W I S E L I
Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison

SUMMATIVE EVALUATION REPORT OF THE
WOMEN IN SCIENCE AND ENGINEERING LEADERSHIP INSTITUTE
(WISELI)

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October 8, 2007

Acknowledgements

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SUMMARY OF FINDINGS
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The following presents a summary of the findings documented in the final evaluation report of the Women in Science and Engineering Leadership Institute (WISELI). WISELI has been in existence at UW-Madison since the awarding of an ADVANCE Institutional Transformation grant from the National Science Foundation in 2002.[1] According to the original proposal, the authors note,

> Our long-term *goal* is to have the gender of the faculty, chairs, and deans reflect the gender of the student body. We realize that this goal is not achievable in five years; however, the *anticipated impact* of the Institutional Transformation initiative is to transform UW-Madison into an on-going living laboratory which will promote gender equity for women in science and engineering and *provide methods and analyses* to measure *intermediate indicators* of success.[2]

WISELI staff members—the PIs, Executive/Research Director, and other faculty and academic staff—were well aware of the many issues for women in the sciences and engineering at UW-Madison, as they cited compelling numbers throughout the proposal to the NSF. Basically, they knew that women were not hired at the same rate as men, that they were rarely found in leadership positions, that they leave the university more often than their male counterparts, and that while here, they are less successful and less satisfied. In their proposal, they described various "interventions" such as workshops, seminars, and grant programs, which were intended to enhance campus climate and ultimately, affect the lives of both female and male faculty and staff on campus. They also suggested the use of the following research questions to guide their work:

1. *What are the climate-related factors, barriers, attitudes, and experiences of women in science on this campus?*
   - What types of initiatives would help address the barriers?

2. *To what extent are WISELI interventions successfully addressing these factors?*
   - Have the interventions resulted in an improvement in the capacity of faculty to succeed and what modifications are needed to make them more valuable?
   - What changes are occurring, if any, in intermediate indicators at the levels of the individual faculty, the division/department, and the institution?
   - Has UW addressed imbalances where apparent? Hired, retained, advanced more women? Adopted and created policies to address needs?
   - What is the value-added of WISELI?

3. *To what extent can our model be replicated and extended to other campuses?*

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[1] NSF SBE – 0123666, $4.75 million provided from January 1, 2002 to December 31, 2006; the ADVANCE Program is subtitled "Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers" and its mission as stated is: "The goal of the ADVANCE program is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce" (Program solicitation).

[2] WISELI Grant Proposal (2001), p. 6.

o What features of the design were instrumental to success?[3]

The following summary addresses these questions by highlighting results drawn from extensive research and evaluation activities—the collection of campus-wide indicator data, the development and use of a longitudinal database of campus participants, baseline and follow-up interviews with female faculty and staff in the sciences and engineering, campus climate surveys of faculty and staff, observation and formative evaluations of WISELI programs and activities, evaluation of UW-Madison policies and practices, the conducting of in-depth research or "issues studies," and summative interviews with faculty, staff and UW-Madison administrators. For a full description of the methodology and results from each of these activities, please refer to the full report referenced below.[4]

Evaluation of WISELI, Overall

The individuals on campus who were interviewed were well aware of WISELI by virtue of their positions in the university or because of the original research study they participated in. Most discussed WISELI positively and used words such as "exemplary" to describe it. In particular, raising the awareness of gender issues across campus was directly attributed to WISELI. One suggested that WISELI's efforts to raise awareness made it a "legitimate campus enterprise" and not on the "fringe" of priorities. They also noted how it helped them to realize how they could help others, especially new female faulty, as a way to contribute to the solution and not the problem. The female faculty we interviewed described feeling supported and not isolated, knowing that this entity was in place at the university and even thought that the center served as a "preventative measure" against wrongdoing towards women. Overall, they felt more comfortable talking about issues and inequities knowing that it was currently part of "normal" discussions at UW-Madison.

Many of the interviewees attribute these successes to the PIs and Executive/Research Director— Jo Handelsman, Molly Carnes, and Jennifer Sheridan. A few women sought out either Jo or Molly to help them with particularly difficult situations on campus. The PIs helped them navigate the system and provided advocacy when needed. Jennifer Sheridan, who directed the climate surveys and a number of other research activities, conducted her work with rigor, using the highest of standards. She knew that if faculty, staff and the administration were going to be informed about gender inequities on at UW-Madison, she needed hard-core evidence to make the case. This evidence was described as being particularly valuable by those we interviewed.

Besides raising awareness and partaking in evidence-based decision making, WISELI staff was also attributed with the creation of high-quality programs, such as the development of Hiring Workshops and Department Climate Workshops for chairs of searches and departments, respectively. Other programs, such as the Life Cycle Research Grants, were also commented on and noted to improve the overall climate at the university. One person thought that providing these grants was one of the most "humane" things the university could do and felt "proud" to be a member of the community.

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[3] WISELI Grant Proposal (2001), p. 6.
[4] Pribbenow, C.M., Sheridan, J., Parker, B., Winchell, J., Benting, D., and O'Connell, K. (2007). *Summative evaluation report of the women in science and engineering leadership institute* (WISELI). Madison, WI.

When reviewing the survey results, which provide a broader view about WISELI, we see that a majority of faculty respondents thought WISELI was *Very*, *Quite*, or *Somewhat Valuable*. Over 80% of female faculty, department chairs, faculty who attended hiring workshops, faculty with any WISELI participation, and faculty in departments who received Celebrating Women in Science and Engineering grants, reported that WISELI was a valuable organization. On the other hand, as of 2006, 25% of the faculty in biological and physical sciences who responded to the climate survey noted that they had never heard of WISELI. One interviewee gives voice to this result by suggesting that she had not been adequately informed about WISELI activities despite being from the "target audience."

The Climate at UW-Madison
When asked about the effects of WISELI on overall campus climate, the interviewees referred back to two of the themes mentioned previously—the value and use of data to inform others about inequities, and the increase in awareness and discussion about various issues. Because of WISELI, one administrator thinks that the discussions about climate are more nuanced—they are "deeper, richer, and different from the very…surface way that…most of the faculty used to see climate five years ago." Results from the interviews with female faculty suggest that a little less than half feel that the climate at UW-Madison has improved in the years since their initial interview (approximately 3.5 years). They attribute this change to the visibility of WISELI, the data the staff has collected and disseminated, and the "normalizing" of discussions about gender issues. Several indicated that the climate is overall "pretty good" and used words such as collegial, collaborative, respectful and community-oriented to describe the UW. A few were unsure of the effects of WISELI on campus climate and did not feel that they had enough information to determine its effects. In general, participants who had the highest levels of interaction with WISELI and participated in WISELI activities felt that WISELI was positively affecting the campus climate for women. Those interviewees who were most unfamiliar with WISELI and its activities were more likely to report that they did not know if WISELI was having an effect on campus climate or that they did not feel it was doing so.

Results from the campus climate surveys are consistent with the interview data referred to above. Fewer than 50% of the faculty in the biological and physical sciences who were surveyed reported a climate change in a positive direction, with more women reporting a change than (31% vs. 17%). Fourteen percent of the respondents noted a negative climate change on campus for themselves, with men noting this more often than women (14% vs. 12%). Interestingly, male faculty members perceive a much-improved condition for women on campus than women report themselves. Also, the 2006 survey results suggest that faculty members who participated in any WISELI event felt more skilled in addressing climate issues at UW-Madison, as compared to the results from the 2003 survey.

Has the climate at UW-Madison improved due to WISELI's presence on campus? This is a difficult question to answer without further defining or objectifying the *quality* of individual and groups experiences at UW-Madison. The following sections, which focus on departmental climate and other critical areas of interest, summarize some of the more nuanced ways in which climate is felt, and the effects that WISELI has had on hiring, leadership, tenure, and in other significant areas of faculty and staff members' lives.

Departmental Climate
The home department of faculty is often the most immediate, important and influential aspect of a faculty member's working environment. Thus, in accordance with the WISELI evaluation goals of understanding and improving the climate and environment for female faculty at UW-Madison, we asked interview participants several questions about the climate in their department. These questions were aimed at revealing some of the departmental-level, climate-related factors, barriers, attitudes, and experiences of women in science, and also understanding how WISELI interventions might be affecting these factors.

When interviewed in 2006, more participants reported an improving departmental climate than a declining departmental climate. Interviewees attributed improving climates to a number of factors, many of which were specific and individualized to the department and the female faculty whom we interviewed. Common themes included new or improved leadership (generally, departmental chairs), and new faculty hires, particularly women. Although none of the interviews cited WISELI as a source of departmental climate change, the themes raised in the interviews directly relate to the mission and work of WISELI. For example, they offered additional affirmation about the essential role of chairs in setting the tone for departments, and therefore the importance of WISELI's workshops with chairs. Second, the interviewees offered some evidence about the effects of more women and more women leaders on the perceived climate of the department. The majority of interviewees reported that more women in their department make a positive difference for them and their working environments. In this way, the data again affirms the importance of WISELI's varied efforts, including the search committee workshops, to ensure that more women are hired into departments across the UW campus.

To address departmental climate in science and engineering departments, WISELI began offering a workshop series *Climate Workshops for Department Chairs*. The workshops aimed to improve departmental climate through an intervention with department chairs. As an important part of this intervention, WISELI evaluators administer an electronic climate survey to faculty, staff, graduate students, and postdoctoral researchers in a participating department. Responses to this survey are presented to participating department chairs in the course of the workshop. Chairs then use the information gathered in this survey to identify strengths and weaknesses and to structure further actions to improve their department's climate.

Comparing overall climate ratings across the different surveyed groups, one notes that a majority of all groups reported positive perceptions of their department's climate. Faculty, academic staff, and classified staff tended to report similar average ratings of department climate (average of 3.65, on a scale from 1-5 with "5" indicating a positive climate). This is in contrast to graduate students and post-docs, who reported similar ratings that were somewhat more positive than those reported by faculty and staff, with average climate ratings of 3.88 and 4.07 respectively. Despite the overall positive picture, a significant minority (10-15%) of faculty and staff rated their department's overall climate as *very negative* or *negative*. Follow-up surveys with some participating departments show an increase in climate scores. Using one department as an example, the overall climate score increased significantly from a 3.21 to a 3.78 after four consecutive years of re-surveying this department.

The campus climate surveys provide us with an inordinate amount of data—too much to summarize here. Rather, some important findings related to departmental climate include:

- Respondents of the 2006 faculty survey rate their departmental climate slightly better than they did in 2003. Although very few significant differences exist between the results from the 2003 and 2006 surveys, where they do exist they are almost always in a positive direction.
- Results from the 2006 survey suggest that faculty feel respected by colleagues, students, staff, and their chairs, just as they did in 2003. Significant differences between groups did not disappear, however. Female faculty and faculty doing non-mainstream research still report significantly less feelings of respect from their colleagues.
- Departments that participated in WISELI's Climate Workshops for Chairs, had at least one faculty member participate in a hiring workshop, and received a Celebrating grant all reported significantly higher agreement that their colleagues in the department respect them.
- There is a strong tendency for women faculty, non-mainstream faculty, and faculty attending WISELI events to report that climate has very much improved for them personally. Approximately 44% of female faculty in biological and physical sciences report that their own departmental climate is significantly or somewhat more positive in 2006 than it was in 2003. Faculty in departments participating in the climate workshops are not *significantly* more likely to report better climate for themselves personally, but there is a slight tendency to report positive climate change for these departments nonetheless.
- In 2006, we see an increase in agreement with the item "I feel like I 'fit' in my department." This finding is significant, because it most encapsulates what "departmental climate" is. Based on analyses from the 2003 survey, this item had the highest correlation with all of the other climate items in the survey; that is, a faculty member's positive response to this item was highly correlated with positive responses to all of the other climate items. The increase in women's "fit" is of note; women's responses increased over 10% on this item as compared to 2003.
- In 2006, a new climate item was used: "On a scale from 1 (very negative) to 5 (very positive), please rate the climate in your primary department." The new climate item shows a familiar pattern; women faculty rate the overall climate in their departments less positively than the men, and department chairs have the most positive view of the climate overall.

Hiring Practice and Policies
The goal of increasing the representation of female faculty in the sciences and engineering called for many of WISELI's resources to be focused on hiring practices and policies. Some resources went to collecting data about the numbers of people hired in any given year, some went to studying current UW-Madison policies (e.g., dual-career hiring), and much went towards the development and implementation of the *Searching for Excellence & Diversity* workshops, often referred to as WISELI's "Search" or "Hiring" workshops. The collection of data from each of these activities provides us with a snapshot of hiring at UW-Madison since WISELI began.

In the previous six years, the percentages of female faculty in the biological and physical sciences at UW-Madison have been increasing, as has the proportion of women in all divisions.

Since 2000, the annual rate of increase has been faster in these two divisions, as compared to the social studies or the arts & humanities divisions. The percentage of new hires in physical and biological science departments, both tenured and untenured who are female, has increased at UW-Madison since 2002. Besides the 2005-06 academic year, the UW-Madison has been increasing the numbers and percentage of women new hires in the previous four years. Almost 40% of new senior hires are women, an increase from the years prior to WISELI's creation.

A design team consisting of faculty and staff from across the campus assisted in the creation of *Searching for Excellence & Diversity* workshops to educate faculty and staff about best practices surrounding the hiring of faculty. These workshops have been the subject of intensive research and evaluation since their beginning. Interviews with campus administrators suggest that this initiative has the greatest potential to impact the UW campus because it is through the process of hiring that long-standing changes in the faculty can be made. In the first two years of the implementation of these workshops, searches in 43 biological and physical science departments at the UW-Madison (61% of the total) have been affected. Evaluation of these workshops suggests that participation is associated with increased offers made to women candidates and an increased presence of women assistant professors in the participating departments.

Besides focusing on improving hiring practices, WISELI staff also used funds from the ADVANCE grant as an opportunity to evaluate current UW policies and practice. Interviews with seven men and women who were hired at the UW-Madison with their spouses indicate that the university is doing good things to attract dual-career couples. The interviewees described how the university had been "accommodating," "proactive," and "helpful" overall. In these cases, each member of the couple was offered a position at the university—the ideal situation for the couple's personal and professional needs. In all cases, the initial hire received the desired faculty position and in two cases, the spouse went into an academic staff position. It appears from the interviews that these hires are a very attractive means for recruiting professional couples to campus. Once the couple is here however, both individuals are not necessarily happy. Surprisingly, approximately half of the interviews with women faculty who left revealed that their husbands were not having positive experiences within their departments, which ultimately prompted both to seek positions elsewhere. In these instances, the wife made the decision to leave the university, which is of particular concern since many of these women were successfully recruited into a science or engineering department.

Results from all of WISELI's studies indicate that attention needs to be paid both during and after the process of hiring. Some of the suggestions to improve recruitment to UW include: Ensuring that start-up packages include items such as space, personnel, and other resources— enough to ensure a successful beginning for a new hire, honoring contracts offered during recruitment efforts, delineating tenure guidelines immediately, making spousal hire policies transparent, disseminating information regarding sick and maternity leave, tenure-clock extension, and other UW policies, and encouraging collaboration across departments to make spousal hires a possibility.

Leadership
From the beginning, the creators of WISELI believed that women's participation in leadership roles at the University were necessary to improve climate, yet very few women were in higher-

level positions or had any interest in doing so. Since the beginning of the grant, there have been many examples of success in this area, yet more needs to be done to reach WISELI's proposed goal of increasing the numbers of women in critical campus positions.

