vice Provost for Faculty Development, represented Stanford at two meetings on gender equity in April of 2003 and 2004. These meetings involved presidents, administrators, and faculty from the original group of nine leading research universities who had attended the initial MIT-led conference in January 2001, and had pledged further action on the status of women. The Committee Chair also reviewed relevant publications and reports from other colleges and universities. The difficulties in compiling such information led to creation of a website database by the Robert Crown Law Library. That site, http://universitywomen.stanford.edu, now includes policies, reports, and resources relating to women faculty throughout the nation, as well as links to other materials and websites. This review of other universities' practices and initiatives helped to inform PACSWF's own recommendations, set forth below in Part VI below.

Collection and analysis of the relevant information was an extremely time consuming process. During that process, the Committee periodically advised the Provost of its work, and presented a preliminary report, including recommendations on recruitment and retention, to the Faculty Senate in May 2003.

This report proceeds in six parts. Part I provides historical background on faculty women's status at Stanford. Parts II-IV summarize the findings of the three subcommittees, Part V presents general conclusions and implications, and Part VI concludes with recommendations. It bears emphasis at the outset that the Committee charge was to focus on concerns related to women faculty. However, many "women's issues" are crucial not only for women, and many of the Committee's recommendations speak to the quality of life and equitable treatment for all faculty. These recommendations are also of particular concern for groups that may experience disadvantages related to race, ethnicity, sexual orientation, family status, and related factors. So too, some of the issues of special importance for women faculty also affect women holding other academic and staff positions, and we urge the administration to give further attention to their needs.

## I. Historical Background and Recent Initiatives

## A. Prior Reports on the Status of Women Faculty

Stanford University has had long-standing concerns about gender equity. Although the University was one of the nation's first leading institutions to admit female students, its record in appointing female professors was, until relatively recently, far less impressive. Several women were part of the pioneer faculty in 1891, Stanford's first year. However, women remained a tiny percentage of the faculty until the 1970s. The first published report on the status of female faculty, delivered to President Richard W. Lyman in 1971, indicated that women constituted only five percent of the faculty and two percent of full professors. ${ }^{2}$ Four of seven schools had no female tenure-track professors. The report noted with concern that women were less well represented at Stanford than at many of its peer institutions and recommended a variety of reforms. Many of those recommendations concerning recruitment, retention, and family policies were gradually implemented.

Two decades later, the next major report on the status of women faculty chronicled substantial, but by no means adequate, progress toward gender equity. In 1993, a Provost's Committee On the Recruitment and Retention of Women Faculty, chaired by Education Professor Myra Strober, found that women faculty's representation had increased to eleven percent. However, almost half of all departments had no tenured women, and Stanford's record in appointing and promoting women still lagged behind that of peer institutions. As the report noted, the underrepresentation of women raised concerns on several levels. Not only was the University failing to include a substantial percentage of the available talent pool, it was also failing to ensure the diversity in backgrounds, ideas, and views necessary for effective teaching and scholarship. Moreover, women's small numbers in many schools and departments seriously compromised their quality of life and academic opportunities. Interviews with female faculty revealed that many felt isolated, unsupported, and overburdened with committee assignments and counseling responsibilities. The Committee's review recommended a comprehensive series of reforms aimed at insuring equal treatment, building a supportive climate, and reducing work/family conflicts. ${ }^{3}$

## B. Recent Gender-Related Initiatives

In response to those findings, and the concerns that the report reflected and reinforced, the University began initiating a variety of strategies. One key Strober Committee recommendation was to have an annual report on the status of women faculty, focusing on the gains and losses of women professors. Such a report has been presented to the Faculty Senate every year since 1997. Other recent initiatives are described below, in the context of three

[^1]commitments made by the presidents of the nine universities participating in the first gender equity conference (see Appendix IA).

1. A commitment to developing "a faculty whose diversity reflects that of the students we educate."

In addition to adopting a "Statement on Faculty Diversity" and appointing this committee, the University has taken a variety of steps to institutionalize its commitment to equal opportunity. One involved a study in 2001 by the Provost's Office to assess Stanford's progress in developing a diverse faculty relative to peer institutions. The "Stanford Peer Institution Survey of Faculty Diversity" generated comparative data from eleven peer institutions on the representation of women and minorities by school and rank.

Annual meetings between representatives of the Stanford Provost's Office and each school's dean and associate deans focus on progress in increasing the representation of women and minorities. These meetings review comparative peer institution data, identify challenges, and discuss strategies to address them. Similar discussions also take place on a regular basis at the Provost's quarterly Chairs Workshops for department chairs, deans, and senior school administrators. So too, in recent years the annual report to the Faculty Senate on the status of women faculty has grown to include additional data, such as detailed information about tenure rates and factors affecting faculty recruitment and retention, based on an annual survey of schools and departments.

A variety of resources is available to assist schools and departments in recruiting and retaining women faculty. The Provost's Faculty Incentive Fund (FIF) facilitates recruitment and retention of individuals who will add to the diversity of the faculty throughout the University. In addition, the endowed Gabilan Provost's Discretionary Fund is available to help increase women's representation in science and engineering. In December 2002, the University received a three-year "Campus Diversity Initiative" grant from the James W. Irvine Foundation, which supports efforts to increase the recruitment and retention of minority faculty and graduate students, and to identify factors that affect students' decisions to pursue academic careers. While not specifically targeted to women, the CDI grant has supported the establishment of the Faculty Recruiting Office, which both provides information to job candidates and aids schools and departments in their efforts to build a diverse faculty. Several resources are also available to help meet the increasing challenge of dual career issues (the most common cause of unsuccessful efforts to hire both male and female faculty in 2002-03). The Special Assistant to the Provost, Law Professor Robert Weisberg, works with schools and departments on spouse/partner placements. Also, Stanford has been a founding member of the Northern California/Bay Area Higher Education Recruitment Consortium (HERC), which has established a web site (www.bayareaherc.org) listing faculty and staff positions in colleges and universities in the Bay Area to assist with dual career couple recruitment and retention.

## 2. A commitment to "equity for, and full participation by, women faculty."

The Provost's Office carries out annual reviews of the representation of women holding leadership positions and endowed professorships; these data are included in the annual report to the Faculty Senate on the status of women faculty. Since the late 1990's, the Provost's Office has
also conducted annual reviews of gender equity in salaries (discussed below). As part of its effort to foster effective guidance for junior faculty, the Provost's Office recently prepared and distributed "Guidelines for the Counseling and Mentoring of Junior Faculty" (Appendix IC).

In addition to PACSWF's University-wide analysis of gender equity issues, reported here, in 2001, the new Dean of the School of Medicine, Philip A. Pizzo, convened a Committee on Women in Medicine and Science, and charged it to "consider how the School of Medicine can enhance its ongoing efforts to increase the representation of women in the professoriate and to address the professional well-being and success of women faculty." The Committee, chaired by Professor Mary Lake Polan, Chair of the Department of Obstetrics and Gynecology, designed and carried out a Women Faculty Needs Assessment. The study's conclusions included a determination that "women faculty members were able to clearly indicate specific interventions that would improve their career success and sense of well-being" and that "the dean's office is committed to implementing these recommendations to provide support for academic advancement of women faculty members." The study's findings helped inspire and inform a range of new Medical School initiatives, including a required workshop for every department on the School's Respectful Workplace Policy and the creation of a new administrative position to focus on faculty relations. ${ }^{4}$ Under the leadership of Dean Pizzo and Senior Associate Dean David K. Stevenson, and with input from the Committee on Women in Medicine and Science, the School of Medicine is undertaking a range of actions to enhance conditions for women, including policy modifications to provide a more flexible work environment. The design of the Needs Assessment was also useful to those who developed PACSWF's Quality of Life Survey, discussed in Part IV below.
3. A commitment to establish "a profession and institutions in which individuals with family responsibilities are not disadvantaged."

The need for available, affordable, and quality childcare is a challenge facing American employers in general and higher education in particular. To address such concerns, Stanford's WorkLife Center has recently conducted a series of assessments of on-campus childcare needs. The University has contributed support for campus childcare center renovations, has opened one additional center (the Knowledge Beginnings Center in the Stanford West development), and has tentatively planned another center, pending evaluation of continuing needs and financing possibilities. In 2002, to increase the affordability of childcare for low-income faculty and staff, the University established the Child Care Subsidy Grant Program. This need-based program is administered as a Dependent Care Spending Account that provides up to $\$ 5,000$ for children five years or younger, and $\$ 1,000$ for children age six through nine.

That same year, the University also expanded its policies for new faculty parents. These policy changes gave to new fathers and adoptive parents the one-year tenure-clock extension previously available to birth mothers, and similarly extended the one-quarter reduced teaching or clinical load to all new faculty parents who are primary care-givers.

[^2]
## C. Representation of Women in Faculty and Leadership Positions

The Committee did not survey women's representation in faculty and leadership positions because, as noted earlier, the Provost's Office already provides such information in annual reports to the Faculty Senate. However, to put PACSWF's findings and recommendations in context, it is appropriate to provide a brief summary of the most recent Status of Women Faculty Report (presented March 4, 2004).

As of September 1, 2003, 22.6\% - 394 of Stanford's 1744 faculty in all faculty lines, ranks, and schools - were women. This represented an increase over the past year from $22.2 \%$ (380/1715), a five-year increase from $18.9 \%$ (300/1587), and a ten-year increase from $15.7 \%$ (219/1398). Over the past decade the proportion of women in the faculty has increased by an average of $0.7 \%$ each year. Over the last five years, Stanford added 94 women to the faculty, an increase of $31 \%$. During this period, all schools and major divisions showed an increase in the representation of women except the Graduate School of Business and the Basic Sciences Division of the School of Medicine; Education had the biggest increase in the percentage of women (from $25 \%$ to $40 \%$ ), and the Clinical Sciences in the School of Medicine had the biggest net increase in numbers of women ( 54 women/ 115 total net increase). As of the beginning of this academic year, among the various faculty lines, women comprise $17.4 \%$ of the tenured, tenure-line faculty; $29.8 \%$ of the untenured, tenure-line faculty; $27.8 \%$ of the non-tenure line faculty; and $28.7 \%$ of the Medical Center line faculty. The representations of women in the total faculty and in the tenured faculty for each of the eleven schools and major divisions are: Earth Sciences ( $17 \%, 15 \%$ ), Education ( $40 \%$, 34\%), Engineering ( $10.5 \%$, 8.0\%), Graduate School of Business ( $20 \%$, $15 \%$ ), H\&S Humanities ( $30 \%$, 27\%), H\&S Natural Sciences ( $14 \%, 10.5 \%$ ), H\&S Social Sciences ( $27 \%$, 22\%), Law ( $29 \%$, 24\%), Medicine Basic Sciences ( $26 \%$, 19\%), Medicine Clinical Sciences ( $25 \%$, 16\%) , and other (Stanford Linear Accelerator Center, independent labs and institutes) ( $16 \%, 14 \%$ ).

Comparison of the representation of women in Stanford's schools and divisions with those of our peer institutions provides one useful benchmark for assessing our progress. Among the nine institutions participating in the recent MIT-led gender equity conferences (California Institute of Technology, Harvard, MIT, Princeton, Stanford, University of California-Berkeley, University of Michigan, University of Pennsylvania, and Yale), Stanford ranks highly in a number of areas in the representation of women tenure-line faculty. Based on the 2003-2004 demographic information for these institutions' schools or disciplines (except medical schools) that are listed in the AAU Data Exchange, Stanford's rankings for the proportion of female faculty are as follows: Biological Sciences (\#2 of nine institutions), Business (\#4 of seven), Education (\#2 of three), Engineering (\#3 of nine), Humanities \#7 of eight), Law (\#1 of four), Math and Statistics (\#7 of nine), Physical Sciences (including earth sciences) (\#1 of nine), and Social Sciences (\#2 of eight).

