Quality of Life Surveys
Council on Family and Work

Institute-wide surveys of MIT faculty and staff were conducted by the MIT Council on Family and Work in October 2001, in order to investigate the factors that contribute to quality of life for faculty and staff at MIT. Separate surveys were administered for faculty and staff, and separate reports prepared.

Quality of life was defined as the ability to integrate a fulfilling and productive work life with a fulfilling personal and/or family life.

The results, and the implications for the future of MIT, were analyzed by the Council and reported to the MIT community in December 2002.

Findings of the FACULTY SURVEY Conducted in October 2001

Report of the Council on Family and Work
December 2002

Massachusetts
Institute of
Technology

Contents

The Quality of Life Survey was announced to the MIT community by MIT President Charles M. Vest in October 2001. In his email, Dr. Vest said, "Two years ago, I reestablished the MIT Council on Family and Work and requested advice on how to make MIT a better place to work and study. Our goal is to provide an environment that promotes personal and professional growth for everyone. The devastating events of Sept. 11 have made us even more determined to strengthen our sense of community, and I am committed to this.… This survey will give us an understanding of the factors affecting the well-being of faculty and staff and will help the Council to formulate its recommendations.… Your responses will help make MIT a better place to work."

The survey's purpose was to investigate the factors that contribute to quality of life for faculty and staff at MIT, and the implications for the future of MIT. Quality of life is defined as the ability to integrate a fulfilling and productive work life with a fulfilling personal and/or family life. During the spring and summer of 2001, the survey instrument was developed, with different versions for faculty, campus staff, and Lincoln Laboratory staff. All faculty and staff working half-time or more were invited to participate in the survey, which was conducted during October and November 2001. Completed surveys were received from 33% of the faculty, 30% of the campus staff, and 40% of the Lincoln Laboratory staff. The data were analyzed by an external contractor, WFD Consulting, Inc., and the results were reported to CFW in a summarized form so that the confidentiality of all respondents was preserved. Survey methods, response rates, and analysis are discussed in *Appendix A: Response Rates and Methodology*.

This report contains a summary and analysis of the results of the Faculty Quality of Life Survey, as well as the recommendations formulated by the Council on Family and Work after considering the findings.

Faculty Survey Results

Only one-third of the faculty are satisfied with the pace and pressure at MIT, and nearly two-thirds believe that the pace and pressure at MIT are greater than at other

leading research institutions. Hours of work have increased over the last decade: in 1989, less than half of the faculty reported working sixty hours or more in an average week, while today, about two-thirds of faculty report they do. Moreover, there is both a gender gap and a generation gap in faculty members' perceptions of pace and pressure: women and younger male faculty disproportionately report suffering the effects of an intense work environment.

Recommendations for Faculty

The Council on Family and Work recommends that a Provost-appointed Committee explore new approaches to solving these problems—some of which are deeply rooted in MIT culture—and carefully formulate a set of recommendations to senior administrators. As appropriate, the Committee may solicit further feedback from the faculty and coordinate its efforts with the Council on Faculty Diversity's subcommittee on Quality of Life. The Council also recommends a new communication initiative to inform faculty and departmental leaders about the revised family support policies which are not as widely known or appreciated by MIT faculty members as they should be. This initiative should be coordinated with the activities of the new Family Policies Oversight Committee, chaired by Prof. Sam Allen.

Both the faculty and the staff surveys revealed that dependent care is a salient issue at MIT. The concerns of both groups, which were quite similar, are summarized in *Appendix B: Dependent Care for Faculty and Staff*, along with pertinent recommendations. Finally, *Appendix C: Sample of Faculty Suggestions*, lists constructive suggestions from individual faculty members that warrant further scrutiny.

Relevance of Staff Survey

It is important to note that the Council also gave significant attention to the staff survey, and its findings are directly relevant to the faculty. An effective and high-performing staff is essential to faculty productivity and well-being. Some particularly important issues that the staff reported in the survey are high levels of stress and burnout among campus administrative staff members, especially those who work directly with faculty, and the importance of flexible work arrangements to a significant number of staff members. The complete report on the staff survey and findings is available separately.

FACULTY FINDINGS and ANALYSIS

Following are the key findings from the Faculty Quality of Life Survey, organized into four major categories: *Pace and Pressure, Inclusion and Diversity, Family Status,* and *The MIT Environment.* The faculty's perceived needs are summarized in *What are Faculty Asking For?*; a section containing *Proposals for Faculty* completes the report.

Pace and Pressure

Fewer than half (46%) of all women faculty and non-tenured men are satisfied[1] **with their overall quality of life,** but two-thirds of tenured men are satisfied (*Table 1*). Quality of life is defined as the ability to integrate a fulfilling and productive work life with a fulfilling personal and/or family life.

TABLE 1: Satisfaction with Ability to Integrate Work Life with Personal and/or Family Life

	Tenured Men	Tenured Women	Non-Tenured Men	Non-Tenured Women
Very Dissatisfied Dissatisfied	18%	41%	35%	31%
Neither Satisfied nor Dissatisfied	15%	12%	18%	23%
Satisfied Very Satisfied	67%	45%	46%	46%

Faculty are working longer hours than a decade ago. Comparing this study to the findings in the 1989 Assessment,[4] hours of work have increased dramatically. Nearly two-thirds of faculty now report working sixty or more hours in an average week, compared to 48% a decade ago.

There are differences of opinion about whether the pace fuels excellence, but many find the pace oppressive. **Some 36% of faculty are dissatisfied with the**

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1. In the text, the word "satisfied" represents the aggregation of respondents who described themselves as "satisfied" or "very satisfied"; similarly for "dissatisfied." This shorthand is used throughout the text; in the tables that support the text, the groupings are clearly indicated.

pace and pressure at the Institute, rising to 41% of faculty with children under the age of 23.

Pressure and time demands differ among the schools. School of Science faculty are more satisfied with the Institute's pace and pressure than those in other schools (49% vs. 38% overall); see *Table 2* for perceptions of pace and pressure by school. They are also less likely to report health effects of work/life demands (23% vs. 37% overall). Nearly three-quarters of Engineering faculty and two-thirds of Sloan faculty report that their job requires too much time, compared to 46% for Science and HASS (Humanities, Arts, and Social Sciences).

TABLE 2: Pace and Pressure by School[a]

	Engineering	HASS	Sloan	Science	ALL
Very Satisfied	8%	14%	3%	6%	7%
Satisfied	27%	28%	21%	43%	31%
Neither Satisfied nor Dissatisfied	21%	22%	33%	33%	25%
Dissatisfied	35%	28%	25%	14%	27%
Very Dissatisfied	9%	8%	17%	4%	9%

a. *There were too few respondents from the School of Architecture and Planning to permit analysis.*

Nearly two-thirds (62%) of faculty believe that the pace/pressure at MIT is greater than at other leading research institutions.

There is both a gender gap and a generation gap in faculty members' perceptions of pace and pressure. Women and younger male faculty disproportionately report suffering the effects of an intense work environment. For example:

- Nearly two-thirds of women (63%) report that the influence of the pace/pressure at MIT on their sense of well-being is negative.

- Non-tenured men (57%) and under-45 tenured men (56%) are more likely than 45-and-over tenured male faculty (38%) to report a negative influence of pace/pressure on their sense of well-being.

- 91% of tenured women feel that, no matter how hard they work, they cannot accomplish everything they need to, compared to 77% of tenured men.

- 54% of tenured women report too much of a service/committee load, compared to 40% of tenured men.

WFD Consulting has developed a proprietary Stress and Burnout Index as a metric for the difficulty of meeting one's professional and personal obligations. Using this metric, WFD (our external contractor) concludes that "older tenured men exhibit lower stress and burnout than other faculty." The numbers in *Table 3* provide a relative indication of the stress and burnout of various faculty groups.

TABLE 3: Relative Stress and Burnout Levels

	Men	Women	Total
Tenured	4.5	6.0	4.7
Non-tenured	5.6	6.2	5.7
Total	4.7	6.1	

Pace, pressure, and stress negatively affect faculty in the following areas:

- Personal/family life (62%)

- Relationship with colleagues (48%)

- Health (37%)

- Teaching and advising (37% and 44% respectively)

- Quality of work (31% say they are unable to do their best at work due to stress of personal/family responsibilities)

- Research (27%)

Teaching and advising loads vary by school, but the advising load is considered "about right" by three-quarters of faculty. Ninety percent of Science faculty consider the advising load "about right" while 25% of Engineering faculty say it is "too much." Five out of six (84%) faculty report that their teaching load is "about right."

Of non-tenured faculty, more than half (53%) report that stress is affecting their health.

Non-tenured faculty are more likely than tenured faculty (74% vs. 58%) to report that MIT's pace and pressure have a negative influence on their personal/family life.

Some 42% of faculty report too few resources for research (space, materials, staff). Of Engineering faculty, 54% cite too few resources for research.

Some 62% of faculty feel physically or emotionally drained at the end of the day. In addition, 78% of faculty report that, no matter how hard they work, they can't get everything done. By comparison, the benchmark figures for these parameters in WFD's database of corporate executives are 55% who feel drained at the end of the day, and 48% who say they can't get everything done.

Inclusion and Diversity

As noted in *Appendix A: Response Rates and Methodology*, there were too few minority respondents to permit analysis of racial and ethnic subpopulations. The diversity analyses in this section are focused on gender diversity only.

Overall, faculty report feeling comfortable, valued, and included as members of their department, although non-tenured (56%) are less likely than tenured (71%) faculty to feel included in their department. In contrast, faculty are less likely to feel included as members of their school or of the Institute. HASS faculty are more likely than those in other schools to say they feel isolated/marginal (48% vs. 29% overall) with respect to the Institute. Sloan faculty are less likely to feel that they are given opportunities to serve on important departmental committees (42% vs. 64% overall).

Relative to their male peers, tenured women faculty feel marginalized. For example, among tenured women:

- 44% feel valued for their teaching contributions (compared to 66% of tenured men)
- 35% strongly agree that they are respected by students (compared to 44% of tenured men)

- 24% have very seriously considered leaving MIT in the last twelve months (compared to 15% of tenured men)

- More than half (51%) of tenured women indicate they serve on important departmental committees, yet a comparable proportion (47%) still feel they do not influence key department decisions (perhaps indicating that the committees' decision-making processes are not transparent and therefore marginalize their women members)

Table 4 provides a summary of key differences between faculty men and women by tenure status.

TABLE 4: Faculty Responses to Key Questions[a]

		Tenured Women	Tenured Men	Non-Tenured Women[b]	Non-Tenured Men
Quality of Life	• Dissatisfied with overall quality of life	41%	18%	31%	35%
	• Cannot accomplish everything they need to, no matter how hard they work	91%	77%	77%	81%
	• Pace and pressure negatively affect well-being	64%	42%	62%	57%
Inclusion	• Feel uncomfortable, marginal or isolated in their department	26%	16%	8%	26%
	• Feel uncomfortable, marginal or isolated in the Institute	37%	22%	42%	45%
	• Feel valued for their teaching contributions	44%	66%	69%	49%
	• Strongly agree that they are respected by students	35%	44%	15%	42%
	• Hold an MIT degree	17%	47%	31%	31%
Ability to Exert Influence	• Strongly agree that they have opportunity to serve on important departmental committees…	51%	27%	8%	10%
	• …yet strongly agree they would value more opportunity to influence key department decisions	47%	27%	23%	13%
	• Have too much committee responsibility	54%	40%	9%	29%
Retention	• Have very seriously considered leaving MIT in the last twelve months	24%	15%	15%	27%
	• Some of the above are nearing retirement (age 55 or older)	33%	50%	n.a.	n.a.

a. Percent of population who, unless noted otherwise, agree or strongly agree with the statement
b. Note that the percentages in this column are derived from 13 respondents; see Appendix A: Response Rates and Methodology, Table 10

Family Status

More than one-third (38%) of tenured male faculty have a spouse/partner who is not employed, compared to 4% of tenured women. Some 64% of tenured men have a spouse/partner who is at home at least part-time, compared to 10% of tenured women. Among tenured faculty, 65% of women are in dual-career families, compared with 29% of men (see *Table 5*). Non-tenured women are either married/partnered with someone who works full-time or they are single; none have partners who are at home some or all of the time.