On a positive note, women's representation on important campus committees had been declining before 2005; however, currently the proportion of women participating on those committees is consistent with the proportion of women who are eligible to do so. Interest in formal leadership roles such as chair and dean, has been increasing among all faculty in the biological and physical sciences. In terms of actual participation in formal leadership, women's numbers have been increasing rapidly at the department chair level in the physical and biological sciences. On the other hand, women's leadership at the center/institute director level is changing very little, and has even decreased in some cases. While this could be attributed to the fact that these positions have a slow rate of turnover, it is nonetheless troubling that in the past seven years that WISELI has been collecting these data, there has never been a female director of any of the approximately twenty centers in the physical sciences on campus.

Approximately 25% of the interviewees in 2006 expressed an active interest in pursuing leadership opportunities in the future. For the female faculty who had already taken on various roles, they described "stepping up" during times of need, taking the reins to make change instead of just "grousing," and sometime succumbing to "coercion." Regardless of their initial reasons for participating in a leadership position, most described their experiences as rewarding. In another component of leadership—distribution of awards and endowed professorships—we see more encouraging numbers. The percentage of women faculty receiving prestigious awards campus-wide has been steadily increasing since 2000, and currently the proportion of women holding endowed professorships is equal to the proportion of women in the eligible pool of recipients. Unfortunately, there are still inequities at both the nomination stage and the distribution stage. WISELI staff continues to rely on the literature regarding the impact of unconscious bias and assumptions and training for department chairs to produce recommendation letters and packets that are equitable for men and women.

Despite a number of gains in this area, some would like the idea of "leadership" to be broadened. For instance, a female staff member notes: "There were things that [WISELI] wasn't able to do in developing leaders. I think we should have explored leadership that isn't just in the faculty— it's in academic staff too. The proportion of women in staff roles is high. They don't see themselves as leadership potential or playing a role in that. What are we missing out on? There are lots of ways to be leaders without being faculty. I think we missed the 'LI' part of WISELI."

Networking and Visibility
WISELI staff used a variety of methods to connect female faculty and staff with others across the campus and country, including listservs, the website, seminars, and the Celebrating Women in Science and Engineering Grant program. WISELI also sponsored large-scale events, such as the hosting of Virginia Valian, which included a networking luncheon. Each WISELI initiative provided a service or met a particular need for networking or publicity.

The electronic means of networking, including the listserv and website, allows information to be disseminated to a large number of recipients quickly about events, upcoming workshops, grant

availability, and other initiatives of interest. The website gets thousands of hits monthly and per year and was of particular interest after the former president of Harvard University, Lawrence Summers, made comments about women in science. The WISELI site was accessed for its response to his comments, links to other related articles, and for its library and other resources. It continues to be updated regularly and "holds" hundreds of references for books and articles, and also includes an online store for people to order brochures and workshop guides.

WISELI Seminars on various topics had been a major aspect of the center's programming from the beginning of the center. In the first few years (2002-2006) twenty-three seminars were conducted, with an average of twenty people attending each. Attendees always included a number of faculty, academic staff, and graduate students. Interviews with female faculty showed that the participants took back data or information that they had gathered from a seminar to colleagues to help make a case for addressing women's issues. In another case, a participant described how attending a WISELI seminar on "women and awards," and seeking advice from the speakers there ultimately caused her to self-nominate herself for a campus award. Another woman reported that the data she had learned from a WISELI seminar caused her to be more thoughtful about her own biases when writing references letters for her students.

Unfortunately, the potential for the seminars was never realized, and they were discontinued. Even though the topics cut across many areas of interest for female faculty and staff, they suffered from low attendance. Approximately one-quarter of the interviewees could not recollect having attended a single WISELI event or seminar. Interviewees gave many reasons for not attending these events—they felt that they did not need to learn the content or skills provided at the seminars or the topics simply did not interest them. The most common reason provided was lack of time. Nearly all interviewees who reported not having time for the workshops had children, and several of them were untenured or only recently tenured.

Many participants particularly remembered and appreciated the WISELI luncheon held at Memorial Union that featured Dr. Virginia Valian as a speaker. Participants commented on the useful content provided by the speaker, the question-and-answer session with senior women on campus that followed, and even the luncheon format as all being particularly valuable.

The Celebrating Women in Science and Engineering Grant program has been far more successful than the seminar series and according to one of the campus level administrators, is one of WISELI's most valuable initiatives. This is so because it "empowers the people in the trenches." This program enables sponsors to bring women speakers to campus and to expose faculty, staff and students to accomplished scientists and engineers. While on campus, invited speakers describe their research, participate in small-group discussions, and engage in one-on-one meetings. Evaluation of this program suggests that it has been positively received, is successful in supporting and encouraging women in science and engineering, and is generally well organized and coordinated.

Tenure Process and Policies
Tenure appears to be an area in which there are mixed indications of success. In general, the percentage of women on the UW-Madison faculty has been increasing in all divisions due to an increase in hiring, as well as to the attrition of male faculty. In both the physical and the

biological sciences, the percentage of women at the associate rank appears to be increasing, either due to achieving tenure or being hired with tenure. At the same time, the percentage of female assistant professors in biological science departments has been declining, which will continue to affect overall tenure rates in the future.

Results from the climate surveys indicate that at UW-Madison, the majority of faculty members (approximately 75%) are satisfied with the tenure process. Women however, continue to indicate that they are less satisfied than men. Both the survey and the interview data suggest that they have different access to information and mentoring, their achievements are not valued equally, and that family circumstances, such as child birth or adoption, can impact women's chances for tenure. In both 2002 and 2006, the lengthiest discussions with the female faculty interviewees centered on how the process of achieving tenure continues to privilege males when there are children involved.

The tenure clock extension policy was one of many UW-Madison supports that WISELI studied to see if it has indeed, helped women achieve tenure. Unfortunately, our findings suggest using the tenure clock extension policy, which was designed to mitigate some of the challenges of family responsibilities, does not necessarily increase satisfaction with the tenure process for those who use it. Interestingly, we found that those most dissatisfied with the tenure process were women who used tenure clock extensions—not all female faculty. We concluded that the reason for using the extension, such as the birth of twins or the death of a parent, might explain women's dissatisfaction with the process overall. This particular study also suggests that the University appears to be doing a better job at educating faculty, providing them with mentoring, and giving them reduced responsibilities; however, the policy is not fulfilling its promise to alleviate stressors among those who need it most. Finally, although some faculty members decide to forgo using the tenure clock extension policy for fear (real or perceived) of negative repercussions, the fear of using it is not widespread at UW-Madison. Very few eligible faculty members indicated that they did not take an extension, even if they wanted to; and no significant gender differences were uncovered.

WISELI staff also studied tenure-track conversion cases to understand if UW administration could increase the number of female faculty in many departments simply by converting academic staff members, who have credentials equivalent to faculty, into tenure-track positions. Two case studies were conducted, one of a successful conversion and one that was unsuccessful. From this research, fifteen strategies were identified to as ways to enable a women to move into a faculty position: *Consideration* stage strategies encourage the staff member to consider a tenure-track placement early in their career, address isolation, 'act' like a faculty member, prioritize time and energy, secure and maintain funding and learn what other colleagues are doing. *Action* strategies guide academic staff to transfer national recognition to local respect, align champions from within and outside the department, identify mentors, and seek out administrative support and guidance. Finally, in the *Attempt* stage, individuals are advised to maintain the highest professional standards, be vocal about accomplishments and goals, be persistent, be politic, and assemble a stellar tenure package. Our findings suggest that it is extremely difficult to make these conversions and an individual will not be successful without the support of the institution at both the department and the divisional levels. Campus administrators will need to find innovative ways to address the perceived two-tiered system

between faculty and academic staff, and change practices within the tenure and promotion system before embracing tenure conversions as the panacea for the lack of women in science and engineering departments.

Work-Life Balance

For the second round of interviews in 2006, we were specifically interested in whether maintaining the tenuous balance between career and home was improving for the women in this study. Although there were some exceptions, most interviewees did not indicate that work-life balance had improved to any great degree, and some indicated that it had become more difficult. Many argued that the balance was simply different based on changing factors in their career or home. None of the interviewees pointed to any specific institutional factors that had helped relieve or reduce their work-life tensions. Importantly, both junior and senior women were equally prone to describe work-life balance as remaining the same or increasingly difficult to attain. For the junior women, young families and stress about tenure were major factors. For senior and tenured women, women both with and without children described increasing work responsibilities and expectations as contributing to work-life tensions. In some cases, they described work as all consuming. At least one senior woman reported that *not* having young children at home meant that she was less able to set limits around her work.

Both junior and senior women described how having children and negotiating family and work balance had affected their careers. For the most part, these descriptions and concerns echoed those from the 2002 interviews and reports. Women reported that having children slowed down their career advancement and affected retention. For some women, the career effects or consequences of having children were more visible in 2006 than in the 2002 interviews. For example, some of the junior women with children had failed to meet their tenure requirements to date, and one had switched from a tenure-track career path to a clinical track career path. At least one interviewee reported that she was considering leaving academia altogether. As in the 2002 interviews, both junior and senior women described forgoing career advancement opportunities, such as leadership roles and travel, so that they could spend more time with their children.

The results from campus climate surveys are a contrast to the lack of change perceived at the individual level. At the campus level we see that some faculty members appear to be sensing a great deal of change in how their departments support their family obligations. Fewer faculty report difficulty adjusting their work schedules to care for children; significantly fewer faculty report that department meetings occur early or late in the day; significantly more faculty report that their department is supportive of family leaves; and significantly fewer faculty report that faculty who have children are considered to be less committed to their careers. Significant differences between men and women faculty on some of these items continue to exist, and women especially have not *significantly* altered their views on how their departments support family; nevertheless, the overwhelming trends for both women and men faculty are in a positive direction for the UW-Madison becoming a "family-friendly" campus.

In sum, the both the survey results and the interview data show that female academics remain tremendously challenged by work-life balance issues. These challenges may be most salient for women with children, and are not necessarily relieved by the achievement of tenure. The interviewees reported that work-life tensions remain across the life cycle, although the source of

tensions and areas of flexibility change. What did not seem to change was the tendency of women to rely heavily on personal and household coping mechanisms, and to forgo personal time and personal health. Furthermore, women with families continued to have careers that advanced more slowly. These patterns were strongly evident in both the 2002 and the 2006 interviews. In some cases, the women in this study described drawing upon institutional resources such as tenure clock extension, family leave, and workplace flexibility to help them manage. These resources were useful, but were limited and were not always executed in a way that alleviated the substantive work-life tensions felt by female faculty. For example, there still seemed to be concern about the stigma associated with taking tenure clock extensions, and some women felt the extension policy was not comprehensive enough to meet their needs. There was little evidence to suggest that these resources had changed much since the 2002 interviews, although anecdotal evidence suggests that the stigma associated with tenure-clock extension may be on the decline in some departments and for some women.

One of WISELI's initiatives, the Life Cycle Research Grant, was designed to provide funding to faculty who were experiencing acute crises in their personal life during critical junctures in their professional careers. These funds are currently available to faculty and permanent PIs at the University of Wisconsin-Madison who are at critical junctures in their professional careers when research productivity is directly affected by personal life events, such as a new baby, parent care responsibilities, a life-partner's illness, or one's own illness. Annual evaluations of this particular program show its enormous success and impact for faculty and staff who have received the grants.

Throughout the many iterations of evaluation, participants acknowledged that this was *the only grant of its kind* and how it uniquely worked to balance out their personal and professional lives. Several of the recipients described how the grant *came at a critical juncture in their personal and professional lives* and significantly helped them stay focused on their research. Many shared that the *grant provided psychological support* and made them feel valued by the university. The faculty also discussed how the grant not only helped to support them*, but impacted other people's lives, as well*. This may have directly included their own families, but also indirectly encompassed the staff and students assigned to their projects or laboratories. Finally, faculty reflected on how the impact of the grant not only aided them during a particularly difficult time, but over the long-term, helped to maintain and promote the mission of the university. Therefore, it was believed that the grant provided *an investment in the grantees' futures and the university's*.

Due to these results and the success of this program, it has since been institutionalized and funded through an endowment from the Vilas Trust. The original name of the grant has consequently been changed from the Life Cycle Research Grant to the Vilas Life Cycle Professorship and is available to all UW campus faculty members. The visibility of the Vilas Life Cycle Professorship program among biological and physical science faculty seems to have increased a great deal since 2003. Female faculty, department chairs, and faculty with any WISELI participation are significantly more likely to have heard of the program and to value it; Life Cycle grant recipients and applicants are similarly more likely to know about and value the program. Interestingly, value of the Life Cycle program is significantly higher in departments where at least one faculty member has applied for or received a grant. This may indicate that

there is little stigma associated with receiving these awards, as all the colleagues of the affected Life Cycle applicant/recipient value it, not just the person who applied.

Satisfaction and the Decision to Stay or Leave
Results from both the in-depth interviews with female faculty and the climate surveys indicate that approximately 80% of the faculty are satisfied with their career and the way they have evolved at UW-Madison. At the same time, women in the physical sciences have much higher rates of leaving the UW compared to men, even if the data are "smoothed" across all of the years tracked. Women in the biological sciences also have higher rates of attrition than their male peers. Interestingly, trends in the data show a decrease in attrition of female faculty since 2000.

A majority of interviewees were inclined to stay at the UW-Madison. Some had already considered leaving or had received offers from other universities, but had chosen to remain here. In two cases, participants been able to change the departments in which they worked, thus facilitating their desire to and ability to remain at the UW-Madison. In only one or two cases were the participants considering leaving academia altogether.

Many interviewees provided specific career reasons for remaining here and referred to their overall job satisfaction. A few mentioned certain career opportunities that would entice them elsewhere, such as opportunity to have budgetary authority or a research fellowship. Several interviewees also mentioned family as an important factor in both why they were satisfied and/or why they would probably stay at UW-Madison, a repeated theme from the 2002 interviews. In the same vein, among the interviewees that were actively considering leaving or somewhat dissatisfied, family was often described as a motivating factor—for example, if a spouse did not get tenure or an opportunity arose to work part-time and spend more time with their children. Finally, one interviewee specifically mentioned WISELI, its networks for women, and its efforts to make positive campus change as a motivating factor to remain at the UW-Madison.

Survey results show that major factors contributing to or detracting from satisfaction at UW-Madison do not vary considerably by gender. Overwhelmingly, faculty members cite "Colleagues/collaborators" as the top factor contributing to their satisfaction. "Students," "Autonomy," "Good research opportunities," and "Collegiality" all are factors that are in the top three for many groups, but these are usually far behind "Colleagues/collaborators" as a positive factor. Slightly more variability is seen in the factors that detract from satisfaction. While each of the following factors—"Low salary," "Poor resources," and "Lack of support"—make the top 3 list for each group, the top factor is often different. Most noticeably for women, the top detractor from satisfaction is "Colleagues" which was also the top positive factor for women. It seems that the quality of collegial relationships can make or break the satisfaction of women at UW-Madison. Also, work/life balance issues enter in the top detractors for women, as they cite "High demands" as detracting from their job satisfaction; no other group cited this reason.

Faculty members who said they had considered leaving the UW-Madison at all in the past three years were asked why they wanted to leave and why they stayed. "Family" and "Colleagues/collaborators" were among the top reasons for staying among all the groups who responded. The reasons for leaving UW-Madison seemed to universally be "Low salary;" this

was by far the top-ranked reason for each group. Women and non-mainstream researchers cited climate-related reasons as next most important ("Don't feel appreciated" and "Climate").

To delve more fully into why female faculty in the sciences and engineering chose to leave the UW-Madison, interviews were conducted with nine women who left the university in the previous five years. Of the women who were interviewed, seven continued in faculty positions at other universities, one took a position as a Lab Researcher in industry, and one took an academic staff position at a university. The results identified two central themes—negative departmental climate and work-life balance issues. The women faculty consistently described specific negative incidents from their personal experience or their spouses and how those incidents affected their decision to leave the UW. Further, competing and often conflicting demands between rigorous professional responsibilities and those of their families provided further justification for their decisions.