Analysis of the University's recent success in recruiting women into junior (untenured) and senior (tenured) tenure-track faculty positions reveals that over the last five years, $32 \%$ of junior tenure-line faculty hires have been women; last year (2002-03), the proportion was $27 \%$. During that five-year period, the highest proportion of women among junior faculty hires occurred in Law (75\%), Education (57\%), and Humanities (50\%). The lowest proportion was in

Engineering (21\%); however, over the last two years, Engineering has made substantial progress, with six of ten junior faculty hires being women. For senior hires over the last five years, $22 \%$ have been women; last year showed the greatest success, with women comprising $36 \%(8 / 22)$ of the senior hires.

Tenure rates for male and female faculty are also reported annually, calculated in two ways. First, the Provost's Office tracks the proportion of untenured faculty who received tenure among those cases where a tenure decision was made. Over the past 25 years, $75 \%$ of both male and female faculty who came up for tenure received tenure. In the most recent cohort (those arriving between 1990-96), the tenure success rate was slightly higher for men ( $79 \%$ vs. $74 \%$ ). In addition, the Provost's Office determines the tenure rate for all untenured faculty hired by Stanford, irrespective of whether or not they came up for a tenure decision. Over the past 25 years, the tenure rate has been slightly higher for women than men, $44 \%$ for women and $40 \%$ for men. For those untenured faculty arriving in the $1990-96$ period, $49 \%$ of men and $36 \%$ of women have received tenure; a small number of faculty have not yet come up for a tenure decision. While the proportion denied tenure during this period was essentially the same for women and men ( $12.5 \%$ and $12.8 \%$, respectively), a somewhat higher proportion of women than men resigned prior to coming up for tenure ( $31 \%$ vs. $22 \%$ ). Also, a slightly higher proportion of women than men ( $20 \%$ vs. $17 \%$ ) have had their tenure decision delayed for a variety of reasons, including a tenure clock extension for new faculty parents. The Provost's Office is currently examining these data to gain a fuller understanding of the apparently higher resignation rate for untenured women.

With respect to leadership positions, women's representation has increased dramatically over the past decade. Currently, four of the seven school deans are women (Humanities and Sciences, Earth Sciences, Education, and Law). A quarter of the academic associate deans are now women, as are $18 \%$ of department chairs, up from just $3 \%$ in 1991-92. In the School of Medicine, $26 \%$ ( 7 of 27) of the department chairs (including the chair of the School's largest department, the Department of Medicine) are women; this compares very favorably to the School's peer medical schools. This year, women constitute an all-time high of $29 \%$ of the 55 elected members of the Faculty Senate, and their representation after the recent election will increase to $35 \%$ next year. In the last eleven years, three women have chaired the Faculty Senate. Women comprise $25 \%(2 / 8)$ of Advisory Board members and $27 \%, 33 \%$, and $43 \%$ of the appointments and promotions committees for, respectively, the School of Humanities and Sciences, the School of Medicine Academic Council professoriate, and the Medical Center Line professoriate. Significant recent progress has been made in increasing the representation of women among holders of endowed chairs. Women now hold $14 \%$ of endowed chairs, up from just $5 \%$ in 1991-92, and women make up $46 \%$ of the net increase in endowed professorships in the last three years.

## D. Assessment

One central objective of this Committee was to evaluate the effectiveness of current gender-related University initiatives, and to identify what other strategies might be necessary to improve the representation and quality of life of women faculty. Although the proportions of women in faculty and leadership positions have increased dramatically over the last decade, as
have the University's efforts to promote gender equality, progress has been constrained by several factors. First, the low rate of faculty turnover and the slow growth in faculty (1-2\% per year) prevent Stanford from hiring in large numbers. In recent years, the number of new appointments has ranged from 100 to 130 per year across the entire University. Even though most of the retiring faculty are male, the small numbers of hires in most parts of the University make it difficult to achieve rapid progress in increasing the representation of women. Second, success in recruiting women faculty is, in part, limited by the numbers of women who apply for our faculty positions. In some fields, especially in the physical sciences and engineering, the availability pools are still dominated by men. Moreover, even in some fields in which the numbers of women earning Ph.D.'s have increased (such as chemistry, where women now comprise $34 \%$ of new Ph.D.'s annually), relatively few female candidates are available for faculty positions at the top research universities. ${ }^{5}$ Finally, competition for outstanding female scholars is intense, both at junior and senior levels. Although there is not always a close linkage between the numbers of women in an academic unit and the climate for those women, the slow rate of progress can be frustrating. The result is to leave in place the heavy service burdens of the few current women faculty, and in some units delay improvements in workplace climate.

The challenges posed by such hiring constraints are, of course, not unique to Stanford, but they will inevitably affect the University's progress concerning gender equity. Yet the University's commitment to diversity demands that it do what it can to increase women's representation and to ensure their equal opportunities. In effect, that requires identifying and addressing institutional practices that can impose special obstacles for female faculty. To that end, after extensive consultation with faculty and University leaders, PACSWF formed subcommittees to compile additional information on women's experience. Their findings appear below.

[^3]
## II. Recruitment and Retention

Shortly after its formation, the Subcommittee on Recruitment and Retention requested information about relevant policies and practices from all schools. ${ }^{6}$ Each responded to this request. Their responses reflected significant variation in search committee practices, compensation, and performance reviews.

## A. Composition and Procedures of Search Committees

University policy requires all faculty searches to engage in affirmative action to increase the diversity of applicant pools. However, practices concerning the composition and procedures of search committees vary widely across the schools. Some schools made no mention of concerns about gender diversity in committee membership (Engineering, GSB). One explicitly indicated that search committee diversity was not a priority (Earth Sciences). Others indicated that the committees were as diverse as the school or department (Medicine, Humanities and Sciences). Two attempted to ensure that at least one woman was on the committee (Law, Humanities and Sciences). In the Social Sciences, one person was sometimes appointed to serve as the "diversity officer." Procedures for ensuring a diverse candidate pool also vary in light of each school's general search practices and the needs of particular fields.

As virtually all individuals responsible for search processes acknowledged, it is extremely difficult to monitor their adequacy after the fact. It can be equally difficult to assess that monitoring process. Some schools reported that they had occasionally asked a committee to reopen a search; others reported that they could not recall ever having done so. In almost all the schools, the dean is ultimately responsible for overseeing the search process, but the degree of involvement differs.

## B. Retention

Schools generally try to ensure retention by considering merit in the salary-setting process and by making faculty feel valued in other ways apart from compensation. Some deans have annual discussions with individual professors that help to identify areas of concern about financial and non-financial forms of recognition. Considerations of horizontal equity also routinely figure in schools' annual salary review procedures.

The importance of outside offers in the compensation process is difficult to assess. No school reported an official or fixed policy on that issue. Practices vary somewhat, but the general norm appears to be that deans will try to respond to a credible outside offer to a faculty member who is important to retain. Schools do not necessarily wait for outside offers to be formalized, but not all indications of interest from other institutions are viewed as presenting credible recruitment threats. The Law School, for example, only takes seriously offers from the top three competitors. So, too, not all potential losses are viewed as crucial to prevent; in some cases the costs of retention would exceed the benefits. As deans from several other schools

[^4]noted, a response to competition for one individual might require adjustments for others to avoid the perception that outside offers are the only effective way of gaining appropriate compensation.

Whether that perception is widely shared is hard to gauge. Some schools reported that professors were not well informed concerning current compensation processes (GSB, Medical School). A few believed that the lack of information was in fact desirable since it prevented excessive internal competition and bidding wars that distort the salary structure.

Whether women are disproportionately penalized by the current process is subject to dispute. Some schools reported no evidence of gender disparities; others reported that women were less likely to engage in strategic bargaining (Engineering, Humanities), or were less likely to be sufficiently mobile to make credible threats to relocate (GSB).

The Committee also heard many women faculty express the view that female professors were disadvantaged, or perceived themselves to be disadvantaged, by current compensation and reward structures. Statements made in the Faculty Senate, in meetings of the Faculty Women's Caucus, and in discussions with central administrators and Committee members all revealed significant concerns about lateral offers and gender equity. A commonly-expressed view is that women are less inclined to engage in strategic use of outside offers, due to socialization patterns, or are less able to do so, due to family constraints. In effect, women are less likely to want to or be able to relocate; they are more likely than men to have family responsibilities that tie them to the Bay Area; and they are less likely to have partners who are willing and able to move in response to an outside offer.

Women's perceptions are consistent with other Committee findings. As noted below, men are disproportionately represented among faculty who are recruited or retained through exceptionally high compensation and other forms of recognition. The visibility of these highly rewarded senior male "stars" may reinforce the perception, reflected in the findings from the Quality of Life Survey (see below), that gender-based salary disparities exist even in schools, divisions, and departments with no statistically-significant differences in compensation for similarly-situated men and women.

## C. Recommendations

In response to these findings, the Committee recommends that the administration adopt and distribute Best Practices for the Recruitment and Retention of Women Faculty. Proposed practices appear as Recommendations 1-7 in Part VI. They address the diversity and procedures of search committees, proactive retention strategies, including responses to outside offers, and central administration initiatives concerning education and monitoring on gender-related issues.

## III. Compensation, Resources, and Recognition

The PACSWF Subcommittee on Compensation, Resources, and Recognition was charged with examining material or monetary compensation and support for Stanford faculty, to identify possible areas of gender disparity for further study, and, where appropriate, to propose strategies for amelioration.

## A. Methodology and Scope of Inquiry

Although base salary is obviously the chief component of faculty compensation, the Subcommittee found it unnecessary to address the issue because, as noted above, the Provost's Office already conducts a comprehensive annual review. This review, done with the aid of University staff researchers and faculty experts, involves formal multiple regression analyses of base salaries that adjust for a number of factors, including measures of seniority. Any potential gender disparities that emerge from this analysis are then the subject of further inquiry by the Provost's Office. ${ }^{7}$ This form of review, first introduced in a report to the Faculty Senate in 1999 and commonly referred to as the "quintile analysis," or "residual analysis," is now updated regularly, with the new information shared with deans for their use in annual salary recommendations. ${ }^{8}$ A full description of this base salary review appears in Appendix IIIA, to help set the Subcommittee's work in context.

Accordingly, the following analysis considers forms of compensation and support other than base salary. After preliminary discussions with administrators and the full PACSWF, the Subcommittee initially determined to review data on: laboratory space, equipment, start-up funds ${ }^{9}$ and research funds. ${ }^{10}$ Ultimately, as explained below, these categories were supplemented and somewhat reconfigured into five major categories to adapt to the differing data available from the schools: offer salaries, start-up offers, research accounts, laboratory space, and moving-rental allowances. ${ }^{11}$ The subcommittee also analyzed information

[^5]concerning summer salaries and retention packages. Although other benefits or support may be equally critical (e.g., housing subsidies and reduced teaching loads), these proved to vary so much in kind, structure, or amount that they are incommensurable in any useful way. Nevertheless, they merit some scrutiny, however impressionistic, and comments about their implications appear at the end of this draft.

Through considerable efforts in the schools to assemble the requested data and enormous efforts by the Provost's Office staff in compiling the data, the Subcommittee is able to provide Stanford's first comprehensive analysis of non-salary compensation and support. Discussion begins with a summary of major findings, and then a detailed explanation of various forms of compensation and support broken down by schools. A few key qualifications are in order at the outset. First, in some areas, the $n$ 's for the number of new or total faculty, or for women within those categories, are too small to permit any generalization. Second, this report uses the word "significant" in two senses. As explained in detail below, it reflects either a formal determination of statistical significance or a rougher measure (i.e., a high ratio of male to female mean numbers for a particular form of compensation) that the Committee construes as important and warranting further inquiry. Third, if a gender disparity is identified, this signals an area where further evaluation is necessary to determine whether or not there is a non-gender-related reason (such as seniority, or subfield, or other individual circumstances) that explains the difference. Thus, a finding of disparity is not equivalent to a finding of gender discrimination, but rather suggests a need for additional study.