TABLE 5: Family Status of Faculty

Family Status	Tenured Women	Tenured Men	Non-Tenured Women[a]	Non-Tenured Men
• Single	25%	7%	38%	17%
• Dual-career household (spouse/partner works full-time)	65%	29%	62%	40%
• Spouse/partner does not work at all or works part-time	10%	64%	0%	45%

a. *Note that the percentages in this column are derived from 13 respondents; see Appendix A: Response Rates and Methodology, Table 10*

Four out of five non-tenured faculty have a spouse or partner; among them, sixteen percent live in a different community than their spouse/partner for work reasons.

Spouses/partners of non-tenured faculty are more likely to work 60 hours or more per week than the spouses/partners of tenured faculty (26% vs. 16%). Women are more likely than men to have a spouse/partner who works more than 60 hours per week (37% vs. 16%).

The work commitments of spouses/partners have not changed greatly since 1989. At that time, 39% of women and 10% of men who were married/partnered reported that their spouse/partner worked 60 hours or more per week.

Tenured men are least likely to have a spouse/partner working 60 or more hours a week (12%), while tenured women are most likely (43%). Women are much more likely than men to report that their spouse/partner's job commitment is the same or greater than their own (57% vs. 26%).

Among faculty who are married or partnered, women are more likely than men to report spending the same amount of time or more time than their spouse/partner spends on the care of their homes, the care of their children, and the care of their other dependents (*Table 6*). The table includes a point of comparison from the 1989 Assessment.

TABLE 6: Time Commitments of Married/Partnered Men and Women

Year of report	Commitment	Women	Men
2001	Spouse/partner spends the same or greater amount of time on care of *house*.	64%	95%
2001	Partner/spouse's time commitment to *child care* is the same or greater.	46%	97%
2001	Partner/spouse's time commitment to care of *other dependents* is the same or greater.	62%	96%
1989	Spouse/partner spends the same or greater amount of time on *housework and child care*.	26%	97%

Women more than men report that their career considerations have been of "major importance" in planning if and when to have children (71% vs. 40%). The gap has widened since the 1989 Assessment, when 65% of women and 45% of men indicated that career considerations in family plans had been of "major importance."

Among men, a greater proportion of non-tenured than tenured faculty report that career considerations in family plans have been of "major importance" (59% vs. 33%).

The MIT Environment

Nearly half (48%) of non-tenured faculty and a third (36%) of tenured faculty do not view MIT as supportive of their personal/family responsibilities. WFD notes that "Faculty typically report that MIT's pace and pressure have a negative effect on their well-being, especially with regard to their personal and family life. Additionally, pace and pressure limit their opportunities to interact with colleagues—one of the main reasons they come to MIT."

One in four tenured women and one in seven tenured men have very seriously considered leaving MIT in the past year. (Only five percent of those who have very seriously considered leaving are 65 or older.) Career opportunities are most frequently cited as a reason to consider leaving. WFD observes that "This would be considered a 'pull' factor, a reason that faculty are attracted away from the Institute. There are aspects of the MIT culture, however, that would be considered 'push' factors—factors that make faculty vulnerable to an offer to leave." Among those faculty who are seriously considering leaving, a number cite "push" factors: over half are dissatisfied with their quality of life and at least a third feel isolated in their departments. While one in four non-tenured faculty members have very seriously considered voluntarily leaving, it is difficult to disentangle the push and pull factors when the probability of obtaining tenure is a factor at play.

What are Faculty Asking For?

To manage work and personal/family life, faculty want:

- **Professional support.** "Of great value" to the largest proportion of faculty are:
    - ♦ More staff support to help faculty get their work done
    - ♦ Resources and technology for home offices
    - ♦ More assistance from department heads to ensure success of their work
    - ♦ Strong mentoring

    See *Table 7* for complete list.

TABLE 7: Professional Assistance: percent of all faculty who rate the item "of great value."

49%	Increased staff support
47%	Resources and technology for my home office
32%	Greater assistance from department head to ensure success of work
30%	Strong mentoring
28%	More opportunities for professional interaction
26%	More opportunity to influence key dept. decisions
24%	Dedicated space for faculty to socialize
22%	Greater support from department head when personal needs arise
22%	Enhanced information about procedures & resources
20%	Resources and technology for staff's home office
19%	Comprehensive orientation for new faculty
17%	More opportunities for social interaction

- **Personal support.** The initiatives "of great value" to all faculty are:

  ♦ Housing assistance (34%) (for non-tenured faculty 66%)

  ♦ Temporary/backup child care services (25%)

  ♦ Paid leave/teaching relief for family care (24%)

  ♦ More support from department heads when personal needs arise (22%)

  ♦ On-site or near-site child care (21%) (for non-tenured faculty 42%)

  See *Table 8* for complete list, by tenure status and gender.

TABLE 8: Personal Assistance: percent of faculty who rate the item "of great value."

Personal Assistance	Tenured		Non-Tenured	
	Men	**Women**	**Men**	**Women**
Assistance with housing	21%	21%	66%	69%
Temporary/backup child care services	15%	27%	38%	62%
Paid leave/teaching relief for family care[a]	14%	33%	41%	54%
On-site or near-site child care centers	13%	12%	39%	54%
Assistance with employment for spouse/partner	8%	4%	44%	17%
Enhanced information on elder/adult dependent care	12%	24%	12%	23%
Part-time post-tenure appointments[a]	10%	21%	9%	31%
Extended tenure clock for new mothers[a]	5%	9%	21%	38%
Part-time pre-tenure appointments	2%	7%	7%	25%

a. *MIT's policies were revised after the survey was conducted and now provide this; see
https://web.mit.edu/dept/libdata/libdepts/d/archives/facmin/011219/011219.html#family.*

Proposals for Faculty

In MIT's pressured environment there appears to be too much to do, too little time, and too few resources. The Council finds many measures in this study indicating unacceptably high levels of stress and burnout, and dissatisfaction with quality of life across the entire faculty. Compounding the difficulties, a number of faculty subpopulations experience extreme pressure.

One of the most striking findings in this survey is the gap that seems to exist between older male faculty (45+) and all other faculty members. Our contractor reports that "this is not entirely unexpected as it is seen at similar organizations that were 'designed' for men who have wives who do not work outside the home or who work part-time." At MIT, women and younger male faculty are less likely than older tenured men to have spouses or partners who do *not* work outside the home. As a result, women and younger male faculty disproportionately suffer the effects of the intense work environment.

Life at MIT may indeed be easier for some older tenured men than for other faculty subpopulations, but the Council concludes that, *for faculty across the board,* the MIT environment presents hardships and obstacles to a productive work life and satisfying personal life.

In response to these troubling findings, the Council's members offered many comments and suggestions, including concepts requiring further research. The Council believes that issues as broad and deep as the ones posed by this survey merit—require—thoughtful consideration, not quick and cursory responses. The imperative confronting MIT now is to proceed both cautiously and courageously: with great respect for the culture and values that have served MIT well for so many years, and with keen awareness that a great institution cannot be a static one.

The Council on Family and Work recommends that a Provost-appointed Committee consider all suggestions carefully, and devote substantial energy to developing new approaches to these problems, some of which are deeply embedded in MIT culture. This work would be coordinated, as appropriate, with CFW's Task Group on Faculty Issues, the Council on Faculty Diversity's

Working Group on Quality of Life, and the Committee on Faculty-Administration. The Committee will explore the complex web of issues that underlie quality of life dilemmas for MIT faculty; try to understand how our peer institutions address quality of life concerns; seek comparative data; make recommendations to senior administration; and, if requested, assist MIT administrators in implementing those recommendations whose immediate benefits would be clear and unambiguous.

These very complex issues require a Committee's careful deliberation. However, there is also a simple and inarguably beneficial step that could be taken immediately.

Clearly communicate to faculty the revised Institute family support policies. MIT's policies—to stop the tenure clock for new mothers, to provide paid leave/teaching relief for family care, and to allow part-time tenure appointments for family care—need to be disseminated effectively to faculty who have or anticipate having family care responsibilities, and to prospective new faculty. In addition, deans and department heads need to be educated about the policies' implementation. Senior leadership must ensure that faculty are able to use these options without career repercussions. The Council recommends that a communication initiative for these policies and benefits be implemented as soon as practicable; this initiative should be coordinated with the activities of the recently-established Family Policies Oversight Committee, chaired by Prof. Sam Allen.

Issues and Considerations for the Provost-appointed Committee

There are many theories and some data on what is driving stress and pressure at MIT on a daily basis, but the picture is incomplete. It is difficult to ascertain how much of the perception of faculty stress is driven by increases in actual work (e.g., grant writing), reductions in administrative support, psychological factors related to more competition, family and personal responsibilities, a changing mix of students and their demands, and other factors. Focused qualitative investigations may be needed to identify the factors fueling pace and pressure at the Institute as well as the costs associated with it. The Committee should monitor any natural experiments that occur when departments or schools initiate change in their own spheres, and if possible, foster limited experiments with new policies before proposing their

adoption Institute-wide. The issues are complex and varied, and the Council urges that the Provost-appointed Committee gather and examine additional evidence relating, but not limited, to all of the issues and proposed solutions listed below.

- **Root causes of pace and pressure.** The intense work environment results in extremely long hours for faculty coupled with high stress and burnout. Other possible costs are attrition, health care, and difficulty with recruitment. While certain interventions might help faculty *manage* the pace and pressure, more systemic solutions must be found that will reduce or modulate the stressors themselves. For example, in order to avoid "mission creep," new initiatives (and older ones as well) might be reviewed to assess their impact on faculty quality of life. MIT must engage its senior leadership in creating the vision and action plan that will address pace and pressure at the Institute.

- **Promotion process.** Balance must be sought between its positive factors, which promote the excellence of the faculty, and its negative factors, with their debilitating consequences.

- **Balancing family and personal responsibilities with work.** The burdens of managing family and work demands fall disproportionately on women and younger male faculty. Compounding this difficulty is the "two-body problem" in which a spouse or partner lives in a different community for work reasons; four out of five non-tenured faculty have a spouse or partner, and among them, 16% have dual-career commuting marriages/relationships.

- **Culture, incentives and accountability.** MIT's cultural norms should be analyzed, and change recommended for those that may not be necessary or effective. Some examples of such norms are the attitude that more—whether applied to papers or hours—is always better and that work must be a 24/7 proposition. (Note that there is healthy contention about the extent to which these cultural norms may be the wellspring of excellence at MIT; as noted in the closing paragraph on page 21, careful attention must be given to insure that efforts to make MIT a more congenial workplace do not inadvertently have a detrimental affect on the Institute's high standards and proud traditions.) Develop incentives for administrative officers to improve faculty well-being and ensure accountability when goals are not met.

- **Offering assistance with housing.** This is a high priority for faculty, especially for non-tenured faculty. Many faculty commute long distances to find affordable housing, detracting from a sense of community, and adding the time and stress of a lengthy commute to an already demanding schedule.

- **Department heads.** Department heads and their equivalents[2] are a crucial nexus in achieving cultural change, and they are already overburdened and

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2.   The Sloan School is organized by areas of concentration, rather than departments.

undersupported. They need better support themselves, as well as clearer expectations with respect to their own roles in assisting and supporting faculty. Faculty—particularly women and non-tenured men—are clearly seeking more mentoring and support from their department heads, both in ensuring the success of their work and obtaining support when personal issues arise. Senior leadership is essential in ensuring that department heads recognize their pivotal role in supporting the faculty in their departments. The New Department Head Orientation, piloted by Human Resources (HR) this year, is a step in this direction and might be expanded to provide more guidance in this area.