Institutional Resources and Other Gender Issues
Real progress in WISELI's mission—to increase the participation and advancement of women in academic science and engineering—has been made in many areas. Compared to 2000, there are more female faculty, and women are a higher percentage of the faculty in both biological and physical science departments in 2006. In 2006, we have many more female department chairs in BS and PS departments than we did in 2000. Tenure rates for men and women have equalized in the past five years (i.e., women are no longer differentially leaving prior to a tenure decision), and men's and women's salaries are approximately the same once rank and division are controlled. Still, as noted throughout this summary and the full report, there are areas needing improvement. Women still leave the UW-Madison at higher rates than men; they may have less lab space than their male peers, and no change or negative change was observed in the numbers of women directing major centers and institutes in the BS and PS departments. Tracking the gains and uncovering the remaining problem areas are crucial to the efforts of WISELI and the UW-Madison administration to achieve gender equity. Continued collection, reporting, and analyses of these gender equity indicators are imperative to achieve this goal.

WISELI Continuation and Future Priorities
A number of themes regarding WISELI's continuation emerged from both the interviews with female faculty in the sciences and engineering, as well as from campus-level administrators. The following themes are further described using various interviewees' voices, and are also complemented by the data and results presented in various chapters of the full report:
- ➢ Institutionalize WISELI – Both campus administrators and the faculty we interviewed agreed that there have not been enough gains in the numbers of women in science and engineering and that gender bias may still play a part. Each suggested a University-wide view of how WISELI should evolve and become institutionalized within the UW-Madison.
- ➢ Broaden the Focus – Interviewees suggested a greater focus on graduate students and junior faculty, male faculty, improving the tenure process, and serving faculty across the University, not only those in the sciences and engineering.
- ➢ Develop New and Expand Existing Workshops – Clearly, WISELI has proven itself as a developer of high-quality workshops. Most participants had opinions about which of these workshops WISELI should continue and prioritize in the future. In particular,

interviewees felt that department climate training and search workshops were specific strengths of WISELI. Both the female faculty and the administrators and staff we interviewed shared this opinion. One new, yet "critical" workshop series, as indicated by the interviewees, should be designed for PIs about how to manage a laboratory. The development of this workshop series was originally identified in the grant proposal and was entitled *Workshops on Laboratory Management*. These workshops are currently in the development stage and will be piloted in October of 2007.

➢ Lead the Discussion about "Leadership" – Many of the interviewees felt that there was much more work to be done to encourage women as leaders. At the same time, they understand that this change will not occur overnight. A dean noted, "I'm disappointed that WISELI has not had more of an impact on hiring, both faculty and in higher level, or leadership positions. It's going to take some time to have an impact though."

➢ Continue to Function as a Center of Research –WISELI's focus on using data and research to inform program development and to evaluate outcomes was critical. When asked if the research-driven approach was successful and if it should be continued, the interviewees replied with an overwhelming "yes."

➢ Disseminate Successful Interventions – With the awarding of the PAID grant, WISELI staff are in a position to disseminate various strategies across campus, and to also disseminate successful interventions to other universities. These activities have already been in process, as early as 2005 when the staff conducted a "Train the Trainer" seminar about search training workshops for other institutions in the University of Wisconsin System. These seminars have also been conducted at other campuses across the country.

BACKGROUND

WISELI, the Women in Science and Engineering Leadership Institute, was created with the funding of an ADVANCE - Institutional Transformation grant from the National Science Foundation[5] to the UW-Madison in 2002. Two of the authors of the funded proposal, PIs Molly Carnes and Jo Handelsman, provided the following vision, goals and anticipated impact:

> Our *vision* is to transform UW-Madison into an inclusive community where—irrespective of gender, race, or cultural background—all individuals are valued and encouraged to learn, teach, collaborate, explore, and share ideas. In accordance with the goals of ADVANCE, this proposal focuses on gender diversity in science and engineering. However, our proposed Institutional Transformation initiative lays the groundwork for the overlapping but unique issues facing other underrepresented groups in academic science and engineering, with the ultimate goal of further diversifying the national workforce. Our long-term *goal* is to have the gender of the faculty, chairs, and deans reflect the gender of the student body. We realize that this goal is not achievable in five years; however, the *anticipated impact* of the Institutional Transformation initiative is to transform UW-Madison into an on-going living laboratory which will promote gender equity for women in science and engineering and *provide methods and analyses* to measure *intermediate indicators* of success. A National Women in Science and Engineering Leadership Institute (WISELI) will be established as a visible, campus-wide entity, endorsed by top-level administrators. WISELI itself will be part of the project design and will centralize collected data, monitor the success of the proposed efforts, implement a longitudinal data system, and ensure dissemination of best practices.[6]

Clearly, the authors of the proposal recognized the integral roles that evaluation and research would play during the process of implementing various initiatives and ensuring that these programs would have their intended effects. This report documents the results from the research and evaluation activities that occurred during WISELI's implementation, from January 2002 - December 2006.

EVALUATION DESIGN

Evaluation is an integral feature of WISELI. According to the original proposal,

> Evaluation will be a cornerstone of our Institutional Transformation at UW-Madison. A team of experienced evaluators will, 1) perform a thorough environmental needs assessment and longitudinal study regarding the current status of women in science and engineering at UW-Madison complemented by in-depth anthropological and discourse analytic studies; 2) conduct annual "Issues Studies" on pertinent questions that need investigation; 3) provide formative feedback about the interventions that WISELI

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[5] NSF SBE – 0123666, $4.75 million provided from January 1, 2002 to December 31, 2006; the ADVANCE Program is subtitled "Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers" and its mission as stated is: "The goal of the ADVANCE program is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce" (Program solicitation).

[6] WISELI Grant Proposal (2001), p. 6.

undertakes and about WISELI as an organization that will inform mid-course corrections and decisions; 4) institutionalize processes for longitudinal monitoring beyond the grant period; 5) provide summative data about the attainment of our specific objectives; and 6) disseminate results through writings and presentations.[7]

Indeed, all six of these objectives were completed by faculty and staff researchers and evaluators, both current and former: Christine Maidl Pribbenow (Evaluation Director), Jennifer Sheridan (Research Director), Deveny Benting (Research Specialist), Susan Millar, Dianne Bowcock, Susan Daffinrud Lottridge (former Evaluation Directors and evaluators), Margaret Harrigan (Office of Budget Planning and Analysis), Kathleen O'Connell (ABD - Educational Leadership and Policy Analysis), and Brenda Parker (ABD - Geography). Faculty members who conducted research studies included Cecilia Ford (English), Amy Stambach (Educational Policy Studies and Anthropology), and Amy Wendt (Electrical and Computer Engineering). Graduate student research assistants included Ramona Gunther (Educational Policy Studies), Sarah Marxhausen (English) and Jessica Winchell (Political Science).

Research Questions

In the initial proposal, the authors identified noteworthy features of the evaluation plan: it 1) has both formative and summative purposes; 2) uses both qualitative and quantitative methods; 3) involves multiple researchers and complementary methods to provide triangulation; 4) uses iterative approaches built on existing data to shape next steps; 5) is designed to build capacity for WISELI to become institutionalized. They also identified three overriding research questions:

1. ***What are the climate-related factors, barriers, attitudes, and experiences of women in science on this campus?***
   - What types of initiatives would help address the barriers?

2. ***To what extent are WISELI interventions successfully addressing these factors?***
   - Have the interventions resulted in an improvement in the capacity of faculty to succeed and what modifications are needed to make them more valuable?
   - What changes are occurring, if any, in intermediate indicators at the levels of the individual faculty, the division/department, and the institution?
   - Has UW addressed imbalances where apparent? Hired, retained, advanced more women? Adopted and created policies to address needs?
   - What is the value-added of WISELI?

3. ***To what extent can our model be replicated and extended to other campuses?***
   - What features of the design were instrumental to success?[8]

These questions, along with those activities defined in the proposal, guided all of the research and evaluation that occurred. This next section provides an overview of specific data sources and the means for collection.

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[7] WISELI Grant Proposal (2001), p. 6.
[8] WISELI Grant Proposal (2001), p. 6.

Sources of Data and Methods of Collection

As proposed in the initial application and since the funding of the grant, the following data collection activities[9] occurred:

- Development of a longitudinal database (2002 - ongoing).

The longitudinal database, which is composed primarily of the survey data, tracks faculty participation in various WISELI activities, including: attendance at the seminar series and town hall meetings, participation in the department climate and hiring workshops, awarded life-cycle and celebrating grants, and service on the leadership team. Through this database we are able to correlate participation with survey results.

- Collection of campus indicator data (2001 - ongoing).[10]

The NSF required each ADVANCE site to collect standardized data about their faculties and institutions. These areas include: the number and percentage of women faculty in science and engineering (S&E), by department; number of women in tenure-line positions, by rank, department, ethnicity; tenure promotion outcomes; years in rank by gender; time at institution and attrition; numbers of women in non-tenure-track positions; number and percentage of women S&E in administrative positions; number of women S&E in endowed/named chairs; number and percentage of women S&E on promotion and tenure committees; salary of S&E; space allocation; and start-up packages.

- Baseline interviews with female faculty and staff in the sciences and engineering (2002).

Interviews were conducted to serve as a baseline from which to identify and describe women's experiences on campus; to inform the development of a survey that would be distributed to all faculty on the UW-Madison campus; and to help the WISELI leadership as it makes decisions regarding areas of further study. Twenty-six female faculty members and fifteen academic staff members participated in these initial interviews. Methodology for this study is found in Appendix A and a summary of the findings are found here:

> Pribbenow, C.M., Lottridge, S., and Benting, D. (February, 2004). *The climate for women faculty in the sciences and engineering: Their stories, successes, and suggestions*. Madison, WI: Women in Science and Engineering Leadership Institute.

- Baseline survey of all faculty and a sample of academic staff (2003).

Development of the *Study of Faculty Worklife at UW-Madison[11]* survey began after the completion of the in-depth interviews described above. The survey asked faculty to respond to questions about the hiring process, tenure and promotion, professional activities, department and institution climate, overall satisfaction, use of programs and resources, sexual harassment, balancing personal and professional life, diversity, and general demographic information.

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[9] Detailed methodology descriptions for each of these can be found in the citations and appendices referenced throughout this report.

[10] Sheridan, J. (2007). *By the numbers*. Madison, WI: The Women in Science and Engineering Leadership Institute.

[11] Sheridan, J., Lottridge, S., Pribbenow, C.M., Benting, D., Handelsman, J., and Carnes, M. (2003). *Study of Faculty Worklife at the University of Wisconsin-Madison. Madison*, WI: The Women in Science and Engineering Leadership Institute.

Embedded in each of these areas were questions that gave the respondents an opportunity to identify indicators of climate, either positive or negative. Although WISELI focused its efforts on women in the biological and physical sciences, in collaboration with the Provost's Office, this survey was sent to the entire UW faculty included in its four divisions: Arts and Humanities, Social Studies, Biological Sciences, and Physical Sciences. *The Study of Faculty and Academic Staff Worklife at UW-Madison*,[12] which was designed similarly to the faculty survey, was conducted with a sample of staff at UW-Madison in 2003. The survey methodology is found in Appendix B.

- Observation and participation in WISELI meetings and programs (2002 - ongoing).

Evaluation staff members were present at WISELI workshops, seminars and meetings to document the implementation of WISELI and to provide ongoing formative feedback and suggestions. As participant observers, we were able to help design workshops, evaluate them, and capture experiences of faculty and staff on an ongoing basis.

- Formative and summative evaluation of WISELI initiatives and programs (2002 - ongoing).

The following list is a sample of the many reports written to provide the PIs, Executive Director, Leadership Team and others, with formative and final evaluation of WISELI initiatives and programs:

> Pribbenow, C.M., & Winchell, J. (2006). *WISELI's workshops for search chairs: Evaluation report*. Madison, WI: The Women in Science and Engineering Leadership Institute.
> Pribbenow, C.M. (2005). *WISELI's climate workshops for department chairs: Evaluation report.* Madison, WI: The Women in Science and Engineering Leadership Institute.
> Benting, D., & Pribbenow, C.M. (2005). *Survey results of the "Implementing training for search committees" workshop: Evaluation report*. Madison, WI: The Women in Science and Engineering Leadership Institute.
> Pribbenow, C.M., & Benting, D. (2004). *WISELI's life cycle research grant program: Formative and summative evaluation*. Madison, WI: The Women in Science and Engineering Leadership Institute.
> Pribbenow, C.M. (2003). *WISELI's department climate workshops: Formative evaluation report.* Madison, WI: The Women in Science and Engineering Leadership Institute.
> Benting, D., & Pribbenow, C.M. (2003). *Survey of the Virginia Valian luncheon: Final report*. Madison, WI: The Women in Science and Engineering Leadership Institute.
> Pribbenow, C.M., & Benting, D. (2003). *Interviews with WISELI leadership team members (2002-2003): Summary report.* Madison, WI: The Women in Science and Engineering Leadership Institute.
> Benting, D., & Pribbenow, C.M. (2003). *Meetings with senior women faculty: Summary of notes*. Madison, WI: The Women in Science and Engineering Leadership Institute.

- Evaluation of UW-Madison policies and programs (2002 - ongoing).

Using the results of the campus surveys and in-depth interviews, a number of UW-Madison policies and programs were evaluated to provide a review of how well these campus programs were meeting the needs of faculty and staff:

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[12] Sheridan, J., Lottridge, S., Pribbenow, C.M., Benting, D., Handelsman, J., and Carnes, M. (2003). *Study of Faculty and Academic Staff Worklife at the University of Wisconsin-Madison.* Madison, WI: WISELI.

O'Connell, K., Pribbenow, C.M., & Benting, D. (2006). *The climate at the University of Wisconsin – Madison: Begins sunny and warm, ends chilly*. Madison, WI: The Women in Science and Engineering Leadership Institute.

Sheridan, J., Benting, D., & Pribbenow, C.M. (2005). *Evaluation of childcare needs and practices at the University of Wisconsin – Madison*. Madison, WI: The Women in Science and Engineering Leadership Institute.

Sheridan, J., Benting, D., & Pribbenow, C.M. (2004). *Evaluation of the women faculty mentoring program at the University of Wisconsin – Madison.* Madison, WI: The Women in Science and Engineering Leadership Institute.

Sheridan, J., Benting, D., & Pribbenow, C.M. (2004). *Evaluation of the tenure clock extension policy at the University of Wisconsin – Madison.* Madison, WI: The Women in Science and Engineering Leadership Institute.

- Conducting of issue studies (2004 - 2006).

In the original proposal, three issues studies were to be conducted using, "the data from the year one baseline study to identify a topic, issue, setting (college/school) or cohort (e.g., newly hired faculty women in science) that we will investigate further…This design, which is intentionally open-ended, provides flexibility and allows WISELI to pursue research questions as they arise. The methods used in these studies will be interviews (both individual and group), surveys, and participant observation, as appropriate."[13] Using these parameters, three topics emerged and are documented in the following manuscripts:

The impact of the department chair on climate
Pribbenow, C.M., Sheridan, J., Carnes, M., Fine, E., & Handelsman, J. (2007). *Departmental climate: Differing perceptions by faculty members and chairs*. [Accepted and under revision: The Journal of Women and Minorities in Science and Engineering.]

Dual career hiring and why women leave
O'Connell, K., Pribbenow, C.M., & Benting, D. (2006). *The climate at the University of Wisconsin – Madison: Begins sunny and warm, ends chilly*. Madison, WI: The Women in Science and Engineering Leadership Institute.