## B. Summary of Major Findings ${ }^{12}$

Taken as a whole, the findings reflect a mixed and complicated picture. In a number of categories, the data reveal no significant disparities by gender. For example, initial offer salaries, start-up funds, laboratory space, and moving and rental allowances exhibit no gender disparity in most of the schools. On the other hand, disparities of varying magnitude appear in a number of categories in several schools, although there is no distinctive pattern by category or by school. Some, but not all, of these gender differences appear to be statistically significant. In a number of instances where no statistical significance appeared, the apparent disparity seems attributable to the presence of a few male "high-outliers," or to the simple fact of small numbers of women-especially as new senior hires-in certain schools or fields. ${ }^{13}$

But even where no statistical significance emerges, several major concerns remain. The first is that the overall pattern of difference is unidirectional. Where disparities occur, virtually all involve men receiving higher compensation or support than women. This pattern suggests that additional analysis may be necessary. A possible next step would be to reaggregate the data

[^6]and employ techniques of meta-analysis to determine whether further gender disparities emerge, and whether they suggest additional grounds for inquiry into what accounts for the inequalities.

A further concern is that in circumstances where all of the most highly compensated faculty are male, that pattern may reflect and perpetuate gender stereotypes. An impression may be left that men are the most celebrated or deserving academics, and the most likely to attract outside funding and high reputational rankings for their departments. A link between gender and "star power" may itself contribute to the fact or appearance of bias that the University seeks to alter.

Finally, where a small number of women explains why a disparity is not statistically significant, that factor underscores what may be the largest gender disparity: the underrepresentation of women faculty, especially in the senior ranks and among recent lateral hires.

More detailed analysis revealed the following significant findings concerning recruitment and ongoing support.

1. In most of the schools, men on average receive significantly higher initial offer salaries. On the one hand, these disparities do not reflect adjustments for seniority at the time of hire, and in some cases merely reflect the apples-and-oranges comparison of male full professor hires and female junior hires. ${ }^{14}$ On the other hand, these figures underscore the deeper problem of the relative infrequency of senior female new hires. Moreover, where the disparities remain even after separating senior from junior hires (especially true in the Social Sciences), they raise the question of overall base salary equity. Even if women receive fair and equitable annual raises, their initial salaries may have been lower for undetermined reasons, and so the annual raise process can only slowly, and never completely, resolve disparities absent specific adjustments. ${ }^{15}$
2. In a few schools, men receive larger start-up packages, in some cases much larger. These differences may be related to the disproportionate number of male senior hires over female senior hires. ${ }^{16}$
3. The category of moving and rental expenses is the least significant in terms of the absolute number of dollars involved, and the numbers tend to be fairly even across the University. Nevertheless, a few anomalously high outliers for male senior hires require further inquiry to see if they are explained by distance, family size, or other justifiable factors.
4. Men tend to have somewhat greater average laboratory space in Engineering and Medicine, but not in the Natural Sciences. In the Basic Sciences division of the School of

14 As noted in Appendix IIIA, the base-salary analysis done annually by the Provost's Office adjusts for two different seniority factors.
15 This concern is also being addressed in the quintile review of base salaries.
16 The data for senior lateral hires do not adjust for years of experience within the profession, so we cannot tell whether seniority among seniors correlates with size of start-up packages. However, even if adjusted data were available, the numbers would probably be too small to permit meaningful analysis.

Medicine, the gender difference is fairly large and exists both in overall male-female comparisons and in a comparison solely of junior faculty. Further detailed inquiry is needed to determine whether the differences that do emerge are due to the differing logistical needs of specific subfields of research and the different distribution of men and women in those subfields. ${ }^{17}$
5. In the Medical School, for both Clinical and Basic Science divisions, the category of discretionary funds (mainly research funds) reveals a significant disparity in favor of men. (In the relatively small pool for which these data were available, there were seven male full professors and no female full professors, but the disparity persists even with removal of the seven senior men.) Given the diversity and complexity of medical research, and variability among departments in the provision of discretionary funding, this pattern should be examined in greater detail to determine if appropriate factors explain it. For example, further inquiry is necessary to determine whether men are disproportionately represented in fields where research funding needs are greatest and most readily available.

The discussion below offers a more extensive explanation of these findings and the methods on which they are based.

## C. Sources of Data

The Provost's Office staff received the following data from each school in fall and winter, 2001-2002:

1. All offer letters to new Academic Council and Medical Center Line faculty for all ranks, for offerees who actually accepted the offer and whose appointments began between $9 / 1 / 96$ and $9 / 1 / 01 .{ }^{18}$ These letters covered most of the categories of discretionary benefits and support, and also sometimes included commitments of housing supplements of various sorts beyond or instead of the standard University programs (see below).
2. Retention letters written to faculty from $9 / 19 / 96$ to $9 / 1 / 00$, to capture not only salary and other financial matters but also such benefits or support as deviations from standard teaching load, research funds, staff support, paid research assistance, and so on.
3. Data on any summer (non-base) salary to faculty, from department, school, or University funds, for the summers 1997-2001. This category excludes: salaries for Executive Education in the GSB, other teaching or administrative supplements, and any other pay for service.
4. Individual research account commitments for the years 9/1/98 to 8/30/01 (although the number ultimately used for comparison was the actual amount committed or granted to the faculty member for use in the last year for which we have information. Thus, this amount is separate from any amount granted to the person in any previous year.).

[^7]5. Data on laboratory space as of $9 / 1 / 00$. In the rare cases where the only information available was for shared space, the allocation was split.

The Subcommittee and Provost's staff assembled the detailed quantitative information from each school. Once the data were compiled on comprehensive spreadsheets, five basic categories were established for comparison: Offer Salaries, Start-Up Funds (including new equipment, and excluding housing allowance), Laboratory Space, Research Funds, and Moving and Rental Allowances. Not every school has a graph for each of these new categories, because in several cases the category does not exist or the data set is too small. In addition, the GSB has a distinct category identified as Summer Salaries. ${ }^{19}$

## D. Presentation of Data

The data are presented in 25 graphs in Appendix III. For each academic unit, scatter plots indicate every data point, along with means, medians, $10^{\text {th }} / 90^{\text {th }}$ percentiles, one standard deviation above and below the mean; $p$-values are provided to indicate whether or not the differences in the means for male and female faculty are statistically significant. ${ }^{20}$ Where it is helpful for clarity, full professors are split out from junior faculty (defined for this purpose as associate and assistant professors). Due to confidentiality concerns, the scatter plots are not accompanied by precise dollar amounts or square footage for lab space.

## E. School-by-School Analyses

## 1. Education

There is no evidence of any disparity in offer salaries in Education (Graph 1). No disparity appears in start-up funding (Graph 8), except for one extremely high outlier - a man. Because that individual was recruited as a junior faculty member, the explanation may lie in some reason unique to his field or to the importance of his recruitment. In terms of research funds, the allocations were quite similar; the means for male and female faculty are the same. The median is higher for men (Graph 13), but this difference may be due to research subfield peculiarities, as the data show that juniors often receive more than senior professors. As for moving and rental expenses, women had a slightly higher mean (Graph 20).

## 2. Engineering

The data reveal a difference in mean offer salary (Graph 2). This difference is greatly diminished when only junior hires are compared, but the size of the mean disparity underscores the effect of the hiring discrepancy: i.e., a large number of senior male new hires and the absence of women senior hires. A similar pattern appears with respect to start-up funds (Graph 9 ); a difference favoring men is reduced when we consider only junior hires. The difference in

[^8]means in this latter category is not statistically significant. Notably, there was a large number of male senior hires in the lower range, and field-specificity may be a major explanation of any gender disparities. The field-specificity explanation is consistent with the laboratory space figures (Graph 14), where despite the higher proportion of male faculty, especially senior faculty, there is no difference between space allocated to male and female faculty at either junior or senior levels. On the other hand, a few male hires have much higher moving and rental expenses than the great bulk of hires (Graph 21) -and this group includes both senior and junior hires. Hence, these figures require some scrutiny to assess whether legitimate gender-neutral factors such as distance or family size explain the disparity.

## 3. Graduate School of Business

The Business School data reveal no disparity in offer salaries among junior hires (there were no senior women new hires in these data) (Graph 3). As for research accounts (Graph 15), the numbers are essentially the same for male and female junior. At the senior level the mean and median are higher for female than for male faculty, although the presence of a few high male outliers merits further inquiry. In the special category of summer salaries (Graph 25), men had a slightly higher mean, irrespective of rank, though the differences were not statistically significant. In this category, there were a few very high male full professor outliers, while on the other hand, many of the lowest summer salaries were for men.

## 4. H\&S Humanities

In this division the greater number of male senior hires than female senior hires produces a disparity in mean offer salaries (Graph 4). This difference appears to be due to the recruitment of a much higher proportion of male than of female full professors. A similar pattern appears for start-up funds (Graph 10), where the mean for men is significantly higher than for women. The difference persists even among full professors. On the whole, women do poorly in the start-up fund category-senior women received significantly less than senior men. In moving and rental expenses, most faculty received compensation within a narrow range, but a few male full professor recruits had higher numbers (Graph 22), so, again, the reason for these higher figures should be examined.

## 5. H\&S Natural Sciences

Men had a higher mean offer salary than women in the Natural Sciences, but a similar median (Graph 5). The difference in the means is not statistically significant, which may reflect the small number of senior women and the large representation of male junior professors at the lower end balancing the high male outlier full professors. As for start-up funds (Graph 11), the picture is fairly even, though the presence of a few male high-outliers may require further analysis. The figures for laboratory space are fairly even (Graph 16), ${ }^{21}$ as they also are for moving and rental expenses - although here again there are two very high male outliers among full professors (Graph 23).

[^9]
## 6. H\&S Social Sciences

A significant disparity is present in the Social Sciences in offer salaries, even among male junior and female junior hires (Graph 6). To understand these differences, a departmental breakdown of these figures is therefore crucial. Among full professor hires, the one woman received an offer salary that was about the same as the average of the men. However, a disparity in mean offer salaries appears for junior hires. The figures for start-up funds (Graph 12) are generally even, and the differences are not statistically significant, although a concern remains because of the presence of a few male high outliers. The figures for laboratory space are fairly even (Graph 17). In moving and rental expenses, the means and medians are similar, but, again, there are two male full professor outliers (Graph 24).

## 7. Medicine

Several categories of compensation and support stand out for detailed further inquiry in the School of Medicine. Offer salaries were higher for men in both the Basic and Clinical Sciences (Graph 7). However, no statistically significant differences emerge among junior faculty. In the Clinical Sciences, an explanation for some of the difference in offer salaries is the overwhelming gender disparity in senior hires (sixteen men versus one woman), and some high offer salaries for those individuals. Of course, even if controlling for seniority reduces or eliminates statistically significant gender difference, the absence of senior women hires is itself a concern. Some differences also may reflect the different salary scales for the various clinical specialties. In the Basic Sciences, although the $n$ 's are small, some disparity remains in offer salaries even just comparing junior faculty, but the difference is not statistically significant. Laboratory space also exhibits notable disparities (Graphs 18A and 18B). In the Basic Sciences, although there is no significant difference between the mean lab space of male and female full professors, among the junior faculty men have significantly larger labs than women. By contrast, there is no difference in mean lab space of male and female faculty in the Clinical Sciences, either at junior or senior ranks. Finally, the mean levels of discretionary funds (Graph 19) are very similar for male and female faculty, despite one high outlier man. It again bears emphasis that much of the gender differences may reflect disparities in male and female representation in particular fields and their varying resource-related needs.

## F. Other Benefits ${ }^{22}$

The new hire offer and retention letters included a very rough category or set of categories for which the items are so varied and non-commensurable that no quantitative tables or graphs are possible. Nevertheless, some description of their nature, magnitude, and frequency is useful. Moreover, an impressionistic evaluation suggests that they are an area for potential (although mild) concern in terms of gender equity, and thus merit further study.

22 The term benefits here and elsewhere in this report serves as a generic informal name for various forms of compensation or support, and should not be confused with the standard employee benefits (health insurance, etc.) provided to faculty and staff.

## 1. New Hire Benefits

In H\&S, there were no special housing supplements for new hires. There were, however, scattered miscellaneous benefits including special "relocation loans", summer salary, and vaguely denominated "program support." There were 137 new hires in the list, thirty-nine women and ninety-eight men. Of those, seventeen received significant miscellaneous support: two women and fifteen men. As for the other schools studied so far, only in the Law School were there significant data in this category, and the benefits involved were given to an equal number of men and women.