- **Life-cycle of the academic career.** An academic career spans 30-35 years. Perhaps different phases of one's academic career could be dedicated to different academic responsibilities that reflect changing family and career circumstances and demands. Perhaps one's early career, when family and promotion pressures peak simultaneously, and flexibility is demanded, should be devoted more to research. In later years, as family pressures taper off, more teaching could be accommodated. If MIT wishes to promote and sustain a diverse academic community, some choices such as these may have to be considered.

- **Resources.** Should administrative support, resources, and technology for home offices be increased, recognizing that increased home office support could well encourage still longer working hours for faculty? Are current staff being effectively utilized? Might work process improvements result in better support for faculty? Perhaps administrative staff support should be increased, or existing staff support be reorganized or restructured; see also *Staff Survey Findings*, Recommendation *3*, "MIT should conduct workload analyses with the goal of reducing hours and decreasing stress and burnout for post-docs and campus administrative staff." Perhaps every faculty member, or at least every junior faculty member, should be given funds for one graduate student or post-doc per year. Another possibility would be to give every faculty member discretionary funds and access to advice about setting up a home office.

- **Collegial interaction.** Faculty are attracted to MIT by their prospective colleagues more than any other single factor, and MIT should consider ways that it can facilitate meaningful interaction among faculty, perhaps by rewarding collaborative research or service efforts. A quarter of faculty say they would greatly value a faculty club.

- **Metrics and measurement.** Develop metrics which assess the health and well-being of the faculty and monitor these metrics periodically, perhaps every three to five years. Make the fullest possible use, given considerations of confidentiality, of data available internally at MIT.

- **Evidence from peer institutions.** Benchmarking and peer institution studies, such as the triennial HERI (Higher Education Research Institute) surveys, can be used to help gauge whether the pace, pressure, and stress levels at MIT, and

MIT's possible health costs or attrition rates, differ from comparable institutions. Interviews with individuals who have left the Institute as well as with those who have declined offers from MIT might isolate how heavily the Institute's pace and pressure contributed to their decisions. A related investigation might examine graduate programs at MIT, a primary pipeline for MIT's future faculty, and explore the reasons why some graduate students leave MIT programs. Also to be explored by the Committee are ways to develop comparison data across time at MIT, and with peer institutions (so far, WFD has not gathered comparable data from other research universities).

- **Priorities.** The urgency of each need must be weighed against resource limitations, fiscal constraints, and time pressures. To achieve sustainable change, a careful and practicable sequence of actions is required.

- **Choices.** Wherever possible, faculty members should be offered choices about the resources that are most important to them. Some individuals may value housing assistance more than additional child care, or a part-time graduate student more than a home office. Such preferences might change during a faculty member's career. Cafeteria-type benefit plans might also offer additional flexibility and should be studied more closely.

- **Analysis of minority populations and a broadened working definition of diversity.** MIT is committed to increasing faculty diversity and to enhancing the quality of life for minority faculty members. Yet we know little about our minority populations and were unable to learn as much as had been hoped from this survey. The Committee will need to find ways of understanding more fully the experience of minority faculty members, as well as increasing the value placed by the community on the growing diversity of family structure, lifestyle, and life experience of its faculty.

Healthy and beneficial institutional change is a deliberate, carefully reasoned, and painstaking process. The issues themselves are daunting and resilient: we have been grappling with some of them for years, as evidenced by current findings that echo the 1989 Assessment. All of the suggestions and recommendations cited above need to be considered fully, and additional ones formulated. Real breakthroughs may lie in concepts that have yet to be formulated. We would not expect the Provost-appointed Committee's continuing research to reveal surprises or "quick fixes" of any kind. What we do expect is that a conscientious and discriminating analysis of our own history and culture and the practices of our peer institutions will illuminate those aspects of MIT that can and should be recalibrated, and those that should not be tampered with.

Appendix A: Response Rates and Methodology

Response Rates

Overall, the response rates (following reminders sent by mail and email) ranged from 30% to 40%. The population groups surveyed and their response rates are summarized in *Table 9*.

TABLE 9: Survey Response Rates

	Total Population	Respondents Number (%)
Faculty	956	315 (33%)
Staff	9309	3017 (32%)
Campus	7067	2115 (30%)
Lincoln Laboratory	2242	902 (40%)

Of the 956 MIT faculty, 315 responded for an overall response rate of 33% (*Table 10*). Among faculty, response rates were similar for tenured and non-tenured men. Among women, tenured women were much more likely to respond than non-tenured women. In fact, only 13 responses were received from non-tenured women so these findings should be considered less reliable.

TABLE 10: Faculty Population and Respondents by Tenure and Gender

	MIT Population					Survey Respondents					Respondents as % of Population		
	Total	Men		Women		Total[a]	Men		Women		Total %	Men %	Women %
		#	%	#	%		#	%	#	%			
Tenured	691	594	86.0	97	14.0	223	174	78.0	49	22.0	32%	29%	50%
Non-tenured	265	210	79.2	55	20.8	80	67	83.8	13	16.3	30%	32%	24%

a.   *A total of 315 faculty surveys were returned; twelve did not indicate tenure and gender information.*

Faculty respondents were primarily male (84%) and primarily Caucasian (89%). There is a somewhat greater representation of minorities among non-tenured

faculty—17% of non-tenured faculty are non-Caucasians compared with 9% of tenured faculty—but the actual numbers of minority respondents were too low to permit analysis. Otherwise, these data compare very well to population proportions for faculty including rank by gender, years at MIT, and race (*Table 11*).

TABLE 11: Faculty Profile of Population (n=956) and Response Pool (n=315)

Tenure by Gender	Tenured Men	Tenured Women	Non-Tenured Men	Non-Tenured Women
Population	62%	10%	22%	6%
Response Pool	57%	16%	22%	4%
Race	**Asian/P.I.**	**A.A./Black**	**Cauc./White**	**Hisp./Latino**
Population	10%	3%	86%	2%
Response Pool	7%	2%	89%	1%
Years at MIT	**< 5**	**5–9**	**10–14**	**15+**
Population	24%	16%	10%	50%
Response Pool	26%	14%	12%	48%

Design and Fielding of the Survey

In designing the survey, input was sought from senior administrators as well as faculty and staff. First, in spring 2001, executive interviews were conducted to help frame the research questions. Then, during the summer, focus groups and interviews to identify key topics for the survey instruments were conducted for and with faculty and staff.

The Quality of Life Surveys were conducted by the Council on Family and Work in the fall of 2001. All faculty and staff working 50% time or more were invited to participate.[3] Different versions of the survey instrument were developed for faculty, campus staff, and Lincoln Laboratory staff. Because this survey was intended in part as a follow-up to the 1989 Assessment conducted by the Ad Hoc Committee on Family and Work,[4] several questions were repeated to allow for comparisons.

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3. Quality of life questions were developed for graduate students and included in a separate general survey of graduate students fielded in late fall 2001 by the Provost's Office.

Participation in the study was strictly voluntary, and the information provided has been held in strict confidentiality. The data were analyzed by an external contractor, WFD Consulting, Inc., a Watertown-based firm whose clients are primarily large corporations. WFD describes its expertise as lying in "services to help clients create conditions—both at work and in the community—that help people come to work, stay at work, and be effective at work." WFD presented its analysis of the data to the Council on Family and Work on February 26, 2002. Excerpts from WFD's analysis are cited throughout this report.

WFD reported the survey results to CFW in a summarized form so that the confidentiality of all respondents was preserved. Because of the differential response rates, all data were weighted to represent the true population proportions. For faculty, data were weighted by rank and gender. For staff, data were weighted by location (campus or Lincoln Laboratory), position, and gender.

Statistical Methods

Tests of Significance

For questions with ordinal responses (e.g., very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, very dissatisfied), a Kruskal-Wallis test was run on the groups of interest (e.g., tenured male, tenured female, non-tenured male, non-tenured female) to see if any significant differences existed among these groups. For questions with responses on an interval scale (e.g., stress and burnout index), an analysis of variance replaced the Kruskal-Wallis test at the same level of significance.

These tests were run at the 95% significance level, which may be interpreted as meaning that 95 out of 100 times, when a sample is drawn from the same population, one or more group differences under consideration will, in fact, be

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4. The Ad Hoc Committee on Family and Work, chaired by Professor Peter Elias, was asked "to gather data on MIT demographics, to review current MIT practices affecting family responsibilities, and to recommend improvements." The Committee presented its preliminary findings at the Faculty Meeting of March 21, 1990; issued a report on May 25, 1990 summarizing focus group and survey results; and released its final report on November 7, 1990. The entire 1989 Assessment is often referred to as the Elias Report.

significant (i.e., not equal to zero). In this report, any quantitative measures cited in the text (not tables) were detemined to be statistically significant by WFD.

Weighted Responses

Weighting factors for faculty were calculated by tenure and gender based on response rates. As an example, 594 surveys were sent to tenured men and 174 responses received from them. Thus responses from tenured male faculty members were weighted by 594/174, or 3.41, to represent the entire cohort of tenured men. Similarly, responses from non-tenured female faculty members were weighted by 55/13, or 4.23. Therefore, each response from a non-tenured woman was weighted at 124% of a tenured man's response.

Non-responders

The first invitation to participate in the survey was sent to all faculty via email; the survey questionnaire could be completed interactively on the Web using a browser. Anyone who preferred to complete a paper questionnaire could request one and was sent a hardcopy form. Everyone who did not respond to the first invitation was automatically sent a reminder email as well as a paper copy of the questionnaire. There was no further follow-up with non-responders after the second round, and no detailed analysis of the non-responding population to compare it to the responding population.

Findings

Dependent care issues are salient at MIT. Nearly half of faculty and almost as many staff have children currently living at home, and over a fifth of faculty and staff expect to have or adopt a child in the next few years. Parents face difficulties finding child care when their regular care is not available, for mildly ill children, and for infants and toddlers. Affordable child care is an issue for staff. Virtually the entire MIT community supports on-site or near-site child care at MIT; non-tenured faculty and post-docs are the most likely to say it is of great value to them.

MIT's investment in on-site child care is greatly valued by a substantial population at MIT, and Institute members strongly believe that MIT should meet this need, whether or not they themselves would use these facilities.

Elder care is a growing concern. A quarter of faculty and staff expect to have this responsibility in the near future, while one in seven say they are currently engaged in elder care.

Recommendations

1) The Institute should continue its track record of improving and expanding child care resources.

In particular, three actions are recommended:

- **Follow up with commitment to expand on-site child care capacity.**

  Responding to faculty and staff demand for an increase in on-site child care and to a serious shortage of local infant and toddler care, MIT is substantially expanding its total child care capacity. Within the next three years, capacity will grow from 123 slots to 277 or more slots: roughly 128 slots on campus, and 149 at Lincoln Laboratory.

Currently, MIT's two campus facilities, located within graduate housing complexes at Eastgate and Westgate, serve a total of 55 children. In January 2004, a new child care facility, serving 73 children, will open in the Ray and Maria Stata Center for Computer, Information, and Intelligence Sciences. Support for the campus expansion has come from the Provost. Campus programs offer full- and part-time child care and occasional back-up child care for children from 15 months through kindergarten entry; the Stata Center will be able, in addition, to offer infant care. An additional 75 slots were recommended by an Ad Hoc Faculty Committee on On-site Child Care in 1998. Studies are underway to explore additional expansion opportunities at existing and new campus child care sites.

At Lincoln Laboratory, construction has been completed to increase the capacity of the existing child care facility on the grounds of Minuteman Regional High School from 68 to 149 children. Lincoln Laboratory will offer full-time child care for children from infancy through kindergarten.

The expansion of campus child care has been accompanied by a change in management structure. The Center for Work, Family, and Personal Life now oversees campus child care, and Bright Horizons Family Solutions, Inc., an outside child care firm, has been engaged to provide management services to existing programs at Eastgate and Westgate; beginning in 2004, Bright Horizons will also manage the new program at the Stata Center.