The movement of academic staff into tenure track positions
O'Connell, K., & Pribbenow, C.M. (2006). *She's got a ticket to ride: Strategies for switching from a non-tenure to a tenure-track position at the University of Wisconsin – Madison*. Madison, WI: The Women in Science and Engineering Leadership Institute.

- Re-surveying of faculty (2006).

As proposed in the original ADVANCE grant, faculty members were re-surveyed in order to evaluate the impact of WISELI on campus and to document any changes that occurred between 2003 and 2006. The 2006 instrument was very similar to the 2003 instrument. The survey was again extended to UW-Madison faculty in all divisions through the contributions of the Office of the Provost. It was in the field from February through April of 2006, and received a 55.7% response rate.

- Re-interviewing of original female faculty participants (2006).

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[13] WISELI Grant Proposal (2001), p. 8.

Of the original 26 participants who were selected for the study, 19 participated in the follow-up study. From the original participants, three had moved to another University, retired, or relocated without providing further information. One of these three women was interviewed in 2004 as part of another WISELI study titled, *Why Women Leave*. The remaining 23 women were sent letters of invitation to participate in the follow-up study. Of these, 19 agreed to a second interview. The results from these interviews are documented throughout this report.

- Summative interviews with UW-Madison administrators, faculty and staff (2006).

To inform this final report, interviews were conducted with UW-Madison administrators (i.e., Provost and provost's staff; assistant and associate vice-chancellors; program directors), faculty, and staff to identify the effects of WISELI on the UW-Madison campus and to provide suggestions for WISELI's ongoing work. Interviewee's were considered "positioned subjects,"[14] as they were able to provide an historical perspective and due to their position, were familiar with WISELI. These interviews were conducted from September to December of 2006 and each lasted approximately 30-60 minutes. Themes and quotes from these interviews are found throughout this report.

The next sections of this report document if and how well WISELI achieved its goals, the impact of various initiatives and programs, and highlights the research and evaluation activities conducted to address the previously mentioned questions. The chapters in this report are as follows:

Chapter I: Evaluation of WISELI, Overall
Chapter II: The Climate at UW-Madison
Chapter III: Departmental Climate
Chapter IV: Hiring Practice and Policies
Chapter V: Leadership
Chapter VI: Networking and Visibility
Chapter VII: Tenure Process and Policies
Chapter VIII: Work-Life Balance
Chapter IX: Resources and Other Gender Issues
Chapter X: Satisfaction and the Decision to Stay or Leave
Chapter XI: WISELI-Funded Campus Research
Chapter XII: WISELI Continuation and Future Priorities

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[14] Bogdan, R.C., & Biklen, S.K. (1992). *Qualitative research for education: An introduction to theory and methods.* Boston: Allyn and Bacon.

CHAPTER I: EVALUATION OF WISELI, OVERALL

Once funded, the PIs created the Women in Science and Engineering Leadership Institute, otherwise known as WISELI, and sought and obtained "research center" status from UW-Madison administration. Jennifer Sheridan, the current Executive and Research Director was hired in 2002. Since then, other faculty and staff members have been on WISELI's payroll to develop and implement programs, serve as administrative support, and research and evaluate various initiatives. WISELI staff members were assigned to offices and were provided resources in Engineering Hall. A web page and symbol were created to further extend WISELI's presence on campus and elsewhere. Because of the funding from NSF and these structures, WISELI officially existed.

The Effects of WISELI: A View from the Top

To provide a broad view of WISELI, a number of upper-level campus administrators, faculty, and staff who were familiar with it since its inception were interviewed (Appendix C). Three themes about the impact of WISELI emerged from this particular study—WISELI raised the awareness level about the climate for women on campus, WISELI's research is rigorous and valuable, and WISELI staff developed programs that are high-quality and effective. As seen in the following quotes, these effects are not mutually exclusive. For example, an Associate Vice-Chancellor at UW-Madison provides his perspective:

> *WISELI has been just an enormous boost. I think it's the best thing that's happened to climate on campus, absolutely the best thing that's happened to climate. To have the money to pay for really professional, bright, dedicated staff to do the ground-work and think through how you do evidence-based research and do the materials, and programs, design them, be inclusive in designing them and piloting them and having leadership team meetings that keep people informed. And pulling people in…it's just been marvelous, absolutely marvelous. I really think that it's the way an initiative like this ought to run. So, WISELI has played an enormous role, absolutely enormous role. I just think it's exemplary, absolutely exemplary.*

Another upper-level campus administrator concurs:

> *[WISELI] has done more to raise the conversation level and awareness level on campus. I'm probably being a little unfair, that you know five years ago the number of people who would discuss – for example, flexible tenure clock – would be very small. Now I think you hear much more broader conversations about those things and an increasing awareness that this impacts who stays and who leaves, this impacts the kind of quality and type of person that we can recruit in the first place. This is something we want to pay attention to because it sort of affects what the future faculty looks like. And unless we want that to be effective as a way of filtering out certain types of faculty or other, then we need to pay attention to what impact that has and if we don't like the way that filters faculty, then we better do something about it…So, [WISELI] kind of raised awareness… to be able to make [issues of gender] a topic of conversation and let people carry that along through the normal university channels.*

These two administrators note that the importance of WISELI was not only to raise issues, but to also attempt to address them through normal university channels or, when needed, by developing an activity or program. Karen,[15] a member of the Provost's staff, explains:

> *I think WISELI has had the kind of combination of timing and positioning and success to really raise these issues. And, in a few cases, provide concrete activities. For example, the Search Chair Training, the issue is raised; WISELI has proposed a way we can work on that. It may or may not be the perfect Chair Training, but in some ways it doesn't really matter. What matters is that it's a high-impact activity; it's been identified as something that's likely to really make a big difference. And then, WISELI put some work into saying okay so, rather than just identifying the issue, why don't we put something together?…So to me, that has been really valuable because in that whole sequence of identifying the issue, figuring out what could be done to impact this issue, and putting the example in place that other people can grasp, because it's fairly concrete. Do this! Here's how you do this!*

In the original proposal, the authors describe their intention to, "transform UW-Madison into an on-going living laboratory which will promote gender equity for women in science and engineering and *provide methods and analyses* to measure *intermediate indicators* of success."[16] The interviewees also attributed WISELI's success to using data-driven decision making, especially when attempting to reach audiences based in the sciences and engineering:

> *I feel like in some ways, that the notion of kind of quality of climate is not a totally novel concept. But I feel past actions have been driven largely, I would call it anecdotally or by someone's intuition, that says well I think the problem is this, so let's do something that impacts it… I think the data—that that's a really good way to start, is to say we have data that says here is what perceptions of climate really are and more particularly here are some of the key areas where people say they feel that the climate for them has been poor or less than what they hoped for because that gives you real targets to focus on. If you feel overwhelmed by saying, 'Well I can't change the entire climate everywhere overnight.' You can say, 'Well you don't have to. Here are two or three things that are big impactors, let's do these two or three. Maybe we'll worry about other things later, maybe we won't. At least here are two or three things.' So I think [using data] was a very good approach.*

At the same time, faculty and staff in areas such as the humanities also found value in the data WISELI gathered and presented:

> *I think that's a very important role that WISELI contributes, is actually giving credible numbers. But for me—I'm not such a number person—so for me it's just giving sort of analysis and credibility to something you just otherwise have as a pervasive sense… Anyway, so going back to giving WISELI credit for, I think there's a tremendous value in having certain kinds of graphs, certain kinds of numerical, certain kinds of visual*

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[15] Pseudonyms are used to maintain anonymity of the interviewees.
[16] WISELI Grant proposal (2001), p. 6.

information that you hold that sort of articulate something that you just have a kind of general uneasy sense about…it's validating.

These quotes describe the perceptions by the majority of people interviewed at the end of the grant. Clearly their positive view of WISELI is influenced by how they are positioned at UW-Madison and within the communication channels of WISELI. Many of these interviewees were aware of the original goals of the grant and had a historical view of what being a woman in the sciences or engineering was like many years ago. Some played integral roles in the planning and implementation of WISELI activities. Others were "in the know" about what WISELI had been doing because they needed to be informed. The following relies on the perspectives of the female faculty in the sciences and engineering who had been interviewed at the beginning of the grant (2002) and at the very end (2006) to discover their experiences with WISELI.

The Effects of WISELI: A View from the Trenches

This next section focuses explicitly on female faculty members' experiences with and perceptions of WISELI activities at UW-Madison. During these interviews, we asked participants several questions about WISELI (see Appendix B). In doing so, we had several goals in mind: to discover which WISELI resources and activities were utilized by participants and in what ways, to probe participants' perspectives about the value and impact of WISELI activities for them personally, for their departments, and for the overall campus environment, and to elicit suggestions about the future and priorities of WISELI.

Participants were asked a series of questions about WISELI, including their understanding of its mission, their perceptions of its effects on their department or the overall campus climate, and whether WISELI had enhanced awareness of gender issues on campus. The purpose of these questions was to help the evaluators gain a sense of the overall value that WISELI efforts bring to campus, and to gauge the extent that WISELI is affecting the overall environment on campus for women. When combined with other evaluation measures, the interviewee responses described below help paint a broad picture of the complex contributions of WISELI, and how its efforts might be situated under a broader goal of institutional change.

Enhanced Awareness of Gender Issues
When asked if WISELI had enhanced their personal understanding of gender issues on campus, the vast majority of respondents affirmed that it had. A majority also felt that WISELI was raising awareness about gender issues more broadly on campus and among their colleagues. Interviewees gave several examples of ways that WISELI was enhancing awareness of gender issues on campus. Many of these centered on the information that was distributed through WISELI, including seminars, seminar topics, reports, and brochures. At least two women mentioned that simply receiving notices about upcoming WISELI seminars caused them to be more aware of particular challenges for women. Although she personally was not encountering gender difficulties, one woman reported seeing a seminar notice and thinking "Oh yeah, I guess that could be an issue for somebody." One interviewee mentioned that participating in this study and learning about WISELI from the interviewer had helped raise her awareness. Another noted that she was now more conscious of personally being a mentor to other women. Similar to the interview with UW administrators, many of the interviewees elaborated on certain reports or studies that were influential in raising their personal awareness:

I think the results of the climate survey were certainly useful. I think it's very important too—for some people, data is very important. And having access to some of those data is very helpful. Because there's a denial that goes on when there's no objective information. And so having that can sometimes be very helpful to actually be able to point to some numbers.

<div align="center">*****</div>

And I take a lot of sort of comfort from WISELI and what's being done to slowly raise awareness. And I love the fact—you know like the research they describe where people read a CV and it doesn't matter if you're a man or a woman reading a CV, you still rank the man more highly… it's just that this is what our society is like and we all have to acknowledge and then deal with issues like that.

<div align="center">*****</div>

Just going to [WISELI seminars] and hearing about the different studies that have been done, knowing that letter writers tend to use less superlatives for women - fewer superlatives for women than they do for men. Both men and women writers understanding that it's not just men in society who 'diss' women, it's everybody. I mean it's a little bit depressing because it's hard to know what to do about it. But it is awareness, for example, when I'm writing letters.

Several interviewees also reported that WISELI had increased their awareness of campus resources and where they could go for information or support when they encountered gender or other difficulties. In particular, two participants noted that they had specifically sought out assistance from the Principal Investigators because they knew of their involvement with WISELI. Nicole provides the following example:

When I was in a crunch time in this other situation and there were some nasty issues going on, I called up Molly Carnes and said, 'can we talk?' And I knew—I mean I had known Molly a little bit, just from interactions in the Medical School, but not well. I would not have done that if I didn't know that she was involved with [WISELI]. You know what I mean? It was so—so like in a sense she played an extremely important role. She probably doesn't remember this, for one very short period of time as giving me someone to talk to and compare experiences of what was going and decide what was the best, you know, 'what should I do now?'

In many cases, participants provided examples or elaborated upon reasons why they thought the increased awareness created by WISELI was valuable. These reasons were varied, but can be grouped into several broad categories that help outline the importance and effects of WISELI's work on the UW-Madison campus. First, participants noted that efforts at awareness building helped ensure that gender concerns or inequalities were not seen as "fringe" or isolated issues, but rather part of a systemic problem worthy of University attention and resources. Rather eloquently, one interviewee suggested that WISELI's efforts at increasing awareness make "it a legitimate campus enterprise to examine and act on some of the issues that women have on campus." Elaborating further, she explains the importance of "naturalizing" discussions and efforts to improve the situation for women on campus:

I think just the elevation of awareness of women's issues on campus, that's been useful because it doesn't seem like a brand new topic when you bring it up. It's been a part of the discussion on campus in various ways. So that makes it less threatening to bring up those issues because they're everyday issues that we need to talk about.

*****

So now when somebody sits there and goes 'there's a climate problem in this department' and 'this is an old boys network'—it just ups the visibility of the whole thing by somebody at the campus level saying we have issues, we have problems. We need to deal with it. Right? Because then it isn't just someone in the middle, complaining assistant, female assistant professor stuck in the middle of a male-dominated department. It's kind of a bigger, kind of issue…It's not just one department, it's a more systemic issue.

Similarly, several participants noted that the broader visibility of gender on campus helped women feel supported and less isolated. While some of the respondents had not necessarily confronted gender problems themselves, they found it comforting to know that WISELI was available as a resource to them and to other women on campus:

There's this unit now [WISELI]—there's this group of people and I know what you guys are doing and that if I ever needed some information specifically, that's where I would go.

*****

All of the [information gathering and surveys] has been really good in raising awareness, creating a climate of inclusiveness for women—just being part of this has been empowering.

*****

I think there are a lot of intangibles that WISELI provides. I think just knowing that there's a federally funded institute looking at things that are really important to me—just knowing that's here on campus…So I take a lot of comfort from the fact that people are doing what they are doing. And also I came from an institution that's far worse than this one so being at Wisconsin is nice because at least people talk about it and try to do things.

In light of WISELI's focus on climate, some participants mentioned that enhanced awareness helped produce a better overall climate for women. They felt that the activities of WISELI served as a "preventative measure." They felt that the visible presence of WISELI helped keep gender discrimination at bay and prevented a decline in the current situation for women.

I would certainly hope that it improves the climate for women on campus as a whole and I think this because it's had quite a lot of visibility. The upper administration is very aware of it. I know it's been in the newspapers and stuff periodically or I've seen various things that reference it. So I would assume that just by that alone it's, I mean awareness is a good way forward, towards improvement or stopping anything that would make things worse.

*****

> *Just knowing that WISELI is out there and doing different activities, it's certainly visible...I think without it we might have more problems. And you can't have too much support, especially on a campus and in a department where the men dominate.*

In some cases, interviewees suggested that the enhanced awareness created by WISELI directly spurred them or other individuals in their department to personal action, or caused them to rethink their own roles, responsibilities, or ways of carrying out their work. In one case, a department chair on campus designated a substantial portion of his salary towards a fund for faculty development for women. Although the interviewee described controversy over the motivation and use of this fund, she felt that enhanced awareness produced by WISELI had been a factor in the chair's decision: "I think this department chair putting his own salary into this fund is probably directly attributable to stuff that WISELI has done." In other cases, interviewees described a personal change in their own work habits or priorities. Rebecca noted that she is "more likely to ask for help now than to try to be superwoman all the time." Faye comments that she now sees mentoring junior faculty as part of her responsibility.