## 2. Retention Letter Benefits

In Humanities and Sciences, there were forty-one retention letters, twenty-nine for male faculty and twelve for female faculty. The negotiated benefits included everything from subsidies for copyright permission fees to paid leaves, housing stipends, and teaching reductions. In some cases, these items could not be called individual benefits because they involved promises - for example, of "program support"-presumably including money that only indirectly benefits the faculty member. In several cases the category even includes tuition or job search assistance for a spouse. A few letters referred to "summer support," but were ambiguous as to the intended use of the funds.

Despite this incommensurability, these forms of support can be classified into "high," "moderate," and "minor" items. By that measure, only one woman, but five men, appeared in the high category; in the middle category are two women and three men. That leaves nine women and twenty-one men in the lower category, a number consistent with their representation among the forty-one faculty receiving these letters. One distinct category for retainees is housing assistance that exceeds standard University programs. Five professors received significant housing support: one woman and four men. This ratio is consistent with the overall gender distribution for tenured faculty: about eighty percent male and twenty percent female for the H\&S faculty.

## G. Broader Implications

A striking feature of these data is the disproportionate number of male and female faculty, especially among senior faculty and newly hired senior faculty. In many cases, the disparities in mean values for men and women may be attributable to the disparities of male over female hires, especially at the most senior levels. ${ }^{23}$ These senior hires largely account for the

23 It may well be that certain disparities in compensation will diminish or disappear by virtue of increased hiring of women faculty. A suggestive example is Biological Sciences which has the highest percentage of women faculty among the Natural Sciences or technical fields more generally. If we examine that department separately for two categories, including all current faculty, the gender figures prove notably different from those for the larger unit of Natural Sciences. For laboratory space, among full professors ( 19 men and 5 women), the female mean is about 7 percent higher than that for men; among associate professors ( 3 men and 2 women), the means are virtually the same, while for assistant professors ( 6 men and 3 women), the male mean is somewhat higher than the female mean. While these $n$ 's are small, these figures on the whole show a more favorable allocation for women than do the overall laboratory space figures for Natural Sciences (Graph 17). Another interesting category is individual research accounts (where for the Natural Sciences generally the data were too few to warrant any graphing at all in this
levels of compensation and support that are in the high-outlier category. This report does not seek to identify and evaluate the reasons for that hiring difference - whether those reasons relate to availability pools, demographic issues, societal factors, subtle forms of disparate treatment, or some combination of the above. However, further efforts should be made to address those issues. At this juncture, it is important to note the effect of the hiring difference, and the challenge it presents to efforts to promote gender equity
report). There, the mean for female full professors is over 40 percent higher than that for men, and over 20 percent higher among assistant professors, while the male figure is much higher than the female in the associate professor category.

Thus, in the Natural Sciences department with a reasonably large proportion of women, the allocation of benefits does not generally favor men and in some key categories favors women. These numbers are too small to qualify for statistical significance, but they are at least consistent with the hypothesis that allocations may be less likely to exhibit gender differences, or differences favoring men, once the proportion of women, especially senior women, increases. However, an alternative conclusion that could be drawn from these findings is that the same positive climate that has led to increased representation of women on the faculty has encouraged gender equity in lab space and research funds.

## IV. Quality of Life

## A. Background: the Stanford Faculty Quality of Life Survey

The PACSWF Subcommittee on Quality of Life focused on obtaining a better understanding of the professional climate for women faculty. To that end, the Subcommittee determined that an anonymous survey of all Stanford faculty was the best approach for generating systematic information about women's experiences and how these experiences might differ from those of their male colleagues. After reviewing studies by several other universities, the Subcommittee developed a survey instrument focusing on the following major areas: academic responsibilities and workload, perceptions of climate and opportunities, accommodation of work and family obligations, personal/family responsibilities, spouse/partner opportunities, and overall satisfaction (Appendix IVA). The survey was designed to generate both quantitative and qualitative data. It was administered via the web by the University's Information Technology Systems and Services group in May 2003. To ensure anonymity, no link of survey responses to personal identifying information was retained. Questions requesting demographic information on faculty gender, race/ethnicity, faculty line, rank, and school/division were included in the body of the survey. ${ }^{24}$

The response rate for this survey was $49 \%$ ( 839 completions out of 1,717 faculty). The survey response was sufficiently representative of the faculty population, with low or negligible discrepancies on race ( $0.7 \%$ ), gender ( $4.2 \%$ ), faculty line ( $2.6 \%$ ), rank ( $0.2 \%$ ), and school ( $2.7 \%$ ) in comparing those who responded with those who did not (See Appendix IVB). ${ }^{25}$

## B. Summary of Major Findings

Three broad conclusions stand out from this analysis of gender and the quality of faculty life at Stanford. One involves the similarities between women's and men's experience. For the faculty as a whole, there are no significant gender differences in measures of their overall satisfaction. For both women and men, work climate and sense of inclusion are two of the major factors affecting assessment of their professional setting. Male and female faculty also agree on what they consider the most positive aspects of the Stanford environment-the quality of students and colleagues, and the Bay Area location. Women and men similarly pointed to the same negative aspects of the Stanford experience, primarily the financial stresses associated with living in the Bay Area.

[^10]A second key finding is that female faculty generally had more concerns about their quality of life than their male colleagues. Women generally rated their work climate less favorably than men, were less likely to feel included and valued, and were more likely to report gender discrimination. Women also experienced greater workload pressure, especially related to advising and mentoring, and this experience was particularly pronounced among women of color. So too, female faculty were more likely than their male colleagues to report work/family stress, and were particularly concerned about the availability and affordability of quality childcare.

The third key finding involves the significant differences in general satisfaction and workplace experience among women faculty depending on their rank, ethnicity, and school or division within the University. Female faculty in the Social Sciences and Clinical Sciences expressed a lower level of general satisfaction than male faculty in these divisions. By contrast, women in Natural Sciences and Engineering are as satisfied as their male colleagues, reflecting similar perceptions of their work climate, sense of inclusion, pay equity, and workload reasonableness.

Although the overall picture for women at Stanford is a positive one, this analysis points to areas requiring attention from the University's central administration and from its schools and departments.

## C. Survey Analysis

The short-answer questions that yielded defined responses were analyzed by the Stanford Institute for the Quantitative Study of Society. Initial quantitative analyses were carried out for the University faculty as a whole, largely focusing on academic groupings (i.e., faculty rank, line, and schools/divisions). These findings were reported to the Faculty Senate on December 4, 2003. The results of the quantitative analysis focused on responses by gender are reported here. To aid the evaluation, survey items were analyzed to identify core measures that would be especially relevant to gender analysis. That involved constructing indices by combining a number of items that shared conceptual coherence and elicited similar patterns of responses from respondents (additional details are provided in Appendix IVC). Eleven core measures, listed in the table in Appendix IVC, were used for the gender analysis. Six core measures were indices (General Satisfaction, Work Climate, Sense of Inclusion, Participation in Decision-Making, Advancement Opportunities, and Opportunities for Women). Five core measures were individual questions (Actual Workload, Perceived Reasonableness of Workload, Perceived Pay Equity, Financial Stress, and Personal Stress).

For the qualitative analyses of responses to the sixteen open-ended questions, response categories were developed, and responses were coded and tabulated so that they could be associated with responses to the other survey questions, including respondent demographic information. Coded responses within each open-ended question were analyzed for thematic patterns and were then examined more broadly for patterns across open-ended questions. Specific attention was paid to response patterns by gender. This comparative analytical approach is designed to maximize the insights from the subjective perceptions of faculty, as these are critical to individuals' varying levels of professional satisfaction. The following sections discuss
the findings from the survey, incorporating the results of both the quantitative and qualitative analyses.

## D. Survey Findings.

1. General Satisfaction
a. Faculty Responses to Questions About Satisfaction

The survey asked three questions about faculty members' general satisfaction: (1) Would you now decide to come to Stanford? (2) Have you seriously considered leaving Stanford? (3) How satisfied are you with your position at Stanford? In response to the third question, the majority of faculty ( $68 \%$ ) indicated that they were satisfied or very satisfied with their position, $15 \%$ were neither satisfied nor dissatisfied, and $17 \%$ were dissatisfied or very dissatisfied. About the same number, $63 \%$, said they would choose Stanford again; only 5\% indicated they would not choose Stanford again, and $33 \%$ said they would have some second thoughts. Male faculty's ratings on satisfaction with being at Stanford were slightly higher than those of female faculty, although the difference is not statistically significant. Gender differences in faculty responses to whether they had seriously considered leaving Stanford and whether they would again choose Stanford were significant, however. It is important to note that these differences are not prevalent across the University. Rather, they appear to be largely driven by responses from female faculty in the Clinical Sciences in the School of Medicine, who comprise $31 \%$ of all of the female faculty respondents to the survey. Differences in responses among the various schools and divisions are examined below.

The open-ended responses are helpful in interpreting these satisfaction ratings. Male and female faculty reported similar positive factors contributing to their levels of satisfaction. Professors across the University pointed to the strength of colleagues and students, the excellent research environment, and the draw of the Bay Area (despite its cost of living) as reasons why they felt positively about being at Stanford.

Similarly, no significant gender differences emerged in the "most important" negative aspects of the Stanford environment that faculty chose to highlight. The three reasons mentioned most frequently were: personal financial issues (salary, cost of living) (45\%); University or departmental leadership (12\%); and lack of support for research (12\%). Faculty with young children - women and men alike - expressed concerns about their ability to support their families. Pressure to obtain a summer salary was often mentioned as a source of stress. Of all faculty who responded that they had very seriously, or somewhat seriously, considered leaving Stanford, more than half identified financial concerns as the main reason. As one professor explained, "There is no question in my mind that my family is less well off financially by my choosing an academic job in general and at Stanford in particular." Female faculty who had considered leaving pointed to dual-career concerns and feelings of under-appreciation, in addition to financial worries. A higher proportion of female than male faculty also mentioned the following negative aspects about the quality of their life at Stanford: high overall workload, administrative work, lack of collegiality, and lack of support for female and minority faculty. These issues are explored below.

## b. Factors Affecting Faculty Members' General Satisfaction with Stanford

These three items-whether faculty would now decide to come to Stanford, whether they had seriously considered leaving the University, and how satisfied they were with their positions at Stanford - comprise a core measure of "general satisfaction." ${ }^{26}$ In general, household structure, school, rank, and race were found not to play a significant role in predicting a faculty member's general satisfaction with Stanford. Multivariate analysis revealed that these variables do not account for much variance in faculty perceptions of general satisfaction, pay equity, perceived reasonableness of workload, and financial stress. ${ }^{27}$ In short, there are more similarities than differences between male and female faculty when it comes to factors affecting their general satisfaction with Stanford.

The multivariate analysis indicated that major determinants of the level of general satisfaction among all faculty, regardless of gender, include: work climate, a sense of inclusion in the school, department and university, and financial stress. ${ }^{28}$ However, there are also some differences in factors affecting the level of satisfaction of male and female faculty. For men, the top three factors that influence their sense of satisfaction are (in rank order) work climate, financial stress, and sense of inclusion, while for women the top three (in order) are sense of inclusion, work climate, and location in the Clinical Sciences division of the Medical School, which predicted lower satisfaction.

These findings suggest that in general Stanford has made progress in addressing many of the factors typically associated with differential satisfaction between female and male faculty, most particularly those related to pay equity and access to resources. Opportunities to increase faculty satisfaction involve attention to the factors that affect the attitudes of both women and men, as well as those of women in particular.

## c. Subgroup Differences in General Satisfaction with Stanford

Subgroups of Stanford faculty expressed differences in their general satisfaction, and these differences highlight issues for the University to consider in addressing faculty quality of life.

Rank. Male full professors provided the most positive assessment of satisfaction, as measured by the general satisfaction index; female associate professors provided the least (Figure 1). Among the three ranks, associate professors of both sexes are least satisfied. The gender differences within each rank were not statistically significant.

[^11]Figure 1: General Satisfaction Ratings of Male and Female Faculty Classified by Rank


Note: In this and similar graphs the five response categories (very dissatisfied, dissatisfied, neither satisfied nor dissatisfied, satisfied, and very satisfied) were converted to a 0-1 scale, with 1 reflecting the most satisfaction. Gender differences within each rank did not reach statistical significance.