- **Initiate a back-up child care program.**

A modest increase in resources would allow back-up child care to be made available; this is very valuable to younger faculty, and it is a need perceived by staff as well. For example, Harvard subsidizes back-up and emergency child care through a local, vendor-managed, in-home service, Parents in a Pinch, which provides caregivers to homes in the greater Boston area. Parents contract with the vendor individually, but at a somewhat reduced cost.

- **Address issues of affordability and best use of facilities by means of the newly established MIT Child Care Advisory Committee.**

An MIT Child Care Advisory Committee is being established as an advisory group to the Center for Work, Family, and Personal Life to provide ongoing

guidance regarding child care needs. This Committee will help assure the best use of on-site facilities, resulting in a mix of programs to meet the needs of the MIT community. The Council recommends that special attention be given to infant and toddler care and the issue of affordability.

2) Given the expected rise in the number of MIT employees who will provide care to elders, MIT should provide more comprehensive resources for elder care.

Resources must be useful for faculty and staff who provide care for elders locally as well as for those managing care at some distance.

Appendix C: Sample of Faculty Suggestions

Table 12 below summarizes the suggestions received from the faculty in response to open-ended questions in the survey about ways to improve quality of life at MIT. Following the table are sample quotations and paraphrases drawn from this set of responses. The Council on Family and Work recommends an analysis of all of the faculty comments as part of the Institute's further study of these issues.

In *Table 12*, the "Total #" column indicates the total number of comments submitted by respondents on each subject; not all of these comments are listed in this appendix.

TABLE 12: Summary of Responses

Category		Total #
Professional Growth and Advancement	Tenure (promotion, evaluation)	41
	Sabbaticals	4
	Mentoring	16
	Administrative and Committee Load	39
	Compensation, Funding	51
	Fairness	5
	Reward and Recognition	10
	Orientation for New-Hires	3
	Social Interaction	16
Teaching and Students	Teaching Load and Class Size	26
	Faculty-Student Ratios	14
	Faculty-Student Relationship	6
	Student Resources and Requirements	21
Administrative Needs	Administrative Support (amount, quality)	78
	Technology	26
	Infrastructure (space, parking, construction, security)	61
Personal and Family Needs	Balance (pressure, stress, time)	41
	Family (child care, elder care)	34

Category		Total #
Employee Benefits	Benefits, General	6
	Housing	26
	Health Care	8
	Food	2
Institutional Governance	Leadership and Governance	28
	Bureaucracy (departmental coordination)	31
	Communication	14
	Resources, General	9
	Attitude and Outlook	17
Other	Other	12
	Total	645

Below are the sample quotations and paraphrases.

Tenure (promotion, evaluation)

1. "Explicitly consider the candidate's broader life constraints in making promotion/tenure decisions"

2. Establish own tenure standards and be less influenced by numbers of outside letters

3. "Get rid of untenured associate professor promotions, which consume an inordinate amount of time that is simply replicated two years later"

4. Professional advancement for full professors (wage stagnation for senior faculty)

5. Change expectations (can't possibly achieve excellence in both teaching and research)

6. "The whole tenure system works against a reasonable family life for women (the whole definition of a job here assumes a home back-up system, i.e. a wife); such rethinking will never take place unless many more women are in leadership positions here."

Mentoring

1. "Stronger mentoring for making professional and research decisions"

2. "It would help to have support for the senior faculty to help them learn how to be better mentors, and support junior faculty members emotionally (many top programs suffer for the lack of a positive human influence)"

Administrative and Committee Load

1   "Don't ask faculty to do so many administrative tasks that do not result in concrete outcomes"

2   "It's a great help that MIT has made many services available on the web, but that should not cause trivial administrative details to switch from support staff to faculty"

3   "MIT imposes a heavy and ineffective administrative burden on faculty (support from central administration and central services are very poor)"

4   "Each department head should be fair in distributing loads"

Compensation, Funding

1   "Put resources in the hands of those who are feeling pace and pressure and allow them to apply as it best suits them (discretionary money is a great lubricator for all the machinations of life at the Institute)"

2   Fund programs that help faculty better manage research and teaching (reengineering, perhaps unintentionally, appears to have increased faculty workloads in some cases)

3   "Salaries should be public so individuals can discuss perceived inequities with supervisor"

4   "Increased unrestricted research funds"

5   "MIT should consider basing faculty salaries less on market competition (e.g., pressure from external offers) and more on merit (e.g., research, teaching, and service to MIT)"

6   "Think twice before adding additional unfunded mandates (e.g. OCW and UPOP)"

7   "Salary inequities reinforce general sense that Institute doesn't really value or understand the field I work in"

Reward and Recognition

1   "No explicit rewards for many activities but clear penalties if research activity falls off"

2   "Most faculty feel compelled to meet the unrewarded expectations while also working frantically to achieve the research-based rewards (if MIT rewarded all contributions to the community (research, teaching, service) with equal enthusiasm, the faculty would be less inclined to spread themselves so thinly)"

3   "Give more reward to truly academic efforts, as opposed to short-term entrepreneurial activities"

Orientation for New-Hires

1   "Better 'standard' support to get rookies to learn the ropes (teaching, computer support, etc.)"

Social Interaction

1 "Cafe to discuss or guide guests to other than a cramped office"

2 Need a working faculty club or space for faculty to hang out informally for lunch

Teaching Load and Class Size

1 "Class sizes are way too big (class pace, level of expected preparation are so high that even a simple, basic course becomes a huge time-sink)"

2 "For junior faculty, keep number of different courses to be taught in the first few years to a max of 2 or 3"

3 "Tenure-track faculty often get stuck with difficult teaching assignments and find themselves competing with senior faculty to attract graduate students, which causes stress"

4 "Provide equitable distribution of teaching duties and consider redistributing teaching and service obligations to be leaner during times of known personal need (such as birth of a child)"

5 "During the past 15 years that I have been on the faculty, unfortunately, there has been a significant decrease in support for teaching (TA support)"

6 "The average teaching load in some departments in the School of Science is less than those in my department (in Engineering) and they seem to have more time for research, travel, and creativity"

Faculty-Student Ratios

1 "Increase head count when institute commits to new initiatives"

2 "Increase number of faculty or reduce number of students (graduate)"

Faculty-Student Relationship

1 "Encourage more adventurous advising of students"

2 "Drop graduate advisor role (use CMU's "Black Friday" model instead)"

Student Resources and Requirements

1 "Rethink the imposition of the "CI" requirement on top of the existing HASS-D requirement"

2 "No evening exams for students"

3 "High tuition for graduate students, especially those who have passed all subjects and need only to complete the thesis"

4 "Provide real graduate student fellowships (i.e. four year fellowships, or an annual amount that I could use for two or three students of my choice)"

5 "MIT should lead a national effort to get federal agencies to fund students directly rather than through research contracts and grants"

6 "Fund raising campaigns should invest in students' work in research, through a free tuition and stipend program for all graduate students admitted to MIT, in addition to the facility renewal program"

Administrative Support (amount, quality)

1 "More administrative support (accounting, purchasing, repairs, space, space modification funds, meeting rooms, classrooms)"

2 "Help from OSP in getting proposals correctly prepared/sent out"

3 "Better pay for better support staff"

4 "Higher quality staff support (in the sense of attitude and outlook)"

5 "MIT is under-staffed (secretarial support has been cut by 75% in my time here)"

6 "Quality of support staff (not an issue of low pay or inherent poor quality, more a combination of attitude and poor training)"

7 "Resources in the form of hard equipment, funding opportunities, and good collaborators are ample; on the other hand, resources in the form of technical support and the support to handle the paperwork required to maintain a competitive (in MIT terms) research program, are too little"

8 "Lack of administrative support (for most of my time here, I either have not had an Admin Asst. at all, or I have had someone with a very low skill level). Consequently, I have to do the work to compensate. This is to a large extent the result of good admin people going to the private sector where they make significantly better salaries"

9 "Too hard to find people to delegate to (contrast to industry where you can hire professionals at competitive salaries)"

10 "The quality of staffing is an important problem (with the increasing computerization of the office, many staff have not been able to keep there skills current and the support for faculty teaching and research has decreased)"

Technology

1 "Make on-line budget statements consistent, up to date, and readable"

2 "Computers for faculty that do not have to come out of research grants, especially given the new demands for open course ware"

3 "There is a need for non-traditional/high-tech support staff to help with computer technology issues (web pages, software/hardware installations, etc.)"

4 "Big initiatives are fine, but you can go a long way by fixing the little things like technology"

Infrastructure (space, parking, construction, security)

1 "Cover the Main Parking Lot and make it a multi-story atrium collaboratory café"

2 "Sloan is embarrassingly far below other b-schools in physical plant"

3 "Lack of adequate library resources, especially Dewey"

4 "Parking (if I do not get here before 10 am, I am unable to park)"

5 "The physical plant (buildings, etc.) is in poor repair (it took several months to get an air conditioner and three years to have broken glass replaced in my office)"

6 "Insufficient # of women's restrooms"

Balance (pressure, stress, time)

1 "Have fewer activities to concentrate on at any one time"

2 "Lower expectation that everyone will work 10+ hours, 6-7 days/week"

3 "There is simply too much for any one human being to do, especially if they do not have someone else at home taking care of them (all the maintenance stuff which is essential for being productive during the day)"

4 "Excessive teaching, advising, service, and committee load (reengineering at Institute level had the effect of dispersing work to centers, departments and individual faculty and staff)"

5 "Too many disruptions that lead to a fragmented schedule while on campus, thereby making a need to pursue much work at home"

Family (child care, elder care)

1 "Don't schedule meetings after 5:00pm"

2 "Alleviate pressure during childbearing years so that women faculty are not forced to risk their own health and the health of their future children in order to keep their job (e.g. excessively postponing childbearing is extremely risky)"

3 "The combination of early morning committee and faculty meetings and evening professional events at MIT make it extraordinarily difficult for faculty with children living at home to meet both professional and personal responsibilities"

4 "An on-campus care facility for short notice 'emergencies' (e.g. mildly ill child, snow day, spouse commitment, etc.)"

5 "Give us a good policy for elder care"

Benefits, General

1 "In the past, MIT would support travel to one scientific meeting a year; it no longer does"

2 "Cafeteria benefit plan so as not to discriminate against those without children/spouses"

Housing

1 "Temporary residences for new faculty (one year)"

2 "MIT needs to be much more generous with housing help, especially the down payment"

3 "Help junior faculty more with housing (MIT's second mortgage program is not very helpful)"

Health Care

1 "Mental health/counseling for students and staff is inadequate"

2 "Health insurance support for elder dependents, specifically parents"

Leadership and Governance

1 "Imposition of engineering institutional models on other fields for which it is inappropriate"

2 "The whole business of whether to give women extra time off from the tenure clock for having a baby could be perhaps better dealt with if all department heads were fair and understanding about any major event that happens to a junior faculty member (bitter divorce, serious medical crisis, etc.)"

3 "Stronger oversight of faculty over institute decisions rather than ineffective committees"

4 "Faculty and administration are competing rather than cooperating (administration needs to deal with faculty by patience, long-suffering, and love unfeigned; faculty need to work more cooperatively and think less adversarially about colleagues and administration)"

5 "Most importantly, I think the Institute sends a double-message right now about the need for faculty to engage more fully with students and the entire MIT community (I have never heard anyone from central administration urge schools and departments to take community involvement into account when making promotion and tenure decisions)"

Bureaucracy (departmental coordination)

1 "Lack of flexibility/cross-fertilization between departments/labs"

2 "Lack of rapid and efficient purchasing and shipping/receiving capabilities"

3 "Endless paperwork and regulations, and ridiculous budget and finance practice with unintelligible inconsistent account statements (expenditures negative of income, etc.)"

Communication

1 "Separation between faculty and administration"

2 "What is completely missing at MIT is transparency at almost every level (this is the root of the problem)"

Resources, General

1 "Make sure new initiatives have adequate resources"

2 "Support to invest in new fields in research"

3 "Support for faculty involvement in athletics"

Attitude and Outlook

1 "Encourage faculty to be active in spheres outside their routine profession and department"

2 "Reduce rigidity of academic calendar (encourage subjects that don't begin and end at the usual term boundaries), like trimester system"

3 "Teach everybody here to praise others and impress upon them how important this is (we are trying to measure up to some impossible standard)"

Other

1 Boston area doesn't have the infrastructure to support us (hard to find good schools, tight community, good in-home child care, with a sane commute around here, even before you think about housing costs); I was on sabbatical at another university which seems to do better on many of these fronts despite being located in an expensive housing market.