Mentorship, Leadership, and Advocacy
In many cases, participants reported that they had personally benefited from the mentorship or advocacy of WISELI Principal Investigators, Jo Handelsman and Molly Carnes. In other cases, they did not necessary have individualized interactions with the WISELI Principal Investigators, but felt that theirs and others' leadership enhanced the status of WISELI on campus and helped legitimize campus efforts to address gender and climate issues. In the case where participants benefited from mentorship or advocacy, it was usually through WISELI that they became aware of or connected to Dr. Carnes and Dr. Handelsman. In other cases, they interacted with one of the Principal Investigators first, and then became more involved with WISELI. For example, Adele, who had met Dr. Handelsman at a WISELI workshop, described how she had been a strong ally for her in facing challenges in her department:

> *The first year when I was teaching all these courses, she told me, 'You need to go meet with the Dean.' And I was very hesitant to do that because you know here I am, this kid right out of college. Here I am complaining about my department. And she said 'Oh no, you need to stand up for yourself'...so it was nice to build a camaraderie between us. Through this whole tenure process, she read and made comments on my tenure document. She's just been an all-around great person.*

Later in the interview, the same participant reported that she often went to Dr. Handelsman to find out information about gender resources on campus:

> *I usually just go talk to Jo, I guess. To be honest, I feel I owe this woman my life practically.*

Elaine described a situation where Dr. Handelsman advocated for her by speaking directly with her department chair and faculty when they were not following proper procedures:

> *There were some real subversive things with one faculty member in particular, and Jo Handelsman advocated on my behalf with this and said 'You know, you just can't have*

these secret departmental meetings behind [name] back and talk about this, you need to have this in the open.' She was just awesome and I had never had anybody advocate for me. So the fact that she dropped everything on my behalf and then helped advise me on my transition to [location], made me realize how incredibly valuable her experience was. And Molly too, people who aren't afraid to speak out and take that kind of leadership role are the inspiration for the rest of us who don't have the confidence or the experience yet to do that kind of thing.

Another interviewee described a brief mentoring occurrence that she had with Dr. Carnes that emerged because of Dr. Carnes' involvement with WISELI:

And that was why I called her actually because I sort of trusted her. I mean I trusted her judgment just on the little bit that I had seen of her in these interactions and then because of this. Part of this was an issue with total lack of understanding of the difference between sexual harassment and climate… And it was WISELI because that was the only reason that I went to her.

On a few other occasions in the interviews, participants commented not on their personal interactions with the WISELI Principal Investigators, but rather on the symbolic and actualized importance of their leadership on campus and with WISELI:

You know also there's a certain level of respect because of the women involved—Molly Jo, and Bernice Durand—it's very, very good that these are accomplished scientists who are in leadership roles. Very, very, very successful and it's kind of hard for them [campus leadership] to say, 'Oh these are a bunch of rabble-rousers.'

*****
So Molly and Jo, what I know of them, they're just great role models, themselves. Just having them as a presence on campus and in charge of WISELI is so powerful.

WISELI, the Center of Research
Another area where participants indicated that WISELI had particularly provided added value on campus was in data production and dissemination. Although we did not directly query participants about if and how they engaged with WISELI campus reports and data, many raised this issue during various stages of the interview, similar to campus administrators. In particular, interviewees mentioned that the WISELI data was a personal resource for them, or that it helped with raising awareness on campus.

I think anytime you have again a group of people who are acquiring data—hard data that you can point to and say this is wrong or this is good—and providing tools to make it better, that's a good thing. The difficulty is getting people to listen of course.

*****
I don't think we can make decisions about what is working and what's not working or whether there are disparities or no disparities or things like that, if we don't have a more structured analysis of it.

Alison pointed to the way that WISELI responded to the "Summers episode"[17] with appropriate data and commentary:

> *I thought it was interesting with the whole Summers episode. I thought it was great having WISELI on campus to be a focal point for that and to have the data at their fingertips and be able to respond to that and advertise what had been said and to immediately tell people why this was not an appropriate statement. So I thought that was case in point of why having such an institute is important. Because it's a way to focus and combat what can be really insidious. It is a resource.*

Some individuals reported not necessarily using WISELI resources for themselves, but to help colleagues or faculty that they were supervising or recruiting for new positions:

> *It's nice to have the resource. It's nice to be able to say 'Why don't you check there.' And knowing that there is a pretty comprehensive thing available. In recruiting this assistant professor, his wife is somebody that almost got her Ph.D., had two kids and didn't finish. They had some contacts at Wisconsin and after their second visit their whole conversation was about whether or not there would be some way of having her be able to go back to school. I think that's what sealed the deal honestly. You know and having that website, to go to and say, 'Look, there really is a concern about this.' It was very nice.*

Another interviewee reported that WISELI had made her aware of campus resources for women and how to navigate them.

> *I'm still feeling my situation, my way through this. But one thing that I've learned in the last three or four years… perhaps WISELI has helped with this or at least Bernice Durand did, who is part of WISELI and that is that when somebody is in a situation like this, and it's a difficult one, that of course you have to go through the chain of command. But if that doesn't work, there are resources to go above it that are confidential…And five years ago I would not have done that. That's something I've learned for sure, that I won't be afraid to ask for help, because it's there. And I think, I think WISELI has a part in that.*

Faye conveyed that while she wished that gender was not an issue in her career and that it was not something she wanted to focus on, she realized that she needed the support of organizations like WISELI in order to be successful:

> *In those early years, I got very frustrated that I did not want to be perceived as the token woman, that I got this job because I'm a woman or my contribution to this department*

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[17] This refers to the occasion in January 2005 when Harvard University's President Lawrence Summers suggested (at an invitation-only conference on diversifying the science and engineering workforce) that innate differences in women's and men's abilities in math and science was one of the reasons for women's inadequate representation in the highest levels of academic science. WISELI responded by not only providing a formal written statement, but also by collecting, tracking, and posting media and academic responses to the event and other pertinent information on the WISELI web site.

and the legacy thing is because of being the woman…So I would assume that you have a lot of women that are like – that some of them just love that role, being the only woman and that's going to be their calling. And so I've struggled with that… But at the same time, I realize I need things like WISELI and I need some of that backup support in order to really accomplish what it is I want to do.

Interviewees were also asked if they would be interested in participating in future WISELI initiatives, or working with WISELI on an issue that was "close to their heart." Although many participants indicated that they faced major time constraints, a majority of them expressed interest in working with WISELI in the future. This was true of both participants who had previous experience with WISELI, as well as those that did not. Most participants simply indicated a general willingness to connect with WISELI initiatives, while a few described a particular interest or project that they would like to jointly pursue with WISELI.

WISELI Research: Campus Value of WISELI Results from Surveys, 2003 and 2006

As seen in Table I-1, a large decrease in the percentage of faculty who had never heard of WISELI is seen in the campus climate survey results from 2003 to 2006; for most groups, the percentage of faculty who never heard of WISELI in 2003 was cut in half by 2006. A majority of faculty respondents thought WISELI was "very," "quite", or "somewhat" valuable (as compared to not at all valuable or never heard of it). Over 80% of women faculty, department chairs, faculty who attended WISELI's hiring workshops, faculty with any WISELI participation, and faculty in departments who received Celebrating grants reported that WISELI was a valuable organization. About a quarter of faculty find WISELI to be "very" valuable, and over 40% of women faculty and faculty who had any participation in WISELI activities report that WISELI is "very" valuable.

About a quarter of faculty reported that they have "used" WISELI. Contradictory patterns in reported "usage" emerged, for example, as about half of those that we have a record of participating in our hiring workshops indicated they had "used" our programming, and only 70% of those we know participated in any WISELI event indicated usage of WISELI. The usage data for WISELI is difficult to interpret. One explanation may be that they attended WISELI programs, yet were unaware that WISELI developed them. Regardless, usage of WISELI is highly correlated with valuing WISELI overall.

Table I-1 Science faculty's knowledge, use, and perceptions of WISELI.‡

	N	Never Heard of WISELI		WISELI is Very, Quite, or Somewhat Valuable**		WISELI is Very Valuable		Ever Used WISELI	
All Faculty in the Biological & Physical Sciences	605	25.3%		71.1%		24.0%		26.6%	
Women	146	8.9%	*	87.0%	*	46.6%	*	57.9%	*
Men	459	30.5%		66.0%		16.8%		16.3%	
Faculty of Color	48	18.8%		75.0%		27.1%		30.8%	
Majority Faculty	557	25.9%		70.7%		23.7%		26.3%	
Department Chair	43	2.3%	*	95.4%	*	30.2%		51.4%	*
Not Chair	562	27.1%		69.2%		23.5%		24.8%	
Non-Mainstream	216	22.7%		74.5%		26.9%		27.8%	
Mainstream	375	26.4%		69.3%		21.6%		26.1%	
Attended Hiring Workshop	56	5.4%	*	89.3%	*	28.6%		48.1%	*
No Attendance	545	27.2%		69.4%		23.7%		24.5%	
Any WISELI Participation	119	2.5%	*	93.3%	*	43.7%	*	70.4%	*
No WISELI Participation	482	30.7%		65.8%		19.3%		15.7%	
Departmental participation in:									
Climate Workshops	231	21.2%		74.9%		28.1%		31.1%	
No Participation	374	27.8%		68.7%		21.4%		23.9%	
Hiring Workshops	403	24.1%		71.7%		22.3%		27.7%	
No Participation	202	27.7%		69.8%		27.2%		24.6%	
Celebrating Grants	141	14.9%	*	83.0%	*	31.9%	*	34.6%	*
No Participation	464	28.5%		67.5%		21.6%		24.1%	

‡ **Responses to questions 35q and 36q of the 2006 *Faculty Worklife* survey.**
***T-test between groups significant at *p*<0.05; no adjustments made for multiple comparisons. Highlighting indicates significant (at *p*<0.05) over-time increase (green) or decrease (yellow).**
**** Compared to *not at all valuable* or *never heard of WISELI*.**

Summary: Evaluation of WISELI, Overall

The individuals on campus who were interviewed were well aware of WISELI by virtue of their positions in the university or because of the original research study they participated in. Most discussed WISELI positively and used words such as "exemplary" to describe it. In particular, raising the awareness of gender issues across campus was directly attributed to WISELI. One suggested that WISELI's efforts to raise awareness made it a "legitimate campus enterprise" and

not on the "fringe" of priorities. They also noted how it helped them to realize how they could help others, especially new female faulty, as a way to contribute to the solution and not the problem. The female faculty we interviewed described feeling supported and not isolated, knowing that this entity was in place at the university and even thought that the center served as a "preventative measure" against wrongdoing towards women. Overall, they felt more comfortable talking about issues and inequities knowing that it was currently part of "normal" discussions at UW-Madison.

Many of the interviewees attribute these successes to the PIs and Executive/Research Director— Jo Handelsman, Molly Carnes, and Jennifer Sheridan. A few women sought out either Jo or Molly to help them with particularly difficult situations on campus. The PIs helped them navigate the system and provided advocacy when needed. Jennifer Sheridan, who directed the climate surveys and a number of other research activities, conducted her work with rigor, using the highest of standards. She knew that if faculty, staff and the administration were going to be informed about gender inequities on at UW-Madison, she needed hard-core evidence to make the case. This evidence was described as being particularly valuable by those we interviewed.

Besides raising awareness and partaking in evidence-based decision making, WISELI staff was also attributed with the creation of high-quality programs, such as the development of Hiring Workshops and Department Climate Workshops for chairs of searches and departments, respectively. Other programs, such as the Life Cycle Research Grants, were also commented on and noted to improve the overall climate at the university. One person thought that providing these grants was one of the most "humane" things the university could do and felt "proud" to be a member of the community.

When reviewing the survey results, which provide a broader view about WISELI, we see that a majority of faculty respondents thought WISELI was *Very*, *Quite*, or *Somewhat Valuable*. Over 80% of female faculty, department chairs, faculty who attended hiring workshops, faculty with any WISELI participation, and faculty in departments who received Celebrating Women in Science and Engineering grants, reported that WISELI was a valuable organization. On the other hand, as of 2006, 25% of the faculty in biological and physical sciences who responded to the climate survey noted that they had never heard of WISELI. One interviewee gives voice to this result by suggesting that she had not been adequately informed about WISELI activities despite being from the "target audience."

CHAPTER II: THE CLIMATE AT UW-MADISON

An upper-level UW-Madison administrator provides his perspective about campus climate:

> *I think one of the big things that's different, is a much broader realization that everybody contributes to climate and it's more than simply being polite in the hallway or kind of the bad things that I think traditionally many sort of said, 'Oh, that's what climate is about. It's about being polite, it's about not being rude or insulting.'… I think WISELI has helped a lot of faculty realize, 'Well no, it's not, actually it's a lot more, it's a lot different from being overtly respectful or disrespectful or rude or not rude.' That there's a whole series of kinds of ways in which, how we deal with differences, that impact climate…That it's much deeper, richer, and different from the very surface way that I think most of the faculty used to see climate five years ago.*

As one way of exploring the effect of WISELI on the overall campus climate, we asked interview participants if they felt WISELI was enhancing the University-wide climate for women. Among the respondents who felt certain or optimistic about WISELI's effects on campus climate, some elaborated on their reasons or offered examples. In many of these accounts, respondents referred to increased gender awareness and the data provided by WISELI, themes reported upon previously:

> *I think anytime you have again a group of people who are acquiring data—hard data that you can point to and say this is wrong or this is good—and providing tools to make it better, that's a good thing. The difficulty is getting people to listen of course.*

> *******
>
> *I think that just verbalizing the issues is a pretty important role and because WISELI is an institution not a person, it lends a certain formality to the discussion because it's not just one person…It's a large group and based on facts.*

> *******
>
> *I think I'm fairly unusual. I don't feel disenfranchised. I've been very successful. But I know that's not true of a lot of other women on campus and so I think having something that's sort of theirs and being able to sort of pick and choose how to get involved. [WISELI] just has to be a good thing.*

Several women interviewed felt that the climate is overall *pretty good* and used descriptors such as collegial, collaborative, respectful and community-oriented. These women were quick to point out, however, that the positive experiences at UW-Madison may be localized and contextual:

> *The thing that I love and I still love about being here is that the university's so collaborative… and collegial and so wonderfully absent of academic politics. And that's not true of other campuses and it's probably not true of other research areas within this campus as well, but it certainly is within the [Unit].*

Several of the faculty interviewed shared that they believed that the efforts on behalf of WISELI were having a positive impact on the status of women at the university.

> *I think it's improving. I think that there's more awareness and that helps. I think the WISELI seminars for hiring—I think that was a really good target, to work with the search committees to try and make them aware of things up front. I really think that has some benefits. And it has long-reaching benefits because even if in one particular search they end up with a candidate that doesn't have a lot of diversity, that's fine. They thought about the process, it causes more conscious examination of those issues. And I think that's valuable and I think, actually search chairs have been quite happy with that because they didn't quite know how to approach the issue too.*

This faculty member goes on to discuss the importance of the data that has been generated by both WISELI and the Committee on Women Report:

> *There was the salary equity exercise that did a lot to raise awareness and to circumvent some of the big mistakes that we made in the past. I mean, it is going to prevent some people from getting away with some of the things that they've gotten away with in the past. It's not perfect, but it's raised awareness. The final reports that WISELI puts out and the data from the Committee on Women has been a tremendous asset because now for the first time historically—I mean this has been in place for about 8 years now—but having them produce those reports on the status of women in the University from a financial standpoint—salary standpoint—has been big, because now it is very open and you can look at these things directly and see this is what is happening; this is where I stand; am I normal? Am I not normal compared to everybody else or where do I fall? Having the data available has been a huge thing because even if your perception is bad or your perception could be good, it is due to ignorance, so having that as a normalizing activity has been great.*

<u>Lack of Changes in Climate</u>
At the same time, participants provided mixed responses to whether WISELI was improving the overall campus climate. Slightly less than half of the participants perceived WISELI as definitely improving campus climate. A few felt unsure, yet in most cases optimistic, about WISELI's effect on campus; the remainder did not know or felt that WISELI was not having any effect on campus.