School. Male and female faculty of the various schools/divisions have different perceptions of their general satisfaction (Figure 2). Women in Engineering, Law and the Natural Sciences are the most satisfied among female faculty, and indeed have higher levels of satisfaction than their male colleagues (though the differences are not statistically significant). Men in Law and Natural Sciences reported the highest level of general satisfaction among male faculty. Women are least satisfied in the Social Sciences; men are least satisfied in Business.

Figure 2: Gender Differences in General Satisfaction within Each School


Note: there was a significant gender difference among faculty in the Social Sciences ( $\mathrm{t}=3.21$, $\mathrm{df}=50, \mathrm{p}<.01$ ) and the Clinical Sciences ( $\mathrm{t}=3.17, \mathrm{df}=177, \mathrm{p}<.01$ ) by t-tests. No significant gender difference existed in other schools.

Open-ended responses from female Social Sciences faculty point to stresses associated with what one termed "crushing administrative and advising loads." Female faculty in this area of the University were most likely to call for additional faculty to advise students and to teach the innovative, interdisciplinary courses so popular with undergraduates.

Both male and female faculty in the Clinical Sciences are among the least satisfied with the quality of their life at Stanford, a fact consistent with pressures reported nationwide concerning the practice of medicine in general and academic medicine in particular. ${ }^{29}$ Gender differences among these faculty are also apparent, which again is consistent with national patterns. Women in the Clinical Sciences referred to instances of perceived gender disparities in resources, recognition, and pay. ${ }^{30}$ Women in this division of the School of Medicine are significantly less likely than their male colleagues to perceive their workplace as supportive-a key indicator of general satisfaction-or to believe that they receive sufficient information for professional advancement. Women faculty in the Clinical Sciences were more likely to report feeling undervalued for their research and contributions to the unit. Responses from a number of female faculty echo one colleague's view that "There is constant pressure to do more: more clinical work so that your Division can be profitable; more research so that you will bring glory and grant funds to the University; more committee work, especially as you are a woman because there aren't enough women to serve."

By Race/Ethnicity. In general, white and Asian male faculty provided the most positive ratings of general satisfaction, while female, non-Asian minority faculty provided least positive ratings (gender differences within each group were not statistically significant) (Figure 3). The same pattern was evident on individual measures such as work climate, personal stress, sense of inclusion, and advancement opportunities.

Figure 3: General Satisfaction Ratings of Male and Female Faculty Classified by Race


Note: Gender differences within each ethnic group did not reach statistical significance.

[^12]Both male and female faculty of color across ranks and departments mentioned the following issues that affect their quality of life and contribute to perceptions that their responsibilities and opportunities differ from those of their white colleagues:

- Additional service demands, in terms of both committees and mentoring, compounded by a perceived need to participate in activities that might benefit their racial or ethnic communities;
- A sense that their scholarship is undervalued, particularly if it deals with race;
- Tokenism reflected in committee appointments, related administrative activities, and high-visibility university events;
- Perceptions of subtle forms of differential treatment based on race, for example, not receiving the active mentoring provided to non-minority peers.

Non-Asian, minority female faculty stand out as being particularly concerned about expectations concerning their role at Stanford, and are the faculty group registering the lowest level of satisfaction with their University position. Some reasons they cited in the open-ended responses echo concerns of other faculty, such as the high cost of living and inadequate salary. But these faculty also highlight systemic issues that often affect women in general, but women of color most severely. Many report disproportionate service burdens. In addition to being in high demand for committees, these faculty point to the significant needs of minority undergraduate and graduate students for mentoring and advising. Although these student needs appear to far outrun women faculty's capacity to meet them, many feel compelled to respond because of a commitment to their racial or ethnic communities. While some of these faculty feel overwhelmed by University demands, they also feel undervalued as scholars, especially if their scholarship deals with race.

Household Structure. Household structure variables yielded different trends on different core measures. Although none of the gender differences within each household group are statistically significant, male faculty provided more positive ratings on general satisfaction than female faculty, except in households with children only (Figure 4). Female faculty living alone provided the least positive ratings on general satisfaction, as did male faculty living with children only. In contrast, male faculty living with a partner only, or with both a partner and children, provided the most positive ratings.

Figure 4: General Satisfaction Ratings of Male and Female Faculty Classified by Household Structure


Note: Gender differences within each household group did not reach statistical significance.

## 2. Faculty Perceptions About Key Aspects of Quality of Life

Work climate, sense of inclusion, and perceptions of pay equity emerged as key elements contributing to the faculty's sense of general satisfaction with Stanford. The sections that follow examine differences by gender and school in these dimensions of faculty life. Attention also centers on two others factors often cited in open-ended responses: workload, and ability to manage personal and financial stress.

Work Climate. Questions about a faculty member's attitudes about various aspects of the climate within the workplace-access to resources, collegiality, respect, and encouragement-together formed a measure of work climate (see Appendix IV.C, Core Measures). This indicator was one of the two most important predictors of faculty's general satisfaction. Analyses by various faculty subgroups show some interesting differences in faculty perceptions of the climate in their workplace.

Male faculty overall rated their work climate more favorably than did their female colleagues, although the differences within each rank were not statistically significant. Among the three ranks, associate professors of both genders were the least satisfied. In the open-ended responses, female faculty expressed more concerns about "lack of collegiality" and explained these feelings in terms of the relatively low number of women faculty in some areas at the University as well as a sense of isolation when their area of scholarship does not seem to be valued.

Differences among the schools and divisions are evident in faculty ratings of work climate. The lowest ratings on work climate factors came from women faculty in the Social Sciences, Education, and the Clinical Sciences (Figure 5). Women are significantly less positive on this workplace measure than are men in Social Sciences and Clinical Sciences. In both divisions, qualitative responses suggest that women's perceptions that their scholarship is not valued constitute an important reason for unhappiness with their work climate. Some women in the Social Sciences believed that interpretative scholarship was dismissed; other women in the

Clinical Sciences thought that "people only respect 'basic science' at the med school and the university." A male colleague in the Clinical Sciences agreed, saying that "clinical contact and expertise is expected but not rewarded. Resources go to basic scientists in a clinical outfit." In contrast, female faculty with the most positive attitudes about their work climate are found in Law, where women give significantly higher ratings to their work climate than do men. This response may be somewhat skewed by the absence of junior faculty among respondents. ${ }^{31}$ However, in several other schools/divisions (Engineering, Business, and the Natural Sciences), women are at least as or somewhat more positive about their work climate than men.

Figure 5: Gender Differences in Perceptions of Positive Work Climate by School


Note: There was a significant gender difference among faculty in Law $(\mathrm{t}=2.33, \mathrm{df}=20$, $\mathrm{p}<.05$ ), the Social Sciences ( $\mathrm{t}=2.30, \mathrm{df}=54, \mathrm{p}<.05$ ), and the Clinical Sciences ( $\mathrm{t}=2.16$, $\mathrm{df}=196, \mathrm{p}<.05$ ). No significant gender difference existed in other schools.

Sense of inclusion. Faculty ratings of their sense of inclusion, the second most predictive measure of general satisfaction, also differed by gender and by school (Figure 6). Male faculty reported a significantly greater sense of inclusion overall than did female colleagues, but school differences were telling. Female Law School faculty expressed the greatest sense of inclusion at Stanford, ratings far higher than males or females in other schools, although again this may reflect the absence of junior faculty among respondents. Other statistically-significant gender differences exist in Social Sciences, where women perceived a much lower level of inclusion than their male counterparts; this was matched by perceptions of women in Education. Both the positive assessments of inclusion given by women in the Law School and the negative opinions expressed by female faculty in Social Sciences mirrored school differences in evaluation of work climate. Some women in Social Sciences pointed to "ingrained attitudes" about women as a reason why they did not feel valued by their department. However, it is hard to disentangle

[^13]these attitudes from expressions of marginalization because of research focus or method. In the other schools/divisions included in Figure 6, where no statistically-significant differences were found, sometimes women reported a somewhat higher sense of inclusion, sometimes men did, and sometimes their ratings were the same.

Figure 6: Gender Differences in Sense of Inclusion


Note: There was a significant gender difference among faculty in Law ( $t=-2.73, d f=16, p<.05$ ) and the Social Sciences ( $t=-2.42, d f=51, p<.05$ ). No significant gender difference existed in other schools.

One additional core measure related to the sense of inclusion - participation in decisionmaking - was not a significant predictor of general satisfaction of faculty. Male and female faculty did not differ in this core measure, an index derived from two questions (whether the academic unit encourages and respects one's participation in the unit's decision-making process, and whether one has opportunities to serve on important committees). Similar proportions of male faculty ( $64 \%$ ) and female faculty ( $62 \%$ ) indicated that they were given the opportunity to serve on important committees.

Pay equity. Perceptions of inequities in compensation stood out for the Clinical Sciences. This was the only Stanford school/division in which significant gender differences emerged in whether faculty felt compensated fairly in relation to their colleagues (Figure 7). Among the other schools and divisions, the differences in responses by gender (not statistically significant) went in both directions.

Figure 7: Gender Differences in Perceptions of Pay Equity within Each School


Note: There was a significant gender difference among faculty in the Clinical Sciences only ( $t=3.77, d f=184, p<.001$ ). No significant gender difference existed in other schools.

Workload. Women and men reported essentially identical workloads in terms of hours spent on teaching, advising, research, administrative and committee work. Men report spending 59.7 hours per week, and women, 60.0 hours per week. However, women - especially full professors and non-Asian faculty of color - were more likely to perceive their workload as high or much too high ( $68 \%$ compared to men's $53 \%$ ).

Open-ended responses to this question suggest that qualitative differences in how female faculty spend their time might help explain this gender difference. Women report disproportional demands for their time as advisors and mentors from "talented but needy and unformed students," which sap the faculty's time, energy, and focus. Non-Asian female faculty of color expressed particular concerns about their ability to meet demands on their time from minority students. As other research suggests, the nature of the advising by female faculty may often be different from that by men; women may be asked to provide more personally demanding, nonroutine counseling and supervision that is unrelated to their own work. Women also were more likely than men to regard their administrative responsibilities as too high, although men rated administrative work as a central negative factor as well.

Women may also perceive their workload as more burdensome than men because it poses more conflict with family obligations. Studies of household labor consistently find that employed women spend substantially more time than employed men on family obligations. Women are also more likely to assume responsibilities that pose the greatest difficulty reconciling with paid work (e.g., emergency childcare). Such differential family obligations may affect perceptions of the reasonableness of professional workloads. Although perceptions among

Stanford faculty are not correlated with family structure, they may reflect other gender-linked characteristics, such as the availability of a partner's assistance with domestic tasks (see Part V).

Faculty assessment of the reasonableness of their overall faculty workload also shows substantial gender differences within and among schools. Female faculty in Education, Social Sciences, and Basic Sciences in the Medical School report significantly different perceptions of workload reasonableness than do their male counterparts (Figure 8).

Figure 8: Gender Differences by School in Perceptions that Workload is High or Much Too High


Note: This graph shows the proportion of faculty who responded that they feel that their overall workload is high or much too high. There was a significant gender difference among faculty in Education ( $\chi^{2}=6.74, p<.01$ ), Social Sciences ( $\chi^{2}=6.35, p<.05$ ), and Medicine: Basic Sciences ( $\chi^{2}=8.16, p<.01$ ), by Chi-Square tests. No significant gender difference existed in other schools.

Financial and personal stress. Financial and personal stresses topped faculty's list of negative aspects of their quality of life at Stanford, and these factors are interrelated. Financial stress (i.e., stress on one's personal/family life due to the high cost of living locally) was the most important negative factor associated with Stanford for both men and women. As one faculty member noted, "financial insecurity is one of the greatest sources of strain for our family. If we were to choose to leave Stanford, this would be a primary reason." Another professor expressed similar concerns: "There is no question that my financial situation is much worse since coming to Stanford, as well as my overall quality of life. Frankly, the only reason that I can think of that we stay is love of the students and respect for what the institution accomplishes. But how long can we continue like this?" Some faculty also mentioned the adverse consequences of obtaining outside work to supplement their faculty salaries: "The high cost of living makes finances an
ongoing burden, and this just exacerbates the problem, especially since I sometimes take outside consulting jobs just to ease this burden, which makes the time crunch even worse." The high cost of housing was a particular concern. Representative comments included: "The mortgage is killing us and has been since we moved here 13 years ago;" and "When housing costs are so extreme that they consume every last penny, one cannot do much else with one's life."