Appendix D: Council on Family and Work

Co-chairs

Roy E. Welsch[5]
- Professor of Statistics and Management Science
- Director, Center for Computational Research in Economics and Management Science

A. Rae Simpson
- Co-manager, MIT Center for Work, Family, and Personal Life

Members

Lotte Bailyn (*ex officio*)
- T Wilson Professor of Management
- Co-chair, Quality of Life Task Force

Noramay J. Cadena '03
- Mechanical Engineering

Vicky Diadiuk
- Assistant Director for Operations, Microsystems Technology Laboratories
- Co-chair, Quality of Life Task Force

Lois S. Eichler
- Clinical Psychologist, Medical

Brian M. Ferrick
- 2nd Class Engineer, Facilities

R. John Hansman, Jr.
- Professor, Aeronautics and Astronautics
- Director, MIT International Center for Air Transportation
- Co-chair, Task Group on Faculty Issues

Terry W. Knight
- Associate Dean, School of Architecture and Planning
- Co-chair, Task Group on Faculty Issues

Helen Elaine Lee
- Associate Professor, Program in Writing and Humanistic Studies

Sandra D. Manassa
- Senior Internal Auditor, Audit Division

Olga Parkin
- Administrative Assistant, Biological Engineering Division

Elizabeth A. Reed
- Director, Office of Career Services and Preprofessional Advising
- Chair, Task Group on Workplace Flexibility

David Saff[6]
- Graduate Student, Electrical Engineering and Computer Science

Joyce D. Yaffee
- Director, Human Resources, Lincoln Laboratory

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5. Claude Canizares served as co-chair of the Council from 1999 through 2001. The Council gratefully acknowledges his contributions and guidance during the planning and design of the Quality of Life Survey.

6. Smaranda M. Moisescu served on the Council as a graduate student from 2000 through 2001. Christopher D. Coldren served on the Council as a post-doctoral fellow from 2000 through 2002.

Quality of Life Task Force

Co-chairs

Lotte Bailyn[7] (acting)
- T Wilson Professor of Management

Vicky Diadiuk
- Assistant Director for Operations, Microsystems Technology Laboratories

Other committee members and key contributors[8]

Noramay J. Cadena '03
- Mechanical Engineering

Regina Caines
- Director, Affirmative Action/EEOC and Diversity Programs

R. John Hansman, Jr.
- Professor of Aeronautics and Astronautics
- Director, MIT International Center for Air Transportation
- Co-chair, Task Group on Faculty Issues

Terry W. Knight
- Associate Dean, School of Architecture and Planning
- Co-chair, Task Group on Faculty Issues

Helen Elaine Lee
- Associate Professor, Program in Writing and Humanistic Studies

Elizabeth A. Reed
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- Director, Center for Computational Research in Economics and Management Science

Ellen Williams
- Special Assistant to the Provost

Joyce D. Yaffee
- Director, Human Resources, Lincoln Laboratory

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7. Roy Welsch served as co-chair of the Quality of Life Task Force from its inception in 2000 until he assumed his role as co-chair of the full Council in February 2002.

8. The Council gratefully acknowledges the contributions of Christopher D. Coldren, Post-doctoral Fellow in Biology, from 2000-2002, as well as the work of Martha Muldoon, independent work/family consultant, from June through November 2001.

Appendix E: Acronyms

CFW   Council on Family and Work

DLC   department, lab, or center

HASS   Humanities, Arts, and Social Sciences

HERI   Higher Education Research Institute

HR   Human Resources

WFD   WFD Consulting, Inc., the contractor assisting with the survey design, implementation and analysis

Findings of the STAFF SURVEY

Conducted in October 2001

Report of the Council on Family and Work
December 2002

**Massachusetts
Institute of
Technology**

Contents

The Quality of Life Survey was announced to the MIT community by President Charles M. Vest in October 2001. In his email, Dr. Vest said, "Two years ago, I reestablished the MIT Council on Family and Work and requested advice on how to make MIT a better place to work and study. Our goal is to provide an environment that promotes personal and professional growth for everyone. The devastating events of September 11 have made us even more determined to strengthen our sense of community, and I am committed to this…. This survey will give us an understanding of the factors affecting the well-being of faculty and staff and will help the Council to formulate its recommendations…. Your responses will help make MIT a better place to work."

The survey's purpose was to investigate the factors that contribute to quality of life for faculty and staff at MIT, and the implications for the future of MIT. Quality of life was defined as the ability to integrate a fulfilling and productive work life with a fulfilling personal and/or family life. During the spring and summer of 2001, the survey instrument was developed, with different versions for faculty, campus staff, and Lincoln Laboratory staff. All faculty and staff working half-time or more were invited to participate in the survey, which was conducted during October and November 2001.

Completed surveys were received from 33% of the faculty, 30% of the campus staff, and 40% of the Lincoln Laboratory staff. The data were analyzed by an external contractor, WFD Consulting, Inc., and the results were reported to the Council on Family and Work in a summarized form so that the confidentiality of all respondents was preserved. Survey methods and response rates are discussed in *Appendix A: Response Rates and Methodology*, and profiles of the staff subpopulations can be found in *Appendix C: Profiles of MIT Staff Groups*.

This report contains a summary and analysis of the results of the Staff Quality of Life Survey, as well as the recommendations formulated by the Council on Family and Work after considering these findings.

Staff Survey Results

Nearly three-quarters of staff are satisfied with their jobs at MIT, and nearly two-thirds are satisfied with its pace and pressure. However, higher levels of stress and burnout are reported by certain subgroups, including post-docs and campus administrative staff, in particular, administrative staff who work directly for faculty.

Over three-quarters of staff feel that their co-workers and immediate supervisors are supportive of their personal/family responsibilities. However, less than half feel that MIT's senior leadership is supportive of their personal/family responsibilities. Minority staff are less likely than Caucasian/White staff to be satisfied with the Institute's diversity and policies to foster diversity.

Recommendations for Staff

After considering the findings, the Council proposes the creation of a special committee, co-sponsored by the Vice President for Human Resources and the Chair of the Faculty, to explore more fully and make recommendations regarding several complex issues, including stress and burnout in subpopulations within the staff. Subpopulations to be examined include those with high turnover rates, those with low response rates in the survey, and those whose concerns may have been masked by the largely aggregated data.

The Council also recommends that special attention be given to the problems of the post-doc position, and that a senior officer be designated as a point of contact for all post-docs, both associates and fellows. These efforts should be coordinated with the newly formed post-doc association.

Other concerns that emerged from the survey are already in the process of being addressed by new initiatives within the Human Resources Department. For example, the Department has convened a team to follow through on the work of the Council's Task Force on Job Flexibility by reviewing and disseminating a set of job flexibility guidelines drafted by the Task Force. The Department also has recently revamped its Orientation Program, created a Rewards and Recognition Program, and established a center called Career Planning at MIT. The Council

recommends that these programs be given ongoing support, and that they be evaluated periodically.

Both the faculty and staff surveys revealed that dependent care is a salient issue at MIT. The concerns of both groups, which were quite similar, are summarized in *Appendix B: Dependent Care for Faculty and Staff*.

Relevance of Faculty Survey

It is important to note that the Council also gave significant attention to the faculty survey, and its findings are directly relevant to the staff as well as to committees that are and will be addressing staff issues. The quality-of-life challenges and proposals that affect faculty have ripple effects on staff, and vice versa. Furthermore, it is critical to pay attention to the areas of overlap, so that remedies suggested for one group do not become problems for the other. Also, there may be programmatic approaches that will benefit the entire community.

In short, the Council urges staff, faculty, and committees working on their behalf to read both reports. Important issues reported by faculty in the survey include high levels of stress and burnout, especially among younger faculty and among women. The complete report on the faculty survey, *Findings of the Faculty Survey Conducted in October 2001*, is available separately.

The following are key findings from the Staff Quality of Life Survey, organized into four major categories: *Pace and Pressure, Diversity, Family Status*, and *The MIT Environment*. The staff's perceived needs are summarized in *What Are Staff Asking for?*; a section containing *Recommendations* completes the report.

Pace and Pressure

Nearly three-quarters (73%) of staff are satisfied with their jobs at MIT. They are satisfied with their working relationships with others and with the challenge of their jobs. About two-thirds (63%) of staff also say they are satisfied with the pace and pressure at the Institute and with their ability to integrate a fulfilling work life with a satisfying personal life.

Over one-fourth (29%) of staff report that the stress of meeting their work and personal responsibilities affects their health. Among non-academic staff, the group reporting the highest stress and burnout scores, according to WFD's measurements, is the campus administrative staff.

Campus administrative staff who work directly with faculty register higher levels of stress and burnout than those who work with other staff members. Researchers and administrative staff who work directly for faculty members log longer hours than those who work for staff: almost half who work for faculty log 50 or more hours per week compared to about one-third of those who work for staff.

Work hours are especially long for post-docs, one-third of whom routinely log 60 or more hours a week. More than one-third (37%) of research and administrative staff work 50 or more hours a week.

Diversity

The figures in this section were taken from a special report prepared by WFD for MIT's Office of Affirmative Action, and *pertain only to non-academic staff* (research, medical, administrative, service, support) on campus and at Lincoln Laboratory. In contrast, staff findings in the rest of the report also include responses from academic staff (post-docs; visiting, adjunct, and emeritus professors; instructors; lecturers and senior lecturers; visiting scholars; affiliates).

Of the respondents, 281 (10%) were minorities. Asians/Pacific Islanders are more likely to be found on the research staff; African Americans/Blacks are more likely to be found on support staff.

Minority and Caucasian/White respondents alike report that their co-workers respect individual and cultural differences (81%). Minority staff are similar to their Caucasian/White counterparts with respect to: satisfaction with their quality of life; sense of the pace and pressure at the Institute; feelings of work/life supportiveness in the MIT community; and feelings of commitment to MIT.

Overall, minority staff are less likely than Caucasian/White staff to be satisfied with the Institute's diversity (66% vs. 78%), and they are less likely to say that MIT's policies and practices foster diversity (53% vs. 62%). In addition, minority staff are somewhat less likely to be satisfied with their working relationships with co-workers (76% vs. 84%). Minority staff are also less likely (21% vs. 32%) to say they feel "extremely comfortable, valued, and included" within their department, lab, or center.

African-American/Black staff are less likely than other staff to feel that MIT's policies and practices foster diversity (47%), to be satisfied with the Institute's diversity (48%), and to feel "extremely comfortable, valued, and included" as a member of their department, lab, or center (16%).

Minority and Caucasian/White staff are about equally likely to have considered leaving ("very seriously" or "somewhat seriously") in the past year (44% vs. 49%). Minority staff who have considered leaving are more likely

than their Caucasian/White colleagues to have considered leaving for advancement opportunities (44% vs. 33%).

Minority staff are more likely than Caucasian/White staff to greatly value: more opportunities for professional development (42% vs. 29%); more opportunities for cross-cultural interaction (29% vs. 12%); a comprehensive orientation program (47% vs. 31%); assistance with housing (28% vs. 12%).

Family Status

Men are more likely than women to report that their spouses or partners work or study less than 35 hours per week (24% vs. 4%). Among staff who are married or partnered, women are more likely than men to report that their spouses or partners have a job involvement or commitment that is the same as or greater than their own (75% vs. 50%).

Among staff who are married or partnered, women are less likely than men to report that their spouses or partners spend the same amount of time or more time on the care of their homes, the care of children, and the care of other dependents. Table 1 shows the contrasts.