Participants who were uncertain that WISELI had affected campus climate or felt that it had no impact did not often elaborate on their answers. Many simply stated that they had not directly observed any changes. Some followed up with the caveat that other women on campus might feel differently.

> *No, well I say that from my viewpoint. Other women might feel differently. So I don't want to sound all negative.*
>   *******
> *As I said, no impact whatsoever…But that doesn't mean WISELI is not a wonderful thing. I am just saying it has had no impact on me.*

At least two interviewees felt they did not have enough information to gauge the effect of WISELI on campus climate. One of these women explained that she had not encountered any climate difficulties, and did not know if women who had challenges were seeking out or benefiting from WISELI's presence on campus.

> *Um, I don't know. Because I don't know if the people who were experiencing difficulties sought help. I just don't know what their response to, when they would encounter things. I heard the stories but I don't know that they then went for advice or help. But obviously they need to.*

In summary, the information gathered through these interviews reveal that the experiences of climate are somewhat varied between participants. In general, although not exclusively, participants who had the highest levels of interaction with WISELI and participated most frequently in WISELI activities felt the most strongly that WISELI was positively affecting the campus climate for women. Those interviewees who were most unfamiliar with WISELI and its activities were more likely to report that they either did not know if WISELI was having an effect on campus climate or that they did not feel that it was doing so.

WISELI Research: UW Climate Results from Surveys, 2003 and 2006

In the following table (II-1), we see the strong tendency for women faculty, non-mainstream faculty, and faculty attending WISELI events reporting that climate has very much improved for them personally.

Table II-1: Science faculty's experiences of *positive* climate change between 2003 and 2006.‡

	N	For Me Personally on Campus		For Women Faculty on Campus
All Faculty in the Biological & Physical Sciences	572	20.5%		40.1%
Women	131	31.3%	*	33.3%
Men	441	17.4%		42.6%
Faculty of Color	47	20.0%		40.6%
Majority Faculty	525	20.5%		40.1%
Department Chair	43	14.0%		51.6%
Not Chair	530	21.0%		39.1%
Non-Mainstream	204	27.0%	*	34.8%
Mainstream	356	16.4%		42.8%
Attended Hiring Workshop	55	30.9%	*	44.7%
No Attendance	513	19.3%		39.1%
Any WISELI Participation	115	28.7%	*	41.8%
No WISELI Participation	453	18.3%		39.0%
Departmental participation in:				
Climate Workshops	214	22.8%		43.4%
No Participation	358	19.2%		38.2%
Hiring Workshops	381	20.7%		40.2%
No Participation	191	20.1%		39.9%
Celebrating Grants	131	18.6%		40.2%
No Participation	441	21.1%		40.1%

‡ Responses to questions 32a and 32e of the 2006 *Faculty Worklife* survey; reported as fraction of respondents indicating climate is *significantly* or *somewhat more positive*, as compared to climate *stayed the same*, *somewhat*, or *significantly more negative*.
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons.

In this next table, II-2, we see the percentage of respondents indicating that climate is significantly or somewhat more negative in 2006 than it was in 2003, and we see rather low percentage compared to the positive climate change seen in Table II-1.

Table II-2: Science faculty's experiences of *negative* climate change between 2003 and 2006.[‡]

	N	For Me Personally on Campus	For Women Faculty on Campus
All Faculty in the Biological & Physical Sciences	572	13.8%	5.9%
Women	131	11.7%	7.6%
Men	441	14.4%	5.3%
Department Chair	43	16.3%	9.7%
Not Chair	530	13.6%	5.6%
Attended Hiring Workshop	55	10.9%	13.2%
No Attendance	513	14.2%	5.2%
Any WISELI Participation	115	10.4%	11.0%
No WISELI Participation	453	14.8%	4.4%
Departmental participation in:			
Climate Workshops	214	16.1%	6.3%
No Participation	358	12.4%	5.7%
Hiring Workshops	381	14.3%	5.1%
No Participation	191	12.7%	7.5%
Celebrating Grants	131	10.9%	6.1%
No Participation	441	14.7%	5.9%

‡ Responses to questions 32a and 32e of the 2006 *Faculty Worklife* survey; reported as fraction of respondents indicating climate is *somewhat* or *significantly more negative*, as compared to climate *stayed the same, somewhat,* or *significantly more positive*.

There is little difference among groups in the overall perceptions of climate on the UW-Madison campus (Table II-3). Faculty of color are significantly less likely to indicate that overall climate is negative however, compared to their majority peers, and faculty whose department chairs participated in a climate workshop are significantly more likely to indicate an overall more negative campus climate. Without more analysis it is difficult to understand why the latter should be the case. Perhaps departments who have participated in climate assessments are more attuned to problems across campus.

Table II-3: Science faculty's experience of overall, campus climate change between 2003 and 2006.[‡]

	N	Overall Climate More Positive	Overall Climate More Negative	
All Faculty in the Biological & Physical Sciences	438	21.0%	21.0%	
Women	85	24.7%	14.1%	
Men	353	20.1%	22.7%	
Faculty of Color	37	16.2%	8.1%	*
Majority Faculty	401	21.5%	22.2%	
Department. Chair	36	27.8%	22.2%	
Not Chair	402	20.4%	20.9%	
Non-Mainstream	159	21.4%	23.3%	
Mainstream	271	20.3%	19.9%	
Attended Hiring Workshop	39	28.2%	15.4%	
No Attendance	395	20.3%	21.3%	
Any WISELI Participation	83	20.5%	18.1%	
No WISELI Participation	351	21.1%	21.4%	
Departmental participation in:				
Climate Workshops	163	20.3%	27.6%	*
No Participation	275	21.5%	17.1%	
Hiring Workshops	289	23.2%	19.4%	
No Participation	149	16.8%	24.2%	
Celebrating Grants	97	20.6%	19.6%	
No Participation	341	21.1%	21.4%	

‡ **Responses to question 32i of the 2006** *Faculty Worklife* **survey; reported as fraction of respondents indicating climate is** *somewhat* **or** *significantly more positive* **and** *somewhat* **or** *significantly more negative***.**

* **T-test between groups significant at** *p*<.05; **no adjustments made for multiple comparisons.**

In Table II-4 we see a significant increase in the women and department chairs' skills in addressing climate issues at UW-Madison. For women, this increase appears to be associated with participation in WISELI events, and for the chairs it is associated with participation in the WISELI climate workshops for department chairs (*p*<.06). Attending a hiring workshop, or attending any WISELI event, is also associated with a skill increase in addressing climate issues in the department. Finally, very little group differences arise in the skill of addressing climate at UW-Madison overall; faculty rarely report high skill in this areas. The only group reporting an appreciable increase in skill at addressing climate issues at UW-Madison overall are those who participated in any WISELI event.

Table II-4: Science faculty's acquisition of skills to address climate issues at UW-Madison.[‡]

	N	High Skill 2003	High Skill 2006	Skill Increase 2003-06**	
All Faculty in the Biological & Physical Sciences	505	7.2%	11.5%	11.6%	
Women	119	8.5%	14.3%	17.1%	
Men	386	6.8%	10.6%	10.0%	
Department Chair	39	7.9%	7.7%	10.5%	
Not Chair	466	7.1%	11.8%	11.7%	
Attended Hiring Workshop	52	5.9%	15.4%	17.7%	
No Attendance	449	7.2%	10.9%	11.1%	
Any WISELI Participation	110	6.4%	14.6%	18.4%	*
No WISELI Participation	391	7.2%	10.5%	9.9%	
Departmental participation in:					
Climate Workshops	196	6.7%	9.7%	10.9%	
No Participation	309	7.5%	12.6%	12.1%	
Hiring Workshops	340	6.6%	11.2%	12.0%	
No Participation	165	8.5%	12.1%	11.0%	
Celebrating Grants	112	5.4%	13.4%	17.3%	
No Participation	393	7.7%	10.9%	10.1%	

‡ **Responses to question 34l of the 2006 *Faculty Worklife* survey.**
* **T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons.**
** **Fraction of respondents reporting *no skill* in 2003 and either *some* or *high skill* in 2006 as well as those reporting *some skill* in 2003 and *high skill* in 2006.**

In summary, female faculty in biological and physical sciences are reporting significantly higher positive climate change for themselves personally than are men, on the campus overall; the same is true for faculty who do "non-mainstream research." Male faculty are perceiving a much

improved condition for women faculty on campus; much higher than women themselves are perceiving. Participation in WISELI events is associated with a perception of positive climate change for the respondent personally, and simultaneously associated with a more negative perception of the climate for faculty of color. Participation in WISELI events is associated with higher skill gains in many actions related to improving climate.

Summary: The Climate at UW-Madison

When asked about the effects of WISELI on overall campus climate, the interviewees referred back to two of the themes mentioned previously—the value and use of data to inform others about inequities, and the increase in awareness and discussion about various issues. Because of WISELI, one administrator thinks that the discussions about climate are more nuanced—they are "deeper, richer, and different from the very…surface way that…most of the faculty used to see climate five years ago." Results from the interviews with female faculty suggest that a little less than half feel that the climate at UW-Madison has improved in the years since their initial interview (approximately 3.5 years). They attribute this change to the visibility of WISELI, the data the staff has collected and disseminated, and the "normalizing" of discussions about gender issues. Several indicated that the climate is overall "pretty good" and used words such as collegial, collaborative, respectful and community-oriented to describe the UW. A few were unsure of the effects of WISELI on campus climate and did not feel that they had enough information to determine its effects. In general, participants who had the highest levels of interaction with WISELI and participated in WISELI activities felt that WISELI was positively affecting the campus climate for women. Those interviewees who were most unfamiliar with WISELI and its activities were more likely to report that they did not know if WISELI was having an effect on campus climate or that they did not feel it was doing so.

Results from the campus climate surveys are consistent with the interview data referred to above. Fewer than 50% of the faculty in the biological and physical sciences who were surveyed reported a climate change in a positive direction, with more women reporting a change than (31% vs. 17%). Fourteen percent of the respondents noted a negative climate change on campus for themselves, with men noting this more often than women (14% vs. 12%). Interestingly, male faculty members perceive a much-improved condition for women on campus than women report themselves. Also, the 2006 survey results suggest that faculty members who participated in any WISELI event felt more skilled in addressing climate issues at UW-Madison, as compared to the results from the 2003 survey.

CHAPTER III: DEPARTMENTAL CLIMATE

The home department of faculty is often the most immediate, important and influential aspect of a faculty member's working environment. Thus, in accordance with the WISELI evaluation goals of understanding and improving the climate and environment for female faculty at UW-Madison, we asked participants several questions about the climate in their department. These questions were aimed at revealing some of the departmental-level, climate-related factors, barriers, attitudes, and experiences of women in science, and also understanding how WISELI interventions might be affecting these factors. We were particularly interested to discover whether the climate in departments had changed for participants since the initial interview. If it had changed, we asked participants to discuss what factors had attributed to the change. In the following areas, we describe participants' responses to these questions, highlighting key aspects of departmental climate that were raised by multiple participants. To a limited extent, we discuss these responses in relation to the first round of interviews.[18] In particular, we focus on issues of change in departmental climate and interviewees' perceptions about the causes of these changes.

Slightly more than half of the respondents felt there was a generally positive climate in their department; the remaining half discussed a number of climate problems. Some of these problems appeared directly related to gender, and were referenced in this way by interviewees. Other problems were more general, such as department factions or sub-disciplinary sections competing for resources. In each case, the interviewees provided rather individualized accounts of the situation in their departments. For example, some women reported an overall positive climate, but still pointed to problems with resource distribution. In other cases, interviewees were unhappy with their departmental climate, but still listed some positive aspects, such as flexible work scheduling. Each of these accounts and the particular departmental contexts cannot be discussed here. There were however, several themes related to departmental climate that emerged repeatedly in the interviewees. To some extent, some of these themes are repeated from the first set of interviews conducted in 2002, such as the importance of the department chair in setting a "tone" and providing support for faculty. These themes, or factors that affect departmental climate according to the 2006 interviews, are discussed below.

Perceptions of Change

Responses from participants about their perceptions of climate change were mixed. Slightly more than one-third of the respondents felt that their departmental climates were improving or had improved in the previous four years. Approximately the same number of participants reported that the climate had stayed the same or they were uncertain whether it had changed. A smaller portion of respondents (about four) reported a decline in their departmental environments.[19]

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[18] The highly variegated nature of the discussions on departmental climate in the first round of interviewees makes a pre-post comparison impossible for this study. To address this limitation, participants' own perceptions of departmental change since the first interview are discussed.

[19] In one case, the interviewee was a college administrator, so her comments were directed at the climate of the college in which she served. In another case, the interviewee had changed departments. The improvement in climate for her personally resulted from the transfer. She did not feel that there was improvement in the departmental climate from which she departed.

Factors Conducive to a Positive Departmental Climate

Among the interviewees who reported that their departmental climate was positive, several reasons were suggested for this positive climate. These included good leadership and support from the departmental chair, a theme repeated from the 2002 interviews. Other factors included support for families and/or flexible scheduling (also mentioned in the 2002 interviews); positive collegial relations—including effective and civil staff meetings; support for women in the department; the presence of women in leadership positions, and fair distribution of resources.

Commonly, interviewees pointed to new leadership, generally in the form of departmental chairs, as the locus of change. In some of these cases, the interviewee had actually assumed the chair position in hopes of instigating departmental change. The following quotes give some insight into the ways that new leadership was affecting departmental climate, as reported by interviewees:

> *Well I think the [new chair] is geared toward building the department. I think that he truly sees that the success of the individual faculty and the success of the individual programs will lead to building the department. And so I mean he's not looking at sort of, you know, building people in groups as much as he is building the whole department ...which is very different than a lot of other chairs because they're not really secure in themselves. So they don't really understand how to help other people become successful.*

<p align="center">*****</p>

> *So I think over time there was some building of trust with the department and the faculty over the previous administration which had eroded some of that...I think the [administrator] was a much more collaborative person, straight-forward. He inspired trust in people because he kept to his word, so there was just kind of a return to the more open communication that it had been.*

When describing the effects of departmental administrators on a positive climate, interviewees discussed chairs that were accessible, honest, organized, accountable, and supportive of faculty:

> *It's the same chair, yeah. I could see that if he left and somebody replaced him that things might change a bit. But he's I think a very honest person, and if you go to him and ask him about something, like there's a problem, he'll tell you very honestly whether he can do it or not. He doesn't play politics, and people in our department really respect him.*

<p align="center">*****</p>

> *I don't think my boss could have been probably more supportive although he couldn't really let me go part time. I mean he just couldn't; that wasn't something that was a viable option...But he certainly went to great lengths to try and support me through a difficult time. You know taking more on himself and giving me the latitude to flex my time when I could so that I could make things work. Helping me though the tenure to clinical track transition so that I didn't end up a year from now basically losing my job.*

<p align="center">*****</p>

[The chair] gets it. She just gets it…she impressed all of us with her knowledge and ability to work with people and to set up the human infrastructure to put partnerships together.

Interviewees also reflected on good collegial relations as producing a positive departmental climate. Rebecca notes:

I think I have a very sort of friendly and generally open-minded department and I can compare that to when I go to other departments and see how the chairs interact with their faculty. I won't say that my department is exceptional but I think that it's not the norm the way we interact with one another. So when I visit other places I see a lot of departments are driven by large egos and very loud people and most of those loud people are usually men. Here we have on our faculty two of those that are very, very loud, and they're balanced by the rest of us I think.