Household structure, not surprisingly, was associated with perceptions of financial worry. Faculty living with a partner only reported the least stress, although it is nonetheless substantial (Figure 9). However faculty living alone, as well as faculty living with children, were most troubled about their ability to support themselves and/or their families in the expensive Bay Area. Women living with children only, without a partner, were the group most stressed by finances. Single faculty often commented that they just could not afford to buy a house and felt limited to living environments less conducive than a home to their scholarly career.

Figure 9: Financial Stress Ratings of Male and Female Faculty Classified by Household Structure


Note: Female faculty living with partner and children or children only reported more financial stress than male faculty living with partner only ( $p<.05$ ). Other gender differences were not significant.

Faculty reports of personal stress (i.e., not enough time to manage faculty and personal/family responsibilities) broken down by household structure reveal similar patterns for both women and men (Figure 10).

Figure 10: Personal Stress Ratings of Male and Female Faculty Classified by Household Structure


Note: Female faculty living with a partner and children or children only reported more personal stress than did male faculty living alone, living with a partner only, or living with a partner and children ( $\mathrm{p}<.05$ ). Other gender differences were not significant.

Female faculty living with a partner and children, or living with children only, reported the most personal stress. Faculty who are single mothers also reported significantly more stress than male faculty in general, although single-parenting poses a major challenge for all faculty, and one that is clearly exacerbated by financial worries.

## 3. Faculty Perceptions of Discrimination and Harassment

Perceptions of Discrimination
The survey explored faculty perceptions of discrimination and differential treatment across a number of important dimensions. One question asked: "In the past three years do you feel that you have been discriminated against or denied something as a faculty member because of the characteristics listed below," and then listed the following: race/ethnicity, gender, sexual orientation, gender identification, physical appearance, disability, religion, age, family responsibilities, research area, research approaches, and politics. It bears emphasis that not all perceptions of discrimination and differential treatment based on the specified characteristics correspond to treatment that most objective observers or a court of law would view as discrimination. However, the Committee regards these perceptions as an important area for further study and attention, given the University's commitments to ensure the fact and appearance of fairness, and to create a supportive climate for all faculty, regardless of their background or field of research.

In general, faculty reported low levels of differentiated treatment based on the specified characteristics. Very few faculty (less than 20) responded that they had felt discriminated against or denied something because of sexual orientation, gender identification, disability, religion, or physical appearance. Slightly higher numbers of faculty indicated that they felt discriminated against or denied something because of race: 17 (3.3\%) of male respondents and

17 (9.1\%) of female respondents to this question. The Faculty Diversity Committee will be carrying out more detailed analysis of the data from the standpoint of race.

Higher proportions of both female and male faculty felt that they had been discriminated against or denied something because of their gender, family responsibilities, research area, or research approaches. The gender differences in perceptions of discrimination and differential treatment based on these characteristics were apparent in both the quantitative and the qualitative data, as described below.

Gender. Women faculty reported differential treatment based on gender more frequently than any other category. Thirty-seven percent of women ( 68 of 184 respondents to this question) felt that they had been discriminated against or denied something because of their gender at some point over the past three years. This perception was shared by women in all three ranks ( $29 \%$ of assistant professors, $49 \%$ of associate professors, and $35 \%$ of full professors) and in most schools/ divisions (except Law and Education). When asked to describe the situation in an openended response, 33 of the female respondents cited a wide range of behavior. As one female faculty member put it, although "tremendous progress has been made along these lines in recent years, there is still an 'old boys club' with ingrained attitudes." A similar comment from a woman in the Clinical Sciences was "Countless times at meetings, our chief would ignore suggestions until the only male in the division made the identical suggestion." Some female faculty also perceived differential teaching loads, lower salaries, lower teaching evaluations from students, and fewer resources than similarly situated male colleagues. Some men similarly reported perceived differential treatment based on gender. A small number of male faculty wrote comments similar to the following: "White males are actively discriminated against at all levels of hiring and promotion."

Research. Both male and female faculty indicated that they felt that they had been discriminated against or denied something based on their research area and/or approaches, although this perception was more prevalent among women than men for both research area ( $31 \%$ of women, $13 \%$ of men) and research approaches ( $21 \%$ of women, $11 \%$ of men). The difference in responses between male and female faculty was most significant for full professors, and for faculty in the Clinical Sciences, Humanities, and the Graduate School of Business. In the responses to the open-ended question asking for a description of the situation, the research genres most frequently cited as having been undervalued are those more often pursued by women than men, including interpretative scholarship, feminist and ethnic studies as primary examples. One professor in the Humanities wrote: "I perceive that many (perhaps the majority) of my colleagues do not respect my research area, because it is connected with issues of race and gender." Male faculty working in these areas reported similar concerns. As one put it: "I do think there are fields and areas that are seen to count, and others whose importance is seen as secondary. This is seen through patterns of investment and allocation (decisions about job lines and administrative organization) and, secondarily, through the choice of people who take on major university responsibilities or are heard on major decisions. It doesn't take long here to learn what sorts of intellectual approaches are 'in the tent' and which ones are more likely to put you outside it."

Family responsibilities. A higher proportion of female than male faculty ( $14 \%$ vs. $5 \%$ ) felt that they had been discriminated against or denied something because of family responsibilities. This
difference was also apparent in the qualitative responses. Some women respondents believed that they had been passed over for important positions because they had young children. One wrote: "An assumption was made that I would not have time/be available to serve on a committee due to my family responsibilities. I would have preferred to have been offered the opportunity, so that I could make the decision myself on whether I wanted to and was able to make the time for it." Both men and women reported that they had experienced "subtle disapproval" of requests for time off for family duties. From their perspective, "taking part in childrearing activities has resulted in being treated as no longer part of the fast track." A junior male professor complained that his department chair did not acknowledge his parenting responsibilities when scheduling meetings or department seminars, on the apparent assumption that the faculty member's wife would fill the childcare role.

## Perceptions of Harassment

Faculty were asked whether they felt they had been verbally harassed in the past three years because of the same set of personal characteristics: race/ethnicity, gender, sexual orientation, gender identification, physical appearance, disability, religion, age, family responsibilities, research area/approaches, politics. Overall no form of verbal harassment had a high incident rate. In general, women were two to three times more likely than men to report verbal harassment based on their race/ethnicity, gender, research area, research approach, and politics. Faculty were also asked whether they felt they had been sexually harassed in the past three years as a faculty member at Stanford. A very small number of faculty responded affirmatively, ten women and four men. More than half indicated that they had reported the incident.

## Further Study

These perceptions about differential treatment and harassment do not lend themselves to simple categorization; they should form the basis of further study. Attention should also focus on the adequacy of University responses. It bears emphasis that the multivariate analysis of the quality of life survey responses indicated that perceptions of discrimination and harassment were not a major factor in determining the overall satisfaction of Stanford's women faculty. That fact should not, however, in any way lessen the University's commitment to preventing and remedying gender bias.

## 4. Faculty Suggestions for Improving their Quality of Life at Stanford

The survey asked faculty to suggest University-sponsored remedies or strategies that would help faculty better manage their work and personal/family responsibilities. Responses from both male and female faculty clustered into four general categories: salaries, housing policy, childcare, and staff support. In addition, some faculty made suggestions about how the University might deal with "pipeline issues."

## Salaries

Faculty discussed salary issues primarily in the context of the high cost of living in the Bay Area and the financial pressures associated with caring for a family under these
circumstances. Faculty called on the University to reconsider compensation policy and to raise salaries to address these local realities.

Housing and rental benefits
The high cost of housing prompted many faculty to suggest specific initiatives to address this issue. Junior faculty were particularly interested in rental subsidies because many cannot afford to purchase a house and felt that the area's high rents made it difficult for them to save for one. Faculty seeking home ownership also called for rethinking assumptions about the amount that current policy assumes "young faculty have...socked away to make a down payment." Faculty homeowners suggested loans for home improvements, as well as a "second program for move-up buyers."

## Childcare

More available and affordable childcare was the number one suggestion from female faculty for how the University could assist them in managing professional and family responsibilities. Women and men alike cited inadequacies in campus childcare centers. One professor described the current campus childcare availability situation as "horrific." The expense of childcare also was a common concern. Home childcare, which gives faculty valued flexibility in their schedules, comes at high cost. One male professor estimated that he spent half his last year's salary on a nanny. In addition to proposals for more full-time childcare, faculty suggested that the University contract with a commercial service to assist families when childcare emergencies occur. Lack of coverage for unexpected illnesses poses obvious difficulties.

## Technical and administrative support

Many faculty expressed concern about the amount and nature of administrative work, as well as the decrease in staff support due to recent budget cuts. Some commented that these responsibilities were "unproductive and a waste of faculty time." To better manage their workload, several faculty requested additional help with administrative tasks, research compliance paperwork, and technical needs. Faculty also felt that many of the University's administrative processes, such as the preparation of appointment and reappointment paperwork, could be streamlined.

## "Pipeline problems"

"Pipeline" issues relating to the recruitment and support of women faculty and students and faculty of color were mentioned by faculty across the University, and were of particular concern to faculty in the Humanities and Social Sciences. Several observed that while Stanford has been successful in diversifying its student body, especially at the undergraduate level, it has been less successful in recruiting and retaining a diverse faculty. In addition, one female faculty noted that "we ARE the pipeline" and urged the University to keep track of the factors that enable minority undergraduates to succeed at Stanford and go on to top graduate programs.

## V. Implications of the Findings

Over the past quarter century, Stanford has made substantial progress in increasing the representation, advancement, and leadership opportunities of women faculty, and in addressing other issues of gender equity. Yet despite such progress, significant concerns remain. None are unique to Stanford, but they all suggest a need for ongoing attention and further initiatives. ${ }^{32}$ Taken together, the PACSWF findings underscore several key issues: the low representation of women, particularly women of color, in many fields and among the most highly rewarded full professors; the frequency of perceived disadvantages due to gender; the lack of inclusiveness and undervaluation of women's contributions in certain disciplines and schools; and the difficulties of reconciling family and professional needs, compounded by financial pressures and inadequate childcare options.

## A. Underrepresentation and Undercompensation: Perceptions and Realities

The underrepresentation of women in positions of greatest status, influence, and rewards is, of course, characteristic of society in general and research universities in particular. A cottage industry of research has documented the complex interplay of factors that underpin this inequality. The general consensus among experts is that much of the current disparity in higher education is not traceable to intentional, legally cognizable discrimination. Rather, it stems largely from often unconscious gender stereotypes, the exclusion of women from informal networks of mentoring and support, the devaluation of certain research and academic service disproportionately performed by women, and traditional allocations of family responsibilities. ${ }^{33}$

Yet while universities are not directly responsible for these forces, they have an important role to play in devising correctives. Without positive steps to ensure gender equity, the underrepresentation of women in certain academic fields and highly rewarded positions can become self-perpetuating. The absence of role models, as well as the isolation and disproportionate administrative and counseling obligations that often accompany underrepresentation, discourage women from seeking such opportunities and undermine their chance for success if they pursue them. The gender inequalities that result both compromise universities' commitment to equal opportunity and impair their ability to make full use of the talent pool available.

To address those inequalities, university committees and experts on whom they draw identify several strategies, which also inform PACSWF's recommendations. The first is the importance of benchmarking in areas where women are underrepresented. Although defining

[^14]what constitutes underrepresentation can itself be a complex challenge, affirmative action experts have developed a range of widely accepted techniques for establishing a relevant applicant pool. Those techniques focus on the percentage of women receiving Ph.D.'s or professional degrees and those receiving appointments at junior and senior levels at peer institutions. Stanford's departments and subfields need to compare their representation of female faculty with those national figures. They also need to track the percentages of women who apply, receive interviews, and obtain offers for particular positions. Systematic information is equally necessary for unsuccessful recruitment and retention efforts; where do desirable job candidates and highly regarded Stanford professors go and why? Second, deans, department heads, and search committee chairs need to act on this information to ensure that qualified women apply, are fairly considered, actively recruited, demonstrably valued, and appropriately compensated. Third, universities need to strengthen the pipeline in fields where women, particularly women of color, are underrepresented. That may entail more outreach to high school and undergraduate students, as well as more support and mentoring of graduate students and junior faculty.