TABLE 1: Household Involvement/Commitment of Spouse or Partner

	% of respondents who say that the household involvement/commitment of their spouse or partner exceeds or equals their own[a]	
	Men	**Women**
Time spent on care of house	87%	50%
Time spent on care of dependents other than children	87%	57%
Time spent on care of children	93%	43%

a.   *Includes "Same as mine," "Much more than mine," and "More than mine."*

Two-fifths (39%) of staff reported that their own career considerations have been of "major importance" in their family plans to have children and when to have children. An additional one-third (33%) reported that career considerations have been "somewhat important." No differences were found by gender.

The MIT Environment

The overwhelming majority of staff rate their supervisors (76%) and co-workers (79%) as being supportive of personal/family responsibilities. In contrast, just 60% agreed that MIT policies are supportive, and less than half (49%) agreed that senior leadership is supportive. See *Table 2* for other staff perceptions.

TABLE 2: Staff who Agree or Strongly Agree with Statement

MIT staff…	say that…
79%	they are satisfied with their benefits
79%	their co-workers are supportive of their personal and/or family responsibilities
76%	their immediate supervisors are supportive
60%	MIT's policies are supportive
51%	they are rewarded for their contributions to MIT
50%	they are satisfied with a sense of shared mission
49%	MIT senior leadership is supportive
46%	they are satisfied with their salary and advancement opportunities
46%	they very seriously or somewhat seriously considered leaving MIT in the past year
44%	they are satisfied with feeling valued by the Institute

What Are Staff Asking for?

More than half of staff (57%) greatly value flexible work arrangements. Four out of five respondents (81%) felt they had sufficient flexibility, but there were comments on the need for consistency and clear policies in making such arrangements.

Post-docs, more than others, request increased opportunities for professional interaction (65%) and ongoing career guidance from their supervisors (48%).

Research women are more likely than research men to value: ongoing career guidance from supervisors (36% vs. 23%); a strong mentoring program (40% vs.

26%); resources and technology for home offices (44% vs. 34%); and enhanced information about campus procedures and resources (36% vs. 20%).

About 40% of administrative and support staff members greatly value a comprehensive orientation program for new staff. Support staff (42%) greatly value better information about campus procedures and resources.

On-site or near-site child care at MIT is valued, along with backup care. Staff parents reported "a great deal of difficulty" with: finding child care when regular care is not available (36%); finding child care for an infant or toddler (34%); finding child care that is affordable (30%); and finding care for a mildly ill child (29%). A special section on findings and recommendations regarding child care and elder care can be found in *Appendix B: Dependent Care for Faculty and Staff*.

Recommendations

The Council's recommendations for following up on the survey results are of two kinds. First, there are complex issues that require further study and analysis, for which the Council recommends the creation of a new committee. Because of the importance and the interrelatedness of faculty and staff issues, the Council suggests that the committee be jointly sponsored by the Vice President for Human Resources and the Chair of the Faculty, and that it include representatives from a broad range of staff and faculty constituencies.

Second, the Council recommends specific action steps that emerge from the findings and that can be expected to be highly cost-effective in improving quality of life for staff. Many are already underway, having been anticipated and acted upon before the survey results were announced.

Proposal for a Committee

While some clear-cut action steps emerge from the survey, some of the most cogent issues that it raises are more complex. For example:

- Stress and burnout are significant for certain subpopulations of staff.

  Staff at MIT are highly heterogeneous, with widely varying job responsibilities and roles at the Institute. While in the aggregate, the survey found levels of job satisfaction to be high, problems were present among particular groups, including campus administrative staff who work with faculty, and post-docs across the board.

- Additional problems may well emerge from further analysis of subpopulations.

  In this study, staff populations were grouped, in effect, by payroll category. However, staff members with similar functions can be found in both the "administrative staff" group as well as the "research staff" group, distinguished only by the source of funds that supports them. This had the effect in the survey of homogenizing a large group of people who may or may not have similar job characteristics, while blurring the distinguishing characteristics of groups that may have common characteristics. As a result, it is difficult to ascertain where there may be serious problems and which groups should be targeted for relief. For example, it would be helpful to characterize properly and analyze certain key staff groups,

such as those who are directors or executive directors of campus departments, labs, and centers (DLCs). Furthermore, the response rates for some subpopulations, including academic staff and service staff, are sufficiently low that the problems within them may not have been clearly indicated. Finally, there may be subpopulations with comparatively high turnover rates, although benchmarking with other area employers would be needed to determine this.

- Staff lack a sense of connection and shared mission as a community.

    While staff feel a sense of connection in their departments, many lack a sense of shared mission and strongly want connections across the Institute. Some staff commented that there are social divisions among employees that negatively affect morale and the coherence of the MIT community.

- Faculty and staff issues are interrelated.

    Staff and faculty are part of a common community with shared values and assumptions about productivity, excellence, and overwork. Any measures that are taken to address these issues for staff must take into account these shared cultural forces. They must also take into account the impact on faculty of making changes for staff, and vice versa.

For all of the above reasons, the Council recommends the establishment of a special committee, co-sponsored by the Vice President for Human Resources and the Chair of the Faculty, to follow up on the survey initiative and to make further recommendations. Specifically, the Council suggests that the committee include in its research the following steps:

- **Evaluate populations at risk of leaving MIT to determine if interventions are needed to retain staff.** A benchmarking study of area institutions, as indicated above, would help provide a context for MIT's turnover figures.

- **Analyze staff subpopulations to identify problems that may not be visible in the aggregate data.** Subpopulations to be analyzed include not only those that are already identified in the data, such as campus administrative staff, but also those that require reanalysis, such as staff in different payroll categories with similar job functions.

- **Explore additional ways to improve morale and connection.** Helping employees connect with one another not only creates stronger attachments to

the Institute, but also helps get work accomplished because of improved networking among staff. Suggestions include a staff newsletter, networking events for staff performing similar functions, and meetings with both training and social components.

One rich source of data for the committee's study is the list of comments that were made by staff respondents to open-ended questions in the survey and to consultants who conducted focus groups. (See *Appendix A: Response Rates and Methodology*.) These comments, edited by the consulting firm to preserve anonymity, will be available to the committee.

Similarly, the Council's Task Group on Workplace Flexibility solicited feedback from staff as part of its research in preparing recommendations to the Council, and much of this feedback is highly relevant to the committee's work. Staff frequently commented, for example, on pressures created by unequal workload and by gradual increases in workload ("workload creep").

Furthermore, the Council recommends that the committee hold forums with appropriate staff groups, such as the Administrative Advisory Council II and the Working Group on Support Staff Issues, to solicit further feedback, while sharing the results of the survey to date. In addition, other offices at MIT have important data to contribute, such as turnover rates, medical care costs, and other metrics of well-being.

Finally, the Council encourages the new committee to coordinate its efforts with those of other committees and organizations whose work is related, such as the new committee to be appointed on faculty quality of life issues, and the new Child Care Advisory Committee.

Action Steps

While the survey highlights some issues that need further study, it points to other issues that are ready for concrete measures to be considered. They include job flexibility, resources for post-docs, career advancement, rewards and recognition, orientation of new employees, and the severe weather policy. Details of the Council's recommendations are as follows.

- **Communicate and implement a clear policy about flexible work arrangements.**

Careful development and comprehensive roll-out is essential to insure the success of a workplace flexibility program in MIT's pressured environment. To date, the potential benefits of flexibility have not been consistently realized, in part because of some managers' unwillingness to allow flexible work arrangements and some employees' lack of knowledge about options and the process for requesting flexibility. Key elements of the Council's recommendation include:

- creating guiding principles
- developing comprehensive guidelines for requesting and evaluating proposals for flexibility arrangements
- disseminating the guidelines effectively to supervisors and staff
- training employees and managers in their effective implementation
- assigning ongoing responsibility for flexibility initiatives to the Human Resources Department

The Council's Task Group on Workplace Flexibility, under the leadership of Elizabeth Reed, researched flexibility at MIT and presented its final report and recommendations to the Council in May 2001. The report included eight proposed principles for flexible work practice at MIT. The Task Group also drafted a preliminary set of flexibility guidelines, which are expected to be revised, reviewed, and distributed by spring 2003. Finally, the Task Group recommended that ongoing responsibility for flexibility initiatives be assigned to the Human Resources Department, which would provide follow-through guidance and tools to support workplace flexibility.

- **Address special problems of the post-doc position.**

Among post-docs, 42% are dissatisfied with their salaries and 20% are dissatisfied with benefits. Suggestions from the Council include: (1) examining the policies of peer institutions that have articulated uniform minimum salary and benefit standards for post-docs, and (2) expanding community-building resources. As of fall 2002, Provost Robert Brown, along with Associate Provost and Vice President for Research Alice Gast, have committed staffing and resources to convene an association of post-docs at MIT. The Council recommends supporting the efforts of the newly established post-doc association.

- **Continue a focus on professional development and career advancement.**

Lack of advancement opportunities is cited as a major issue by those who very seriously consider leaving MIT. Because managers are the primary source of career development for their staff, MIT should consider training enhancements for this aspect of the manager role. The Human Resources Department's new office, Career Planning at MIT (*http://web.mit.edu/hr/careers/index.html*), can be expected to make headway in addressing this important issue, and hence should be supported. The office was established in January of 2001 in response to Institute-wide feedback and inquiries about the need to help employees grow and develop, in order both to achieve greater job satisfaction and to meet the changing requirements of the MIT workplace. The office should be evaluated periodically to assess its effectiveness in meeting its goals, and additions and changes should be made as needed.

- **Continue efforts to recognize and reward staff.**

Given that fewer than half of staff reported feeling valued by the Institute, efforts like the Rewards and Recognition Program (*http://web.mit.edu/hr/rewards/index.html*) should be supported. The Rewards and Recognition Program was established in fall of 2000 following studies by the Human Resources Practices Design and Development teams and by a Human Resources task force. The Program should be reviewed in the near future to assess its effectiveness in meeting its goals, and additions and changes should be made as needed.

- **Continue roll-out of the new comprehensive Orientation Program.**

Staff respondents identified the need for an enhanced orientation program, and, in fact, since the survey was administered, the Human Resources Department has refocused its approach to orientation. In the new approach, orientation becomes a comprehensive process. Responsibility for helping the employee get acclimated during the first year is shared among Human Resources, the new employee's department, and the new employee's manager. It is expected that by late January 2003, a new half-day orientation event will be introduced and that all incoming, benefits-eligible employees will be invited to attend. The new initiative should be evaluated after a period of implementation, and additions and changes should be made as needed.

- **Consider a revised severe weather policy.**

While the survey did not request feedback on MIT's attendance policies, a surprising number of comments about attendance on severe weather days appeared in the open-ended section of the survey. Many staff members expressed concern that they put themselves in harm's way to try to get to work in inclement weather and lose a vacation day if they don't. The current practices should be reconsidered, since they appear to generate some amount of ill will toward the Institute.

Conclusion

In summary, within the Quality of Life Survey results, the Council for Family and Work found striking evidence of areas where MIT is a leader among workplaces locally and nationally, but also problem areas where additional measures could significantly increase productivity, morale, and a sense of community. Quality-of-life issues are clearly salient for many staff, whatever their family structure or life experience. A strong message needs to be sent—by means of policies, programs, and statements from senior administration—that this diversity of life style and experience is not only respected but also supported as part of what creates MIT's excellence.

Appendix A: Response Rates and Methodology

Response Rates

Academic and non-academic staff working 50% time or more were invited to participate in the staff survey. These groups include the following staff populations.

Non-academic staff	Academic staff
research staff	post-docs
administrative staff	other academic staff
support staff	• visiting, adjunct, and emeritus professors
service staff	• instructors
	• lecturers and senior lecturers
	• visiting scholars, affiliates, and others

Unions participated, with the exception of campus Service Employees International Union (SEIU), which declined. Because medical staff are a small group, their responses were not analyzed separately. Two versions of the staff survey were created: one customized for campus, the other for Lincoln Laboratory.