Finally, the discussions with interviewees on positive departmental climate and its causes often referenced flexible schedules and support for faculty's role in raising families as important in setting a good tone in the department. This was also cited as a very important issue to the women faculty in the 2002 interviews.

Having flexibility in the schedule is key. I can't imagine trying to have done this if I was expected to punch a clock, walk in at eight A.M. everyday and punch out at five o'clock everyday… I still work my hours or more, but I leave at 2:00 on Tuesdays and Thursdays.

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For instance, we had an assistant professor just joined the faculty and eight months later she announced she was pregnant. And she's concerned that the timing is bad. We made sure that she knew that no timing was bad, that this was to be celebrated and we would do what we can in terms of rearranging teaching loads and giving her a light semester following the birth in the spring and other kinds of things.

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So I don't have a long term history, but a lot of the younger male faculty have young kids and are coming in at nine because they dropped their kids off and coming in and leaving —which I think is really, really good, because then obviously the women can have that flexibility as well. So I have never seen anything, I have never heard since I have been here any comment about, 'So and so, well where are they? Why weren't they at this meeting?' in any sort of tone, which certainly wouldn't have been—was not true twenty-five years ago.

Some interviewees mentioned the importance of having a good number of female faculty as an important aspect of a positive climate. In particular, having women as senior faculty was described as especially important because of the role models it provided for other women. Jane describes this:

[Our department] actually has quite a few women faculty and senior women faculty. And

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so, and they have always been viewed as full members. Right, and so there has never been any doubt that, 'Oh you're a woman, you can't do this.' Because they have a role model, a woman professor who was chair, who is extremely well respected, who is up in the top ranks of the department. We hired in another senior woman. So we've got these kinds of role models and so there was never any expectation of anything but that we would be continuing in that kind of pattern.

Staying the Same or Uncertainty about Change

Several interviewees reported that the climate had generally stayed the same in the time since their first interview, or that they were not certain if there had been any change. Among the half reporting no climate change and a generally negative climate, interviewees described both poor leadership and often a particularly difficult climate for women. One respondent, who detailed a very difficult tenure case and poor treatment from administrators, described her department as "toxic." Another respondent described the climate as "very exclusive" and the faculty as "set in their ways." A third interviewee, who wasn't sure if the climate was getting better or not in her department, described a legacy of climate problems, some related to gender and sexual harassment. She also described an ongoing problem with collegiality:

It's hard to say. I think that…I don't know if it's gotten better or worse. I think that the department has factions. I don't know if the factions have gotten better or worse. The fact that I'm the chair though, has sort of changed the balance of power a little bit because I'm from one of the areas that historically has had very little influence.

Declining Departmental Climate

Among the faculty that reported a declining climate in their department, some reported that the arrival of a new chair had caused the climate to decline. In one case, the interviewee felt that the arrival of a new chair had created considerable strife among the faculty and staff. Prior to this chair's arrival, she felt that the department "was doing really well," and had worked through a number of problems: "we worked as a team." She described the new chair as showing favoritism, aggravating staff, engaging in gender-biased behavior, and dividing the faculty. In a different circumstance, the environment was described as declining due to a new administrator, but still collegial. Renee explains:

I think it is good, although I think it's less good now than it was with [previous chair]. I think [she] was very good at…we had a lot of faculty meetings which people didn't like but it was good because we actually sat in a room together more often and they were short because there wasn't that much business and people liked that. And now we have one a month and about every other one is cancelled and then they go long and they're not as collegial I think. She just ran things well. But I think people within the section like each other, get along. I don't think the environment is in any way hostile.

In the remaining cases, individualized factors were described as causing climate decline. One interviewee suggested that the issue of how her department "fit" in a changing research climate was causing angst, as were retirements and a decline in funding that were pressing the work load of faculty. The other interviewees described "turf battles" and "divided faculty" as problems. In one department, a split decision over a faculty member's tenure case had divided the department,

in the other, faculty in different sub-disciplines within the department were competing for resources, research emphasis, and the priority focus for incoming faculty.

Campus administrators and staff provided a campus-wide perspective and noted that there are many departments who are "stuck" and "are offended if [they] suggest the department needs to change." Three of the interviewees identified departments within the School of Medicine and Public Health as particularly difficult to change. Joanne, a faculty member in this school replies to the following question:

> I: So specifically what do you think an organization like WISELI could do or would you like to see them do, that would help meet some of the needs that you're concerned about?

> R: *Maybe at a meeting with the women in the medical school…So I don't know if WISELI has to come to the medical school or the medical school has to come to WISELI. I don't know how to do it but we have to get connected…Right now we don't have the connection. I can't say for the whole medical school but - but that's my thing - maybe I'm totally wrong, maybe I'm totally wrong but that's my perception…*

This perception was consistent with the thoughts of two administrators within the Medical School. Yet, they felt some responsibility in getting WISELI's message enacted:

> *I think [WISELI] has done a great job with making it an inclusive program, you know, so I don't see that as a barrier. It's more the message is received you know. But how it's received, [the Medical School] is responsible for working on that. I mean, it doesn't take much, you look at our leadership group, our former leadership group in the Medical School and we have 26 departments, and we have had 1 to 2 women chairs, I've been here a long time. And sometimes it's been, it was 2 and then it was 1. And now it's 2 with one on her way out. So, it's pretty clear to me that we need to be paying attention [to gender issues].*
>
> <div align="center">*****</div>
>
> *In the med school, continuing penetration hasn't been good. WISELI has provided assistance, but hasn't found long-term buy in here. The penetrability of WISELI into faculty, especially young faculty, hasn't had enough impact.*

Factors Contributing to Negative Climate

Among those who described their climate in negative terms, some similar categories emerge. Common reasons reported for poor climate included a divided faculty or poor collegial relations; lack of support for faculty parenting responsibilities; an atmosphere that was toxic, unsupportive or isolating for female faculty; and ineffective or unsupportive departmental chairs, among others. As discussed above, several interviewees also pointed to divisions and conflict among faculty as a source of negative climate problems. These divisions were often specific to the department, but commonly were related to conflicts over resources, competition among sub-disciplines within the department, or divided feelings about tenure cases or administrators, as described by Joanne:

> *I don't know if it's a crisis, but one of the women faculty did not get tenure. We did not vote to give her tenure the first time around. She appealed and then she got it but that generated big stress for everyone. That really did not help the atmosphere here…People were quite emotional about it. We had two groups basically - for and against. It did not help the atmosphere. People still talk about it and it happened about a year ago already.*

In several cases, interviewees described a climate that was hostile or unsupportive of women's (and sometimes' men's) roles as care givers. In particular, women were not encouraged to take maternity leave when needed, and there was a lack of flexibility for them to attend to their family needs.

> *And you know the questions that they ask about family [during faculty interviews]. How could you do what I did, and have a family? And it's not looked upon favorably in our department if you take maternity leave and whatever. A lot of these guys have their wives at home and they take care of them. And that's fine, but that's not me.*

> *******

> *And so now my generation coming through, a lot of us do have children and I think we're doing the next harder thing, which is to succeed and have families. And I'm not sure that's been as supported. There's not ever been anything overt, shall I say, as some of these other blatant inequities that I've pointed out. I'm pretty sure that I would have said at the last meeting that I was encouraged not to take a tenure extension and my son was eleven months old when we first moved here. And I think having small children is just as hard having a baby and I should have been given two years of tenure extension because I had two children under the age of five.*

In a few cases, interviewees described the climates in their department as generally unsupportive, isolating, or even hostile for women. In each of these cases, interviewees described individualized situations in which they experienced hostility or lack of support. However, common themes included difficulty in attaining tenure, uneven distribution of resources and work responsibilities among women and men, the absence of other female colleagues and role models, and a lack of endorsement and/or encouragement from departmental administrators. For example, one interviewee reported that, after a surprising and contentious tenure case rejection, her chair would not meet with her personally to tell her that her case had failed. Rather, he sent her an email. Another interviewee reported that her chair had distributed raises unequally by gender, violating college rules and ignoring the input of faculty. In the quotes below, other interviewees describe various situations related to gender inequity that contribute to a negative climate:

> *So discrepancy? Yeah. A male faculty comes in, asks an untenured female faculty to take over seminar series. That's fine. Tenured female asks untenured male - 'No we protect our junior faculty.' Who do we protect? We protect our junior male faculty. I mean this is blatant.*
> *******
> *And I went to the chair and I said, 'you know, I'm just not happy here. I have to do*

something different here. I have to either move my office out of this building or I need to do something different because I cannot exist on a daily basis with the type of feelings I have about the faculty. I'm not feeling a part of the department.' And he blew me off. And then proceeded to go out of town for the entire fall and never contacted me so in blowing me off he basically said, 'I can't do anything to help you.'

<p style="text-align:center">*****</p>

And then the newest hire after us was also a woman and then we've hired two men after that and it's been watching the discrepancy in how I was treated and how this junior woman is treated relative to how these two men are treated that has really opened my eyes and shocked and appalled me frankly… So now this newest male faculty that has come in was also told, 'Oh you know whatever you want to teach.' So [name], who's the junior woman is teaching [title of course] which is not her expertise, is not her interest. And she was just told this is what you're going to teach. The two male faculty had been told, you know, 'Teach what you want,' basically.

Does More Women Matter?

As the interviews continued, several interviewees indicated that their departments were indeed making an effort to hire additional women:

I like to think we have become very overtly supportive of assistant professors and we actually have quite a number of female assistant professors and things like that. But I'm not sure it wasn't there already. So in that sense it's a continuing of a tradition, in a way.

<p style="text-align:center">*****</p>

I was essentially the first of [several] assistant professor hires…so there aren't too many people in the middle there, and so in terms of a supportive group of colleagues, and now that the first of us has tenure, we feel like we all just want to follow her footsteps, and that is sort of nice.

The majority of interviewees stated that having more women as colleagues and leaders made a positive difference in the departmental and UW's climate. Interviewees offered a variety of reasons why they felt this was so. Most commonly, they stated they felt greater comfort in speaking up at meetings, greater camaraderie, and less isolation. In direct response to the question of how women peers and leaders made a difference, the following quotes were offered. Brenda notes:

I find that I'm not the only woman on a committee—token woman—and that makes a big difference. A big, big difference if you're going to go out on a limb and speak out… Many of the women in the [meeting] made comments, the women chairs and it felt different to me. It felt more comfortable. They weren't always positive comments. Some of them were critical.

<p style="text-align:center">*****</p>

Well, I just think that in faculty meetings - you can tell. At least one of them [women] is pretty outspoken. The one that's in [my department] is pretty outspoken. There's somebody else in a meeting or something leaning over to and making a comment. And the

guys are all doing it. And so it just does, it makes it a little more comfortable.

<div align="center">*****</div>

I think because there is kind of safety in numbers, that kind of paradigm. When you have more people seeing things similar to you or being willing to express opinions that differ, you are not ostracized, you don't feel different, you are willing to think more creatively, because that kind of oppression stifles creativity. And when you can't think out of the box you don't want to let yourself do it for fear of getting your hand slapped and then great ideas are lost. So, having kind of a safety, a safe place, to think creatively and have your ideas reinforced is hugely important. I can't really say that all women experience this in the same way but I'm willing to bet when women have other women peers, it makes life a whole lot easier.

Discussing the importance of their departments' decisions to hire more women, two interviewees commented on how they had previously felt isolated:

And my first faculty meeting was very intimidating because I was the only woman in a room full of twenty men. And I didn't talk probably for the first two years that I was there.

<div align="center">*****</div>

I think for me, I came when there weren't very many [women]. So I guess I'm hoping that maybe it's a better climate for them. I think it's helpful particularly for people who are balancing family you know, having kids and career. Then I think it's especially helpful to have other women who also understand what it's like to do that.

Related to the issue of isolation, two women commented that the lack of women, particularly in leadership roles, makes gender more of a visible issue, which can inhibit collegial interactions, produce an uncomfortable environment for women, and take away from an emphasis on science:

I still think it's unusual for women to be in those roles. I still think there's a lot of consciousness on the part of your male colleagues of your gender. That it is still too few [women] to make it seem like the norm and so that tends to be something that's present in most of your interactions. On both sides, the sort of acknowledgement that this is an unusual situation and I think that tends to make women feel, 'do I really belong here?' because there's always this kind of 'oh, you're a woman,' and that isn't necessarily a value judgment but it still makes you sort of sit there and go 'why are you surprised?'

<div align="center">*****</div>

[Having more women] creates more of an environment where whether you are male or female is not an issue. It's just, we're a group of scientists and academics who are working together at the same institution. So I think it's just—having more of us makes it less unusual that there is any one of us there. So I just think that's a good thing.

In other cases, interviewees felt that women brought certain qualities and styles of communication and changed the dynamics of departments in positive ways. Elaine notes:

Well, it is a huge difference because I really think that we [women] see things differently in terms of just our interpersonal skills, our lenses are different. We see things in a more collaborative sense of building these bridges and these partnerships. It is not like men don't, but they do it differently and instead of being the lone voice of providing ideas and insights over in [department with no women], here, there are many people who see it differently. Some like me, some not, but it is not unacceptable to be different. They embrace the differences and say, 'That's an interesting idea, let's think about that. How can we incorporate that with these other ideas?' To have that kind of affirmation that you're not unusual or bad because you are giving different perspectives makes all the difference in the world.

<div align="center">*******</div>

I think when women try to bring up points in discussions, they tend to be more inclusive and try to bring in a variety of viewpoints. And I think that is sometimes perceived as not being a strong enough message. So the forcefulness with which one point of view is brought out is less for women because they're trying to seek a compromise and trying to reflect what their colleagues have said and the points that might be positive in that, as well as perhaps their own view that might be somewhat different…Where I think sometimes men want to argue one point of view and expect that others will argue their points of view and that's how you reach it… And there's no way you can get around the fact that when there are less discrepancies in the numbers that it works into a different dynamic, and so when you're the only woman in the room it is different than when there are at least a few of you, and that's a big change. I mean I think there's a little of the chicken or the egg situation about whether you need more women before things change, or you create change and then more women come into those roles. I think it's both. But I do see the dynamics of interactions in the communication that happens and those interactions as being influenced a lot by numbers. So when I'm the only woman in the room, I tend to find it more difficulties in communicating and when there are more women around, there's just a different tone of the discussion and it seems to be easier to work through.

At least one woman felt that the addition of women in her department did not make a difference. Others were quick to clarify that whether more women mattered or not really depended on the type of women that were hired. One interviewee suggested that "sensible" and "responsible" senior women can help elevate the status and climate for women for the whole department, while others can actually harm the reputation of women. In a similar vein, one woman asserted the importance of going beyond tokenism to hire high quality female candidates. Mara notes:

Well it's interesting. I was having a discussion yesterday with one of the fellows because you know we had a female [administrator], which is very unusual in [department] and she prioritized bringing in women but she cared about who those women were. And now we have a male [administrator] and my colleagues and I were talking about how he seems to think a female body is a female body. It doesn't matter who it is or if they're any good. And so, so he's decided to recruit certain people and no one can figure out why he's recruiting these people because they're not, they don't seem right for the job.

Ironically, the interviewee noted that while diversity was improving departmental climate in general, things had become personally more difficult for her due to her increased visibility and leadership as a woman.