Finally, those in decision-making positions must address concerns about unequal recognition and respect that may help account for women's underrepresentation. A widespread perception among women at Stanford and at other peer institutions is that they do not receive recognition commensurate with their male colleagues. ${ }^{34}$ This perception is particularly pronounced among women of color, and often persists even when no gender disparities are apparent on tangible measures such as average salaries controlled for rank and experience.

One of the most common factors contributing to this view is the frequent underrepresentation of women among the most highly rewarded faculty. As MIT's 2002 report from Committees on the Status of Women Faculty explains, the current compensation system, which responds "most robustly to outside offers" seems inevitably to penalize women; they are less likely than men to have a partner willing to relocate, and more likely to be undervalued in the eyes of those making and responding to outside offers. ${ }^{35}$ The University of California's 2003 Work and Family Survey provides some empirical basis for the concerns about women's disadvantage in the compensation process. In response to the question whether they had been "unable to consider job offers outside [their] current geographical location because of family reasons," over half of women who were married with children said yes, compared with just under a quarter of men. Of faculty who were married without children, twice as many women as men $(28 \%$ vs $14 \%)$ were unable to move. ${ }^{36}$ Such findings underscore the importance, emphasized by many Stanford women faculty, of ensuring that outside offers do not assume disproportionate significance in the compensation process. While the University needs to be responsive to external competition, it cannot afford to encourage strategic bargaining or allow it to trump other merit-related factors.

Departments should also make renewed efforts to recruit senior women, particularly women of color, and to make adequate resources available for assisting dual career couples. Some of the perceived unfairness of the current "star wars" bidding process might diminish if more women were among its beneficiaries.

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## C. Academic Climate and Work/Family Concerns

On the whole, Stanford compares favorably with most other research universities concerning women faculty's overall satisfaction. For example, in a recent large-scale national survey of junior professors at six universities, women were significantly less satisfied than men on two-thirds of the 28 measures of satisfaction studied. ${ }^{37}$ Yet it is also clear that Stanford needs to do more to create workplace climates and policies that women perceive as fully supportive. Reports of inadequate collegial support, differential treatment, and work/family stress demand further study and institutional responses.

Certain groups of women have needs that require particular attention. For example, experiences of marginalization are especially likely for women of color, and for women of all races whose research focuses on gender. Targeted efforts to improve the academic climate might include more formal mentoring initiatives, greater research and programmatic support, and additional opportunities for cross disciplinary interchange. For example, the Provost's Office could provide staff and financial resources for a Faculty Women's Forum along the lines established in other universities like Yale. Such a forum could collaborate with other Stanford organizations and coordinate programs that would bring faculty together around shared interests and concerns, including gender-related issues. See Recommendations 11-13.

The difficulties that faculty cited in reconciling work and family obligations are not unique to women, but women bear a disproportionate cost. A wide array of research makes clear the price that many female professors pay for the convergence of their biological and tenure clocks, and our culture's gender-based allocations of caretaking responsibilities. Findings from many institutions' quality of life surveys indicate that female faculty generally spend more time on childcare, experience more work/family stress, and more often defer or forgo having children than their male colleagues. ${ }^{38}$ Women with children also are less likely than other women or men with children to advance in academic careers. ${ }^{39}$

Given these patterns, a commitment to gender equity also implies a commitment to adequate policies and practices concerning family leaves, reduced time, tenure clock extensions, and childcare. The University needs to consider not only the adequacy of formal entitlements but how many women feel free to take advantage of them. Research from other institutions often finds that relatively few female faculty who are new parents request tenure clock extensions and teaching relief, often because they lack adequate information or fear adverse career

[^16]consequences. ${ }^{40}$ Further research is necessary at Stanford to monitor the adequacy of policies governing temporary leave, reduced workloads, and tenure timetables.

Additional information and initiatives are equally important concerning childcare. Given that Stanford women faculty view this issue as their top reform priority, the University should take concrete steps to improve the accessibility and affordability of childcare and to provide backup assistance for childcare emergencies and school breaks. See Recommendation 14.

In the long run, however, broader changes in the structure of academic careers and university policies bear consideration. Experts on gender equity in higher education, including some of those present at the MIT-sponsored conferences, have underscored the difficulties of combining family and academic responsibilities under current institutional constraints. The assumption that scholarly accomplishments must be established in a faculty member's first six to seven years of work fits poorly with the demands of childrearing, which are often particularly intense during the same period. Faculty of both sexes could benefit from a more flexible model, which gave them the option to work on a reduced schedule for an extended period without paying a permanent professional price.

## D. Accountability

Taken together, the Committee's findings leave no doubt that the University has made substantial progress in addressing gender equity issues, but also that further initiatives and oversight structures are necessary to address the challenges that remain.

Other peer institutions have varying approaches toward monitoring gender equity; they typically involve some combination of a high-level administrative position and faculty committee or task force. PACSWF members believe that such a combination would be most effective for Stanford as well. The administrative position should be held by a faculty member who has sufficient release time, resources, expertise, and leverage to monitor the University's progress along the lines laid out in this report. The Provost should also retain a faculty gender equity panel to work with the administration on implementing the recommendations set forth below. As part of that process, the University should support further research, including collaborative projects with other institutions, to increase understanding of the obstacles facing women academics and the effectiveness of particular policy responses.

The current Committee commends the President and Provost for their commitment to gender equity and urges their continued support.

[^17]
## VI. Recommendations

The findings of the Committee concerning recruitment and retention practices; compensation, resources, and recognition; and faculty quality of life, lead to recommendations in the following areas:

Recruitment Practices<br>Retention strategies<br>Compensation and support<br>Academic climate<br>Family, work, and related issues<br>Accountability, research, and analysis

## Recruitment Practices

## 1. Diversity of Search Committees

i. A diverse search committee helps to ensure a diverse candidate pool. Accordingly, deans, or others whom they designate, should actively monitor the composition of search committees to ensure they include members with different backgrounds, perspectives, and expertise. Efforts should also be made to appoint members with demonstrated commitments to diversity and members of groups that are underrepresented in the school or department. In contexts where the small number of women faculty prevents their involvement in the search, deans should consider including a woman with relevant expertise from outside the school.
ii. Asking one member of the Committee to serve as a diversity officer may sometimes be appropriate. Faculty serving in this position should have responsibility for monitoring the inclusiveness of the candidate pool and the procedures of the search process.
2. Composition of Candidate Pools
i. Committees should begin with a discussion of selection criteria and strategies for identifying candidates from underrepresented groups. The position should be defined as broadly as possible in order to include such candidates. Committees should obtain the best available data about candidate pools to assess whether women are underrepresented at entry or senior levels in the relevant Stanford department or fields. Efforts should be made to increase the sources of information concerning potential candidates from underrepresented groups.
ii. Identifying appropriate women candidates, particularly women of color, often requires more than standard announcement and recruitment procedures. Advertising in specialty journals targeted to women and minorities indicates concern with diversity and may sometimes identify promising applicants. It is also important to consult relevant publication lists and databases, and to make personal contacts with colleagues at other universities to expand the candidate pool.
iii. In instances where qualified women candidates are assumed to be unavailable (perhaps due to family constraints or a partner's employment), that assumption should be verified through direct inquiry.
iv. In departments where women are underrepresented in relation to the relevant applicant pool at either entry or senior levels, the short list may need to be expanded at the time of scheduling interviews to ensure consideration of female candidates. Personal interviews may allow qualified individuals to demonstrate previously overlooked strengths.
v. Resources from the dean's office or the Provost's Office should continue to be available in appropriate cases to subsidize expenses of additional interviews of women candidates, as well as others who would bring diversity to the faculty.
vi. Efforts should be made by departments, schools, and the central administration to provide mentoring to promising undergraduate and graduate women in order to increase the applicant pool in areas where women are underrepresented.

## 3. Monitoring the Diversity of Search Processes

It is extremely difficult to assess the adequacy of a search process after-the-fact. Therefore, it is important to monitor diversity-related efforts throughout the process (such as by review of the short list before it is finalized). Active oversight by deans and the Provost Office can encourage appropriate proactive measures by chairs and departments.

## 4. Proactive Recruitment Strategies

i. It is often helpful to consult with peer institutions to identify promising recruitment strategies as well as candidates. In some cases, interviews with candidates who rejected offers may identify problems in the search process.
ii. Departments should be flexible in adapting to special circumstances. In areas where women are significantly underrepresented, it may be appropriate to evaluate all potential female candidates and to consider altering subject matter priorities in light of the availability of qualified women.
iii. In areas where women are underrepresented, the deans' and Provost's Offices should actively monitor progress and should encourage additional searches and use of targeted funds to increase the representation of women. Deans, chairs, and faculty should be informed periodically of the availability of these funds, such as the Faculty Incentive Funds for recruitment of women, minorities, and other candidates who would bring diversity to the University, and the Gabilan Provost Discretionary Fund for the recruitment and retention of women faculty in the sciences and engineering.
iv. In making an offer to a woman, departments and schools should assess aspects of the offer or the position that may pose special concerns for female candidates. Such concerns may include family leave, childcare, spouse/partner employment, professional isolation, and/or committee work. It is important to clarify formal policies that may not be well understood. Identification of contacts and resources such as web sites are also important. Individuals in charge of recruiting (generally chairs and deans) should be familiar with relevant policies and
resources and able to make appropriate referrals; both recruits and those involved in the recruitments should utilize the Faculty Recruitment Office as a source of information.
v. The Provost's Office should provide adequate assistance and resources to help in recruiting and retaining faculty, particularly concerning employment opportunities for spouses or partners.
vi. The Provost's Office should develop strategies for communicating best practices for search processes, such as workshops and/or a handbook. The recommendations set forth in this Report could form the basis for such a publication. ${ }^{41}$

## Retention Strategies

5. Although policies on retention are difficult to formalize, schools should devise explicit strategies for providing adequate individual support and recognition, and insuring some measure of horizontal equity among faculty. Professors who feel appropriately valued within their schools are less likely to find seeking outside offers necessary or appealing.
i. Schools should take steps to dispel perceptions that outside offers are the only way to gain appropriate rewards.
ii. Faculty should be appropriately rewarded for their productivity and contributions regardless of their mobility or their interest in pursuing outside offers.
iii. Recognition for outstanding performance should include not only monetary compensation but also opportunities for leadership or for initiatives of special interest to the faculty member and the institution.
6. Yearly meetings between the chair or the dean and individual faculty members are advisable so that faculty members can voice concerns and receive appropriate feedback.
7. Faculty should periodically receive information about benefits that may not always be clear in practice or that may be subject to deans' or chairs' discretion, such as policies for new faculty parents, research support, and teaching buy-out opportunities.

## Compensation and Support

8. The Provost and deans should monitor salary and non-salary forms of compensation and support to ensure appropriateness and equity.
i. The Provost's Office should continue current practices of regarding annual salary review.

[^18]ii. The schools should, as part of their standard record keeping, establish databases to record annual information on non-salary compensation and support. The data should be expanded to include any relevant subsets of the faculty or types of non-salary compensation not represented in the Subcommittee review because the information was not available.
iii. The Provost's Office should collect information on non-salary compensation and support, and make centralized tables, graphs, and summaries available to each school on a regular basis. The Provost's Office, along with faculty selected by the Provost, should review the updated data maintained by the schools on an annual or biannual basis. The data should be evaluated according to the criteria used by the Subcommittee, along with any methods of metaanalysis that prove useful.
iv. The areas of potential gender disparity noted in Part III.D should receive further analysis by the schools to determine whether appropriate individualized factors explain the apparent differences. This review should include not only differences that appear statistically significant, but also other disparities that may reflect the presence of high outliers-itself an issue of concern. The Provost, in consultation with a faculty gender equity panel, should determine the best process for this inquiry. One possible approach would be for a designated administrator to meet with the deans and associate deans to review relevant information about individual faculty cases and apparent disparities. This administrataor would then recommend any appropriate adjustments within a school or department to remedy unjustified differences.
v. Deans and schools should establish a special process for analyzing "miscellaneous benefits" for retainees and new hires. Even though formal commensurability may be impossible for these benefits, the deans or a committee should regularly examine recent examples of miscellaneous benefits to ensure that they are fair and equitable.
9. Faculty who have not been proactive negotiators may not have achieved compensation and related support commensurate with their performance and value to the university. Salaries of all faculty within a department or school should be examined annually for appropriateness and equity. Targeted use of deans' or chairs' resources and special incentive funds should be available to correct disparities in compensation and resources, and to assist retention of talented faculty.