Across the 9309 staff invited to participate, 3017 responded for a response rate of 32%. Of the 7067 campus staff, 2115 responded for a response rate of 30%. The response rate was higher for non-academic staff (38%) than for academic staff (13%). Of the 2242 Lincoln Laboratory staff, 902 responded for a response rate of 40%. See *Table 3* for response rates by subpopulation.

Among staff, response rates for "other academic staff" as well as for service staff were low: 10% and 15%, respectively. The administrative staff had the highest response rate, with 49% of this group returning a survey.

TABLE 3: Staff Populations by Rank/Position and Gender

	MIT Population					Survey Respondents					Respondents as % of Population		
	Total	Men		Women		Total[a]	Men		Women		Total %	Men %	Women %
		#	%	#	%		#	%	#	%			
Other Academic	1525	1150	75.4	373	24.5	155	101	65.2	54	34.8	10%	9%	14%
Post-docs	753	537	71.3	216	28.7	152	107	70.4	45	29.6	20%	20%	21%
Research	2458	1874	76.2	584	23.8	882	645	73.1	237	26.9	36%	34%	40%
Administrative	1956	910	46.5	1046	53.5	960	382	39.8	578	60.2	49%	42%	55%
Support	1863	412	22.1	1451	77.9	720	135	18.8	585	81.3	39%	33%	40%
Service	702	619	88.2	83	11.8	104	91	87.5	13	12.5	15%	15%	16%

a. *A total of 3017 staff surveys were returned; 44 did not indicate campus position. Additionally, population information for 52 staff members was missing.*

Response rates by race for campus and Lincoln Laboratory are show in *Table 4*.

TABLE 4: Population and Response Pool by Race for Campus and Lincoln Laboratory Staff

	Asian/P.I.	A.A./Black	Cauc./White	Hisp./Latino
Campus Population	11%	5%	81%	2%
Campus Response	8%	5%	85%	2%
LL Population	4%	2%	93%	1%
LL Response	3%	1%	94%	1%

Campus staff response rates by number of years at MIT are shown in *Table 5*.

TABLE 5: Population and Response Pool by Years at MIT for Campus Staff

	< 1	1–2	3–4	5–9	10–14	15+
Campus Population	24%	24%	11%	13%	10%	19%
Campus Response	18%	23%	11%	16%	12%	20%

Response rates for campus and Lincoln Laboratory (LL) non-academic staff are shown in *Table 6*. See *Appendix C: Profiles of MIT Staff Groups* for WFD's profiles of the various staff populations.

TABLE 6: Non-Academic Staff Population and Response Pool by Gender

	Men	Women
Research		
Campus Pop (n=1109)	65%	35%
Campus Resp (n=327)	57%	43%
LL Pop (n=1349)	86%	14%
LL Resp (n=555)	83%	17%
Administrative		
Campus Pop (n=1744)	45%	55%
Campus Resp (n=835)	37%	63%
LL Pop (n=212)	62%	38%
LL Resp (n=125)	60%	40%
Support		
Campus Pop (n=1572)	22%	78%
Campus Resp (n=582)	18%	82%
LL Pop (n=291)	25%	75%
LL Resp (n=138)	20%	80%
Service		
Campus Pop (n=293)	85%	15%
Campus Resp (n=24)	88%	12%
LL Pop (n=409)	91%	9%
LL Resp (n=80)	88%	12%

Design and Fielding of the Survey

In designing the survey, input was sought from senior administrators as well as faculty and staff. First, in spring 2001, executive interviews were conducted to help frame the research questions. Then, during the summer, focus groups and interviews to identify key topics for the survey instruments were conducted for and with faculty and staff.

The Quality of Life Surveys were conducted by the Council on Family and Work in the fall of 2001. All faculty and staff working 50% time or more were invited to participate.[1] Different versions of the survey instrument were developed for faculty,

campus staff, and Lincoln Laboratory staff. Because this survey was intended in part as a follow-up to the survey conducted in 1989 by the Ad Hoc Committee on Family and Work,[2] several questions were repeated to allow for comparisons.

Participation in the study was strictly voluntary, and the information provided has been held in strict confidentiality. The data were analyzed by an external contractor, WFD Consulting, Inc., a Watertown-based firm whose clients are primarily large corporations. WFD describes its expertise as being in "services to help clients create conditions—both at work and in the community—that help people come to work, stay at work, and be effective at work." WFD presented its analysis of the data to the Council on Family and Work on February 26, 2002. Excerpts from WFD's analysis are cited throughout this report.

WFD reported the survey results to The Council on Family and Work in a summarized form so that the confidentiality of all respondents was preserved. Because of the differential response rates, all data were weighted to represent the true population proportions. For faculty, data were weighted by rank and gender. For staff, data were weighted by location (campus or Lincoln Laboratory), position, and gender.

Statistical Methods

Tests of significance

For questions with ordinal responses (e.g., very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, very dissatisfied), a Kruskal-Wallis test was run on the groups of interest (e.g., campus administrative staff, Lincoln administrative staff, etc.) to see if any significant differences existed among these groups. For questions with responses on an interval scale (e.g., stress and burnout index), an analysis of variance replaced the Kruskal-Wallis test at the same level of significance.

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1. Quality-of-life questions were developed for graduate students and included in a separate general survey of graduate students fielded in late fall 2001 by the Provost's Office.

2. The Ad Hoc Committee on Family and Work, chaired by Professor Peter Elias, was asked "to gather data on MIT demographics, to review current MIT practices affecting family responsibilities, and to recommend improvements." The Committee presented its preliminary findings at the Faculty Meeting of March 21, 1990; issued a report on May 25, 1990 summarizing focus group and survey results; and released its final report on November 7, 1990.

These tests were run at the 95% significance level, which may be interpreted as meaning that 95 out of 100 times, when a sample is drawn from the same population, one or more group differences under consideration will, in fact, be significant (i.e., not equal to zero). Prominent differences are highlighted in this report.

Staff were weighted by job category, gender, and location. Using female support staff at Lincoln Laboratory as an example, 217 surveys were sent and 110 returned. Each respondent was then weighted 217/110 or 1.97.

Non-responders

The first invitation to participate in the survey was sent to all staff via email following Dr. Vest's email letter. The survey questionnaire could be completed interactively on the Web using a browser. Anyone who preferred to complete a paper questionnaire could request one and was sent a hardcopy form. Everyone who did not respond to the first invitation was automatically sent a reminder email and some DLC heads sent follow-ups as well. There was no further follow-up with non-responders after the second round, and no analysis was made of the non-responding population to compare it to the responding population.

Findings

Dependent care issues are salient at MIT. Nearly half of faculty and almost as many staff have children currently living at home, and over a fifth of faculty and staff expect to have or adopt a child in the next few years. Parents face difficulties finding child care when their regular care is not available, for mildly ill children, and for infants and toddlers. Affordable child care is an issue for staff. Virtually the entire MIT community supports on-site or near-site child care at MIT; non-tenured faculty and post-docs are the most likely to say it is of great value to them.

MIT's investment in on-site child care is greatly valued by a substantial population at MIT, and Institute members strongly believe that MIT should meet this need, whether or not they themselves would use these facilities.

Elder care is a growing concern. A quarter of faculty and staff expect to have this responsibility in the near future, while one in seven say they are currently engaged in elder care.

Recommendations

1) The Institute should continue its track record of improving and expanding child care resources.

In particular, three actions are recommended:

- **Follow up with commitment to expand on-site child care capacity.**

    Responding to faculty and staff demand for an increase in on-site child care and to a serious shortage of local infant and toddler care, MIT is substantially expanding its total child care capacity. Within the next three years, capacity will grow from 123 slots to 277 or more slots: roughly 128 slots on campus, and 149 at Lincoln Laboratory.

Currently, MIT's two campus facilities, located within graduate housing complexes at Eastgate and Westgate, serve a total of 55 children. In January 2004, a new child care facility, serving 73 children, will open in the Ray and Maria Stata Center for Computer, Information, and Intelligence Sciences. Support for the campus expansion has come from the Provost. Campus programs offer full- and part-time child care and occasional back-up child care for children from 15 months through kindergarten entry; the Stata Center will be able, in addition, to offer infant care. An additional 75 slots were recommended by an Ad Hoc Faculty Committee on On-site Child Care in 1998. Studies are underway to explore additional expansion opportunities at existing and new campus child care sites.

At Lincoln Laboratory, construction has been completed to increase the capacity of the existing child care facility on the grounds of Minuteman Regional High School from 68 to 149 children. Lincoln Laboratory will offer full-time child care for children from infancy through kindergarten.

The expansion of campus child care has been accompanied by a change in management structure. The Center for Work, Family, and Personal Life now oversees campus child care, and Bright Horizons Family Solutions, Inc., an outside child care firm, has been engaged to provide management services to existing programs at Eastgate and Westgate; beginning in 2004, Bright Horizons will also manage the new program at the Stata Center.

- **Initiate a back-up child care program.**

A modest increase in resources would allow back-up child care to be made available; this is very valuable to younger faculty, and it is a need perceived by staff as well. For example, Harvard subsidizes back-up and emergency child care through a local, vendor-managed, in-home service, Parents in a Pinch, which provides caregivers to homes in the greater Boston area. Parents contract with the vendor individually, but at a somewhat reduced cost.

- **Address issues of affordability and best use of facilities by means of the newly established MIT Child Care Advisory Committee.**

An MIT Child Care Advisory Committee is being established as an advisory group to the Center for Work, Family, and Personal Life to provide ongoing

guidance regarding child care needs. This Committee will help assure the best use of on-site facilities, resulting in a mix of programs to meet the needs of the MIT community. The Council recommends that special attention be given to infant and toddler care and the issue of affordability.

2) Given the expected rise in the number of MIT employees who will provide care to elders, MIT should provide more comprehensive resources for elder care.

Resources must be useful for faculty and staff who provide care for elders locally as well as for those managing care at some distance.

Appendix C: Profiles of MIT Staff Groups

This appendix contains an analysis, prepared by WFD Consulting, Inc., of the staff responses to the survey.

Academic Staff

Non-academic Staff

Post-doctoral Fellows and Associates

Given the nature of the post-doctoral position, it is not surprising that post-doc respondents are much younger than staff in other positions; four-fifths are between the ages of 25 and 34. Post-docs are mostly men (71%), and almost all post-docs work full-time. This is the most racially diverse staff group: the majority are Caucasian/White, but almost one-third are Asian/Pacific Islander. Reflecting their young age, only about one-fourth of post-docs have children younger than 23, but more than two-fifths expect to have their first child in the next few years.

Similar to other academic staff and faculty, half of post-doc respondents think MIT has more pace and pressure than other places. Post-docs, however, enjoy working at MIT for many reasons, including its reputation, the challenge of their jobs, and the Institute's diversity. Post-docs, however, work long hours with inadequate recognition. They would like to see improvements to their jobs, including better salaries/wages, the Institute's valuing of post-docs, fewer work hours, better

professional guidance and supervision, and less working in isolation. More than other staff, post-docs report that too much extra time is required by their job.

Other Academic Staff

The other academic staff group comprises academic staff who are neither current faculty nor post-docs. They include: visiting, adjunct, and emeritus professors; instructors; lecturers and senior lecturers; visiting scholars; affiliates; and others. The majority of these individuals are men (76%). More than two-fifths of respondents have children under the age of 23, and about one-tenth are planning to have their first child in the next few years. Out of all of the groups of staff, other academic staff have the most part-time workers, nearly one-fifth. Men and women are equally likely to be working part-time.

Like the faculty, more than half of other academic staff respondents think MIT has more pace/pressure than other places. In addition to enjoying working at MIT because of its reputation, they enjoy the challenge of their jobs and the opportunity to learn and grow. Although they are generally satisfied with working at MIT, areas of dissatisfaction include salaries/wages, not feeling valued by MIT, and the lack of a sense of a shared mission. They would like to see a change in the culture to one that has less pace and pressure, fewer work hours and/or more staffing, and less working in isolation. Other academic staff are committed to MIT and experience some stress and burnout, but not more than staff in other professional positions and considerably less than their faculty colleagues. As a whole, other academic staff are less likely than staff in other positions to feel supported for their work, personal, and family integration.

Research Staff

Three-fourths of research staff respondents are men. About half of the research staff have children younger than 23 and about one-sixth (16%) are planning to have their first child in the next few years. Most research staff members are in the baby boom generation (35 to 54 years old), and one-fourth are younger and one-sixth are older. Many research staff have worked at MIT for a long time—half have worked at MIT for ten or more years. A similar proportion expect to work at MIT for five or more years; one-seventh (15%) expect to leave MIT in fewer than three

years. More than two-fifths of research staff respondents work on campus and more than half work at the Lincoln Laboratory.

Research staff enjoy working at MIT because of its reputation, their relationships with co-workers, their benefits, the challenge of the job, their work schedule, and the opportunity to learn and grow. Areas of dissatisfaction include not feeling valued by MIT, lack of advancement opportunity, and low salaries/wages. They would like MIT to improve staffing levels, reduce workload, increase flexibility of work schedules, and improve project management. In terms of the pace and pressure at MIT, about one-fourth of research staff believe the pace and pressure is greater than that of other places. They experience about the same amount of stress and burnout as staff in other professional positions at MIT and similar levels of commitment to MIT.

The majority of research staff are satisfied with their overall quality of integrating work and personal and/or family lives, and they are more likely than those in other staff positions to feel they are given support for their work, personal, and family life integration.

The research staff on campus differ somewhat from the research staff at Lincoln Laboratory. Campus research staff tend to be less satisfied with advancement and career opportunities, salary/wages, and feeling valued and rewarded. Lincoln Laboratory research staff lack flexibility to work at home at least some of the time, flexible full-time work hours, and ongoing career guidance. It should be noted that Lincoln Laboratory research staff are generally more satisfied than campus research staff and staff in other positions with their jobs and ability to integrate work, personal, and family responsibilities.

About one-seventh of research staff respondents expect to work at MIT for only another two years, although this varies significantly by location. One-fifth of campus research staff respondents expect to work at MIT only another one or two years while about one-tenth of Lincoln Laboratory staff expect to work at MIT only another one or two years.

There are some differences that vary by location between research staff who plan on working for a shorter time compared to those staying for a longer time. The first

comparison looks at campus research staff. In comparison to researchers who think they will work at MIT for three or more years, researchers who are likely to work two or fewer years are:

- younger with fewer years of service at MIT;

- less satisfied with many aspects of their jobs, such as challenge of their jobs, opportunity to learn and grow, salary/wages, and their jobs overall;

- less satisfied with their ability to integrate their work and personal/ family lives and with feeling supported by MIT for their personal and family lives, including less support from senior leadership, MIT's policies, faculty/staff, and department administration;

- less attached to MIT, including being less satisfied with feeling rewarded by MIT, the sense of shared mission, feeling valued by the Institute, and feeling like they could recommend MIT to others, as well as feeling less loyalty towards the Institute; and

- more likely to value assistance with housing and ongoing career guidance from supervisors.

For Lincoln Laboratory research staff, those who predict they will be working at MIT for two or fewer years and those who predict they will work for longer exhibit few differences. Those leaving within a few years are somewhat older and tend to be less satisfied with their working relationships with co-workers than are those who predict they will work longer.

Administrative Staff

The administrative staff respondents include about equal numbers of men and women. About two-thirds are in the baby boom generation (ages 35 to 54), with about equal proportions younger and older. Two-fifths have children under the age of 23 and one-seventh are planning to have their first child in the next few years. More than half have worked at MIT for five or more years and half expect to work at MIT for at least another five years. Ninety percent work on campus, one-tenth at Lincoln Laboratory.

Administrative staff like working at MIT because of its reputation and benefits and because of their relationships with co-workers. Two-thirds of the administrative staff are satisfied with their ability to integrate their personal and family lives with

their work at MIT, and they are likely to feel supported for their work, personal, and family life integration—more than most other staff positions.

Areas of dissatisfaction include: salaries/wages; not feeling valued; advancement opportunity; sense of shared mission; and pace and pressure. About one-third of administrative staff think the pace and pressure at MIT is greater than at other places. Other issues include excessive workload, limited flexible work schedules, and poor project management.

Some issues emerge by location.

- Campus administrative staff want greater access to the resources and information they need to do their jobs effectively, and less pace and pressure. They are more likely than their counterparts at Lincoln Laboratory as well as other staff to feel physically and emotionally drained at the end of a workday.

- Lincoln Laboratory administrative staff would like less focus on the number of hours worked and greater emphasis on what is accomplished. In addition, they would like greater flexibility to work at home some of the time and greater availability of flexible full-time schedules.

About one-sixth (17%) of administrative staff respondents expect to work at MIT for two or fewer years, and this proportion is the same regardless of the location. Those who expect to work at MIT for two or fewer years are younger than other administrative staff and are more likely to have children younger than six (66% vs. 39%).

Administrative staff who expect to work at MIT for only two years or less differ from their counterparts who expect to stay longer. They are:

- less satisfied with their jobs, including the advancement opportunity; challenge of their jobs; opportunity to learn and grow; supervision they get; salary/wages; pace and pressure at the Institute; working relationships with co-workers; feeling good about career development opportunities; opportunities to enhance skills in current job; and having the resources and information needed to do one's job effectively;

- less attached to MIT, including being less satisfied with the sense of a shared mission; feeling valued by MIT; feeling loyal to MIT; feeling rewarded for their contribution by MIT; agreeing with MIT's goals;

being recognized by immediate supervisors; and feeling included as a member of their group or department; and

- less satisfied with the support they receive, including getting the support needed when conflicts arise; having the flexibility they need for work, personal, and family responsibilities; and their ability to leave work for child-related situations. They are less satisfied than other administrative staff with their ability to integrate their work, personal, and family roles and with their ability to manage the demands of work, personal, and family life.

In addition, the administrative staff who predict they will work at MIT for only one or two more years are more likely to frequently feel physically or emotionally drained at the end of the work day.

Support Staff

Most of support staff respondents are women (78%). About half are in the baby boom generation, with one-third younger and one-seventh older. They are the youngest workforce among the non-academic staff positions. More than two-fifths are single and have worked for two or fewer years at MIT. About one-third have children younger than 23, and about one-seventh are planning to have their first child within the next few years. More than two-fifths expect to work at MIT for another five or more years. The majority of support staff work on campus, while about one-sixth work at Lincoln Laboratory. Lincoln Laboratory support staff are long-time employees at MIT, with about half having worked there 10 or more years.

Support staff respondents like working at MIT because of its reputation and the benefits. While the majority of support staff are satisfied with their ability to integrate their work life with their personal and/or family lives, men in support positions are the least satisfied of all those in staff positions. In general, support staff feel they are supported at work for their personal and family responsibilities. Areas of dissatisfaction include salaries/wages, advancement opportunities, not feeling valued, sense of shared mission, and challenge of the job. Other issues include limited flexible work schedules, excessive workload, and poor project management.

The support staff have a lower commitment score than those in other staff positions; they have less stress and burnout than other positions as well. In terms of the pace and pressure at MIT, only about one-fifth of the support staff believe the pace and pressure is greater than that of other places. Among all of the staff positions, this group is the least satisfied with their specific jobs. They are dissatisfied with the challenge their jobs present and they report that they are likely to leave MIT for more challenging positions. These employees would like MIT to provide a comprehensive orientation program for new staff as well as assistance with housing.

About one-fifth of support staff respondents expect to work at MIT for only another one or two years, although this varies significantly by location. One-fourth of campus support staff expect only to work at MIT another one or two years, while this figure drops to less than one-tenth at Lincoln Laboratory.

Support staff who expect to work at MIT for only a few more years are younger and less likely than other support staff to have children. Nearly two-thirds are single, which is significantly higher than for those who are staying for longer than two years. Nearly two-thirds have been at MIT for only two years or less. Those expecting to leave are:

- less satisfied with specific aspects of their jobs, including the advancement opportunity; challenge of the job; opportunity to learn and grow; supervision they get; salary/wages; job overall; career development opportunities; and having opportunities to enhance skills in their current job. They are also more likely to leave MIT for a more challenging position;

- less satisfied with the support they receive at work, such as feeling that ideas, questions, and feelings about their job are addressed; getting support when conflicts arise; feeling respected by their immediate supervisor; feeling respected by faculty (campus only); feeling respected by students (campus only); feeling respected by others in their group; and feeling included as a member of the group or department; and

- less attached to MIT, including being less satisfied with the sense of shared mission; feeling valued; feeling rewarded for their contribution; and feeling loyal to MIT.

Service Staff

Most of service staff respondents are men (88%), half have children younger than 23, and only a small proportion expect to start a family in the next few years. The service staff is the oldest of the staff groups, with less than one-tenth under 35, two-thirds between the ages of 35 and 54, and one-fourth age 55 or older. Not surprisingly given their older age, this group has been at MIT the longest. This group also expects to work at MIT the longest—half expect to work at MIT for another ten or more years. Two-fifths of service staff work on campus, and nearly three-fifths work at Lincoln Laboratory.

In terms of their work environment, only about one-tenth of service staff believe the pace and pressure at MIT is greater than that of other places, significantly less than for other MIT staff positions. Among various work environment factors, service staff are the most satisfied with the Institute's reputation. They are dissatisfied with advancement opportunities, feeling valued, salaries/wages, supervision, and opportunities to learn and grow. They are not as committed as other groups to MIT, and they report less stress and burnout than other groups.

The majority of service staff are satisfied with their ability to integrate their work and personal lives, although they do not feel as supported by the Institute as do those in other non-academic staff positions.

Appendix D: Council on Family and Work

Co-chairs

Roy E. Welsch[3]
- Professor of Statistics and Management Science
- Director, Center for Computational Research in Economics and Management Science

A. Rae Simpson
- Co-manager, MIT Center for Work, Family, and Personal Life

Members

Lotte Bailyn (*ex officio*)
- T Wilson Professor of Management
- Co-chair, Quality of Life Task Force

Noramay J. Cadena '03
- Mechanical Engineering

Vicky Diadiuk
- Assistant Director for Operations, Microsystems Technology Laboratories
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R. John Hansman, Jr.
- Professor, Aeronautics and Astronautics
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- Co-chair, Task Group on Faculty Issues

Terry W. Knight
- Associate Dean, School of Architecture and Planning
- Co-chair, Task Group on Faculty Issues

Helen Elaine Lee
- Associate Professor, Program in Writing and Humanistic Studies

Sandra D. Manassa
- Senior Internal Auditor, Audit Division

Olga Parkin
- Administrative Assistant, Biological Engineering Division

Elizabeth A. Reed
- Director, Office of Career Services and Preprofessional Advising
- Chair, Task Group on Workplace Flexibility

David Saff[4]
- Graduate Student, Electrical Engineering and Computer Science

Joyce D. Yaffee
- Director, Human Resources, Lincoln Laboratory

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3. Claude Canizares served as co-chair of the Council from 1999 through 2001. The Council gratefully acknowledges his contributions and guidance during the planning and design of the Quality of Life Survey.

4. Smaranda M. Moisescu served on the Council as a graduate student from 2000 through 2001. Christopher D. Coldren served on the Council as a post-doctoral fellow from 2000 through 2002.

Quality of Life Task Force

Co-chairs

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Vicky Diadiuk
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• Co-chair, Task Group on Faculty Issues

Terry W. Knight
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5. Roy Welsch served as co-chair of the Quality of Life Task Force from its inception in 2000 until he assumed his role as co-chair of the full Council in February 2002.

6. The Council gratefully acknowledges the contributions of Christopher D. Coldren, Post-doctoral Fellow in Biology, from 2000-2002, as well as the work of Martha Muldoon, independent work/family consultant, from June through November 2001.

Appendix E: Acronyms

CFW   Council on Family and Work

DLC   department, lab, or center

HR   Human Resources

LL   Lincoln Laboratory

WFD   WFD Consulting, Inc., the Watertown-based contractor assisting with the survey design, implementation, and analysis