## 10. External Offers and "High Outliers"

i. As the Provost and deans continue to consider the "high male outlier" issue for both new hires and retentions, non-base salary data should be examined along with base salary to ensure that Stanford is not unnecessarily or inappropriately reacting to external offers.
ii. Compensation and support should be awarded on the basis of merit. Monitoring by the deans and Provost should aim both to preempt later retention problems and to promote lateral equity, even where personal circumstances deter a faculty member from seeking outside offers. See Recommendation 5.

## Academic Climate, Work-Family Policies, and Related Issues

## 11. Academic Climate

The Provost's Office, the deans, and other appropriate administration officials and faculty committees should undertake further inquiry into the concerns about academic climate raised by the Quality of Life survey results. Interviews, focus groups, open forums, targeted questionnaires, and related techniques may be appropriate for particular departments, issues, or subgroups of female faculty, such as women of color. Information available from these inquiries should serve to structure strategies aimed at improving academic climate, such as workshops, mentoring programs and so forth. Additional staff and technical support should be available for faculty bearing disproportionate administrative burdens.
12. The Director of the Sexual Harassment Policy Office and the Office of General Counsel should work with PACSWF or its subcommittee to consider what initiatives might be appropriate to address experiences of harassment and discrimination that do not result in formal complaints.
13. The Provost's Office should provide administrative and financial support for a Faculty Women's Forum, along the lines developed at other universities. This Forum should offer opportunities for women across the University to discuss shared interests and concerns, including gender-related issues and research.
14. The University should take actions to improve childcare options.
i. Additional information should be collected to identify concerns about access, affordability, quality, schedules, and coverage for emergencies and school breaks. Such information should be made available to faculty, and should serve as the basis for additional resources and initiatives.
ii. Departments should make efforts to assess and accommodate family-related needs when scheduling courses and meetings.
iii. The Provost's Office should establish and publicize a dependent care fund to subsidize temporary childcare expenses for travel related to research, conferences, and related professional development needs.
15. The University should reassess the adequacy of its policies concerning family leave, reduced teaching and clinical load, and tenure clock extension. Additional information should be collected to determine whether modifications or expansions are necessary for faculty with substantial caretaking responsibilities. Implementation of policies should be monitored to ensure that options available in principle are not discouraged in practice.

## Accountability, Research, and Analysis

16. The University should continue to have a faculty panel and senior level administrator position that focuses on gender equity concerns.
17. The University should periodically collect data from its faculty and staff on gender equity, and related issues. A version of the Quality of Life Study should be repeated periodically to assess changes in faculty experiences and perceptions. Additional inquiry is particularly appropriate on the issues noted above, such as senior-level recruitment, compensation and benefits, academic climate, childcare, and family policies. See Recommendations 2, 8, 10, 11, 14, 15
18. The University should encourage and participate in collaborative research with other institutions to gain better understanding of gender-related challenges and responses.
i. Data from the quality of life survey should be compared with findings from other institutions that have similar survey findings. Review of this research should form the basis for further inquiry and initiatives to improve the quality of life for all Stanford faculty.
ii. Efforts should be made to assess the relative effectiveness of particular gender equity strategies (e.g., reduced schedules, extended parental leaves, formal mentoring programs, and diversity and harassment training).

[^0]:    1 Conference on Gender Equity in Academic Science and Engineering (MIT, 2001). Report of the Committee on the Status of Women Faculty, A Study on the Status of Women Faculty In Science at MIT (1999).

[^1]:    2 Ann S. Miner, Academic Employment of Women at Stanford: A Report to President Richard W. Lyman (1971). The percentages refer to members of the Academic Council, which includes tenure-line and non-tenure-line faculty.
    3
    Report of the Provost Committee on the Recruitment and Retention of Women Faculty (1993).

[^2]:    4 "Career Advancement for Women Faculty in a U.S. School of Medicine: Perceived Needs," Academic Medicine, Vol. 79, pp. 319-325 (April 2004).

[^3]:    5 Science and Engineering Doctorate Awards: 2002. National Science Foundation.

[^4]:    6 Initially the Subcommittee also considered issues of promotion. However, during the course of collecting information, it appeared that schools did not have specific policies on promotion beyond those dictated by the University. Accordingly, the Subcommittee focused its attention on recruitment and retention.

[^5]:    7 The updated statistics are compiled by William Weiler, Associate Vice Provost for Decision Support Systems, who continues to be assisted by Professors John Pencavel and Nancy Tuma, who helped conduct the original analysis.
    $8 \quad$ As explained in Appendix IIIA, this method involves sorting faculty into quintiles according to the size of their residuals, i.e., essentially the ratio of a faculty member's actual salary to the salary predicted for him or her by the various factors used in the multiple regression analysis. In the original analysis, these residuals were sorted into quintiles according to the size of the residuals, and the Provost's Office and deans undertook especially searching reexamination of the salaries of those faculty whose residuals place them in the bottom quintile, i.e., those with the lowest ratios of actual to predicted salary.
    9 This is a very heterogeneous category, covering expenditures such as equipment, research assistant stipends and so forth. It excludes cases in the School of Medicine where a newly hired chair is guaranteed funds for hiring other faculty.
    10 For the School of Medicine, the relevant term is discretionary funds. These funds include research-related subsidies supplied by departments, as well as other funds called recruitment or retention funds supplied by the School. Some of these funds have authorized non-research uses, but those uses are too heterogeneous to be broken out usefully, so they are combined with those designated for research.
    11 In most academic units, we broke out faculty who were full Professors (at the time of hire, of offer salaries, start-up packages, or moving and rental allowances) or at the time of data collection (i.e., for laboratory space and

[^6]:    research funds). References to senior faculty means full professors and junior refers to associates or assistants, regardless of tenure.
    12 Two schools, Law and Earth Sciences, are not included in these overall findings because the $n$ 's were generally too small to produce significant results. However, the data available from these schools indicate no patterns of gender disparity.
    13 These numbers should be viewed in the context of the overall gender distribution for senior (tenured) faculty: about $83 \%$ male and $17 \%$ female. As these figures suggest, the proportion of women on the faculty is an independent area of concern that is being addressed by wider University efforts as well.

[^7]:    17
    The absence of any clear correlation between laboratory space and seniority many support this supposition.
    In some instances fewer years' data were available.

[^8]:    19 Other schools allocate non-salary forms of compensation, such as research funds, for use in the summer; these are not part of the category formally designated as summer salary. The Law School has a special allocation of summer research funds, but, for reasons of small numbers, Law School data generally do not figure in the graphs in this report.
    20 The $p$-values allow us to infer statistical significance at the $.01, .05, .10, .25$, and .50 levels. For most data sets the Mann-Whitney test was used. Where the sample size was large enough the t-test was used.

[^9]:    21
    But see the data just on Biological Sciences, in note 23 below. Since those figures suggest that in laboratory space, women fare somewhat better than men in that one department, the figures for Natural Sciences would look slightly unfavorable for women if we looked solely at the departments other than Biological Sciences.

[^10]:    24 Faculty were asked to identify their school/division from the following options: Education, Engineering, Graduate School of Business, Humanities in H\&S, Law, Medicine: Basic Sciences, Medicine: Clinical Sciences, Natural Sciences (includes Earth Sciences, Natural Sciences in H\&S, and SLAC), Social Sciences in H\&S.
    25 While response rates did not vary widely across the schools/divisions, because of the large differences in numbers of faculty and in the representation of women, the numbers of male and faculty in the samples varied significantly by school/division. The numbers of male/female respondents in the sample from each school/division were: Education (14/12), Engineering 107/16), Graduate School of Business (30/7), Humanities in H\&S (103/44), Law (17/9), Medicine: Basic Sciences (46/18), Medicine: Clinical Sciences (153/68), Natural Sciences (includes Earth Sciences, Natural Sciences in H\&S, and SLAC) (94/20) and Social Sciences in H\&S (45/20). A few faculty did not indicate their school or division.

[^11]:    26 See "Core Measures," Appendix IVA.
    27 The Appendix IVD table displays the regression coefficients of main predictors of general satisfaction.

[^12]:    29 "Career Satisfaction of U.S. Women Physicians," Archives of Internal Medicine, Vol. 159, pp.1417-1426 (1999); "Increasing Women's Leadership in Academic Medicine: Report of the AAMC Project Implementation Committee," Academic Medicine, Vol. 77, pp. 1062-1066 (2002).
    30 Analysis of various aspects of compensation, resources, and recognition is presented in section III of this report for all schools and divisions.

[^13]:    31 It bears note that the Law School sample included only nine women, and that all Law respondents to the survey were full professors.

[^14]:    ${ }^{32}$ Recent reports by other institutions reflect similar concerns. See Report of Committees on the Status of Women at Brown University (2001), Duke University: Women's Initiative - Report of the Steering Committee for the Women's Initiative at Duke University (2003); Reports of the Committees on the Status of Women Faculty at MIT Overview (March 2002); University of Michigan, Faculty Work-Life Study Report (November 1999); and Gender Salary Study: Summary of Initial Findings (2001); University of Texas, Faculty Women's Organization - Report on the Status of Women Faculty (2002); University of Pennsylvania, Gender Equity Report (2001).
    ${ }_{33}$ For overviews, see Yu Xie and Kimberlee A. Shauman, Women in Science: Career Processes and Outcomes (Harvard University Press, 2003); Adalberto Aquirre, Jr., Women and Minority Faculty in the Academic Workplace (Jossey-Bass, 2000); Lotte Bailyn, "Academic Careers and Gender Equity: Lessons Learned," Gender, Work, and Organizations Vol. 10, p. 37 (2003); American Association of University Professors, Statement of Principles on Academic Work and Family Responsibilities (2001).

[^15]:    ${ }^{34}$ See the studies concerning MIT, Texas, Pennsylvania, and Michigan, cited in note 32.
    ${ }^{35}$ MIT Reports of the Committees on the Status of Women Faculty, supra note 32 (see p.1).
    ${ }^{36}$ Report of the University of California Work and Family Survey, Developing New Initiatives for a Family Friendly Package (2003). "Married" included "partnered" in this survey.

[^16]:    37 The measures included issues such as support and time available for research, interactions with senior colleagues and department chairs, and so forth. Cathy A. Trower and Jared L. Bleak, The Study of New Scholars, Harvard University Graduate School of Education (2004). See also the satisfaction rates in the recent reports on women faculty at MIT, Texas, and Pennsylvania, cited in note 32.
    38 See the studies of Berkeley, Michigan, and Pennsylvania, cited in notes 32 and 36. See also Mary Ann Mason, Marriage and Baby Blues, Redefining Gender Equity in the Academy (2003); "Do Babies Matter?" Chronicle of Higher Education, Dec. 5, 2003
    39 See Mason, Marriage and Baby Blues, and Do Babies Matter, supra note 36; Xi and Shauman, Women in Science, supra note 33, pp. 209-212.

[^17]:    40 See Report of the University of California Work and Family Survey, supra note 36; American Association of University Professors, Statement of Principles on Family Responsibilities and Academic Work (2001). Elizabeth J. Allan, Constructing Women's Status: Policy Discourses of University Women's Commission Reports, Harvard Educational Review Vol. 73, p. 44 (2003).

[^18]:    41 Other universities that have developed such handbooks and made them available online include Michigan, MIT, Minnesota, Pennsylvania State and Washington. For links, see Stanford website:
    http://universitywomen.stanford.edu.