> *I think department climate [is improving] in that the diversity thing is getting better. I think that moving into a position that had a lot more power and a lot more money involved, it has been much more challenging. And now I find that there are some colleagues that react much differently. There's a lot more jealousy, a lot more challenge, a lot more competition I get from some of the men faculty.*

In summary, interviewees described their departmental climate in various ways, but highlighted a number of issues that contributed to negative or positive climate, such as the presence of other female colleagues and effective chairs and leadership. Some of these issues were also raised in the interviews conducted in 2002. When queried, more interviewees reported an improving departmental climate than a declining departmental climate, which corresponds to the goals of WISELI to improve the working environments of female faculty. Interviewees attributed improving climates to a number of factors, many which were specific and individualized to the department and the female faculty who we interviewed. However, some common themes were new or improved leadership (generally, departmental chairs), and new faculty hires, particularly women. Although none of the interviews cited WISELI as a source of departmental climate change, the themes raised in the interviews directly relate to the foci and work of WISELI. For example, they offer additional affirmation about the essential role of chairs in setting the tone for departments, and therefore the importance of WISELI's workshops with chairs. Second, the interviews offer some anecdotal evidence about the effects of more women and more women leaders on the perceived climate of the department. The majority of interviewees report that more women in their department make a positive difference for them and their working environments. In this way, the data again affirms the importance of WISELI's varied efforts, including the search committee workshops, to ensure that more women are hired into departments across the UW campus.

WISELI Research: Departmental Climate Results from Surveys, 2003 and 2006

Overall, UW-Madison faculty in the biological and physical science reported positive perceptions of the climate they and others experience within their primary department (Table III-I). Approximately three-quarters of science faculty rated their overall department climate as *positive* or *very positive*. A similar proportion agreed strongly or somewhat that their department's climate for women and faculty of color is good (84.3% and 76.0%, respectively). While this overall picture is rather positive, differences in science faculty's responses suggest that climate experiences vary considerably. In particular, some faculty groups tended to report more or less positive perceptions of their primary department's climate:

- Women faculty in the biological and physical sciences rated their department's climate less positively than their male colleagues (67.4% vs. 81.4% report a positive department climate). They also less frequently agreed that the climate for women and faculty of color in their department is good as compared to men (71.1% vs. 88.8% agree and 49.4% vs. 82.6% agree, respectively). Each of these gender differences are statistically significant at $p<0.05$.

- Science faculty who describe their research as non-mainstream were less likely to report a positive department climate, both generally and for faculty of color and women. These differences are statistically significant at *p*<0.05.
- Biological and physical science department chairs rated their department's climate more positively than all other science faculty (97.3% vs. 76.6% report a positive climate); this difference is significant at *p*<0.05. Chairs were also more likely to report positive perceptions of their department's climate for women and faculty of color.
- The gap between how male and female science faculty perceive their department's climate for women did not change significantly between 2003 and 2006. With respect to faculty of color in the biological and physical sciences, some significant changes were observed. Women faculty and department chairs in the sciences were both less likely to describe their department's climate for faculty of color as positive in 2006 than in 2003.
- Participation in WISELI events is correlated with significant improvement for some department climate survey items. Among science departments that participated in WISELI's climate or hiring workshops or received a Celebrating grant, faculty were more likely to report that they "fit" in their department in 2006 than in 2003. Faculty in participating departments were also significantly more likely to report feeling respected by their colleagues in 2006 than 2003.

Table III-1: Science faculty ratings of their primary departments' climate (2006).[‡]

	N	Positive Climate**		Negative Climate**		Climate for Women is Good		Climate for Faculty of Color is Good	
All Faculty in the Biological & Physical Sciences	597	77.9%		6.4%		84.3%		76.0%	
Women	152	67.4%	*	9.5%		71.1%	*	49.4%	*
Men	445	81.4%		5.4%		88.8%		82.6%	
Faculty of Color	46	68.9%		6.7%		89.1%		71.8%	
Majority Faculty	551	78.6%		6.4%		83.9%		76.5%	
Dept. Chair	42	97.3%	*	0.0%		95.2%	*	90.0%	*
Not Chair	555	76.6%		6.9%		83.4%		74.9%	
Non-Mainstream	212	64.1%	*	12.9%	*	75.5%	*	66.4%	*
Mainstream	371	86.2%		2.7%		89.0%		80.2%	
Attended Hiring Workshop	53	81.1%		9.4%		83.9%		56.7%	*
No Attendance	544	77.7%		6.2%		84.6%		77.8%	
Any WISELI Participation	112	78.2%		8.2%		75.0%	*	56.7%	*
No WISELI Participation	483	78.0%		6.1%		86.3%		80.3%	
Departmental participation in:									
Climate Workshops	220	80.0%		6.4%		87.2%		73.0%	
No Participation	378	76.6%		6.5%		82.5%		77.7%	

	N				
Hiring Workshops	393	77.4%	6.4%	83.4%	71.9%	*
No Participation	206	78.9%	6.5%	85.9%	82.9%	
Celebrating Grants	145	81.4%	4.1%	89.0%	75.2%	
No Participation	461	76.7%	7.2%	82.9%	79.5%	

‡ Responses to question 21 of the 2006 *Faculty Worklife* survey.

* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. Highlighting indicates significant longitudinal change where <mark>yellow</mark> and <mark>pink</mark> indicate change is significant at *p*<0.05 and *p*<0.10, respectively.

** "Positive climate" indicates respondents who say their departmental climate is positive or very positive (vs. very negative, negative, or mediocre). "Negative climate" indicates respondents who say their departmental climate is negative or very negative. This item was not asked in 2003.

Department Climate Change

In the 2006 survey, faculty were asked to evaluate whether and to what degree their department climate had changed since January 2003 (Table III-2). Most biological and physical sciences faculty reported no change in their own experiences of department climate between 2003 and 2006. For those who did indicate a change, faculty more often reported that their department's climate had improved as compared to deteriorated. This is true for science faculty as a whole, but more marked for women and faculty who describe their research as non-mainstream. Both women and non-mainstream science faculty were significantly more likely to report an improvement in their personal experience on campus and in their departments.

Table III-2. Self-reported experience with departmental climate change between 2003 and 2006.‡

	N	Climate *improved* for me in department**		Climate *worsened* for me in department**[8]
All Faculty in the Biological & Physical Sciences	572	28.7%		15.9%
Women	131	43.5%	*	14.5%
Men	441	24.3%		16.3%
Faculty of Color	457	27.7%		12.8%
Majority Faculty	525	28.8%		16.2%
Department Chair	43	21.4%		14.3%
Not Chair	530	29.3%		16.0%
Non-Mainstream	204	35.8%	*	16.2%
Mainstream	356	24.2%		15.5%
Attended Hiring Workshop	55	38.2%		12.7%
No Attendance	513	27.7%		16.4%
Any WISELI	115	35.7%		15.7%

	Participation				
	No WISELI Participation	453	26.9%	16.1%	
Departmental participation in:					
	Climate Workshops	214	33.2%	15.4%	
	No Participation	358	26.0%	16.2%	
	Hiring Workshops	381	29.4%	13.1%	*
	No Participation	191	27.2%	21.5%	
	Celebrating Grants	131	26.7%	7.6%	*
	No Participation	441	29.3%	18.4%	

‡ **Responses to question 32b of the 2006 *Faculty Worklife* survey.**

* **T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons.**

** *Significantly* and *somewhat more positive* vs. *stayed the same, somewhat* and *significantly more negative*.

*** *Significantly* and *somewhat more negative* vs. *stayed the same, somewhat* and *significantly more positive*.

Participation in WISELI events was found to be positively related to climate changes in biological and physical science departments. Faculty who participated in any WISELI event were significantly (*p*<0.05) more likely to report an improvement in their climate experience than their non-participating peers. At the department level, faculty in science departments that had participated in WISELI's climate or hiring workshops were more likely to report climate improvements than faculty in non-participating science departments. Differences between participating and non-participating science departments often were not statistically significant.

Aspects of Department Climate

Respect in the Workplace (Table III-3)

As in 2003, biological and physical science faculty overwhelmingly report feeling respected by colleagues, students, staff, and department chairs in the workplace in the 2006 survey (more than 90% of faculty agreed that they were treated with respect by each group). However, a number of differences between faculty groups persisted:

- Female science faculty were significantly less likely to agree that they are treated with respect by colleagues than their male colleagues.
- As compared to science faculty who identified their research as mainstream, science faculty conducting research outside of the mainstream were significantly less likely to agree that they were treated with respect by colleagues (88.3% vs. 96.3%), students (93.5% vs. 97.8%), and department chairs (84.9% vs. 95.2%).

Table III-4. Aspects of department climate: Treated with respect by colleagues, students, staff, and department chair (2006).‡

	N	Colleagues		Students		Staff	Dept Chair**	
All Faculty in the Biological & Physical Sciences	650	93.5%		96.1%		97.4%	91.5%	
Women	156	89.0%	*	93.0%		95.5%	88.7%	
Men	495	95.0%		97.2%		98.0%	92.4%	
Faculty of Color	51	94.1%		94.1%		98.0%	86.4%	
Majority Faculty	599	93.5%		96.3%		97.3%	91.9%	
Department Chair	43	100.0%		97.7%		97.7%	N/A	
Not Chair	607	93.1%		96.0%		97.4%	91.5%	
Non-Mainstream	231	88.3%	*	93.5%	*	96.1%	84.9%	*
Mainstream	405	96.3%		97.8%		98.0%	95.2%	
Attended Hiring Workshop	58	93.1%		98.3%		98.3%	88.6%	
No Attendance	587	93.7%		95.9%		97.4%	91.7%	
Any WISELI Participation	122	93.4%		96.7%		95.9%	86.9%	
No WISELI Participation	523	93.7%		96.0%		97.9%	92.3%	
Departmental participation in:								
Climate Workshops	247	95.1%		95.6%		97.6%	90.9%	
No Participation	404	92.6%		96.5%		97.3%	91.9%	
Hiring Workshops	431	==94.9%==		96.1%		97.2%	90.7%	
No Participation	219	90.9%		96.4%		97.7%	93.1%	
Celebrating Grants	153	96.7%	*	98.0%		98.7%	92.1%	
No Participation	498	92.6%		95.6%		97.0%	91.3%	

‡ **Responses to questions 19a-19d of the 2006** *Faculty Worklife* **survey; reported as fraction of respondents** *agreeing strongly* **or** *somewhat* **as compared to** *disagree strongly* **or** *somewhat* **and non-response.**
***** **T-test between groups significant at** *p*<**.05; no adjustments made for multiple comparisons. Highlighting indicates significant increase where** ==green== **indicates change is significant at** ==*p*<0.05==**.**
****** **Department chairs are excluded from this analysis.**

Informal Departmental Interactions (Table III-4)
In both 2003 and 2006, biological and physical sciences faculty reported similar patterns of informal department interactions. Less than one-third of science faculty reported feeling excluded from informal networks or having encountered unwritten rules within their department. About one-half of science faculty reported that a *great deal* of their work was not formally recognized by their department. These patterns were highly similar to those observed in 2003.

Despite this stability, some indicators suggest that the quality of informal interactions may have improved for some science faculty:
- Biological and physical science faculty who describe their research as non-mainstream were more likely to report feeling excluded from informal department networks than their mainstream peers in 2006. However, the proportion of non-mainstream science faculty reporting such feelings declined significantly ($p<0.05$) between 2003 and 2006. Despite this improvement, as compared to their colleagues, non-mainstream science faculty remained less likely to report positive interactions within their departments.
- Science faculty of color tended to report lower quality departmental interactions than their peers in 2006, but these differences were not statistically significant. Furthermore, the proportion of science faculty of color reporting feelings of exclusion declined between 2003 and 2006 (significant at $p<0.10$).

For other faculty, significant differences in experience of informal departmental interactions persist:
- Women faculty in the biological and physical science remained more likely than their male counterparts to report feelings of exclusion and encounters with unwritten rules. These significant differences persisted over the survey period.
- Department chairs remained the least likely of all science faculty to report negative departmental interactions. However, the gap between chairs' and non-chairs' reported experiences narrowed between 2003 and 2006. This change may be related increases in the number of women, science department chairs over this period.

Table III-4 Aspects of department climate: Informal interactions within the department (2006).[‡]

	N	Excluded from Informal Network		Encounter Unwritten Rules		Reluctant to Bring Up Issues**		Work not Recognized	
All Faculty in the Biological & Physical Sciences	647	28.9%		31.0%		22.4%		59.7%	
Women	156	51.9%	*	46.8%	*	40.0%	*	60.8%	
Men	492	21.6%		26.1%		16.9%		59.3%	
Faculty of Color	51	21.6%		27.5%		31.4%		59.2%	
Majority Faculty	596	29.6%		31.3%		21.6%		59.7%	
Department Chair	43	14.0%	*	23.3%		9.3%	*	65.1%	
Not Chair	604	30.0%		31.6%		23.3%		59.3%	
Non-Mainstream	229	40.1%	*	41.1%	*	31.9%	*	68.1%	*
Mainstream	405	23.0%		25.6%		17.1%		55.1%	
Attended Hiring Workshop	58	25.9%		42.1%		24.1%		58.9%	
No Attendance	584	29.2%		29.7%		22.4%		59.6%	
Any WISELI Participation	122	34.7%		38.8%	*	26.2%		61.7%	

No WISELI Participation	520	27.5%	28.9%	21.7%	59.0%
Departmental participation in:					
Climate Workshops	247	26.5%	31.0%	23.1%	57.3%
No Participation	401	30.4%	31.0%	22.0%	61.2%
Hiring Workshops	430	29.6%	33.1%	23.3%	57.5%
No Participation	217	27.7%	26.9%	20.7%	64.0%
Celebrating Grants	153	30.7%	30.0%	21.2%	87.3%
No Participation	496	28.4%	31.3%	22.8%	86.2%

‡ Responses to questions 19e-19g, 19j of the 2006 *Faculty Worklife* survey; reported as fraction of respondents *agreeing strongly* or *somewhat* as compared to *disagree strongly* or *somewhat* and non-response.
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. Highlighting indicates significant over-time increase where <mark style="background-color:green">green</mark> and <mark style="background-color:turquoise">turquoise</mark> indicate change is significant at *p<0.05* and *p<0.10*, respectively. <mark style="background-color:yellow">Yellow</mark> and <mark style="background-color:magenta">pink</mark> highlighting represent over-time decrease where change is significant at *p<0.05* and *p<0.10*, respectively.
** Item not included in 2003 survey; longitudinal comparison unavailable.

Colleagues' Valuation of Research (Table III-5)
Overall, science faculty reported more positive perceptions of their colleagues' valuation of their research in 2006 than in 2003. Most biological and physical sciences faculty agreed that colleagues both solicit their opinions and value their research (86.4% and 78.7%, respectively). The proportion of science faculty reporting that colleagues solicit their opinions showed a statistically significant ($p<0.05$) increase. While much of this gain appears to have occurred among majority, male faculty, non-mainstream science faculty reported improvements as did WISELI participants:

- Non-mainstream science faculty were significantly more likely to report that colleagues solicit their opinions in 2006 than in 2003. The gap between mainstream and non-mainstream science faculty's perceptions persisted but narrowed over this period.
- Biological and physical science faculty in departments that participated in WISELI's hiring workshop or received a Celebrating grant were significantly more likely to report that colleagues solicit their opinions on work-related matters in 2006 than in 2003.

Despite these changes, significant discrepancies in how men and women faculty in the biological and physical sciences perceive of their colleagues' valuation of their research persisted:

- Women science faculty remained less likely to report that colleagues seek out their opinions on work-related matters and value their research as compared to men science faculty. As in 2003, women science faculty were more likely than their male peers to report that their own research falls outside of their departments' mainstream. These gender differences were again found to be statistically significant (at $p<0.05$).

Table III-5 Aspects of department climate: Colleagues valuation of research (2006).[‡]

	N	Colleagues Solicit Opinions		Research is "Mainstream"		Colleagues Value My Research		Work Harder to be deemed Legitimate Scholar**	
All Faculty in the Biological & Physical Sciences	642	86.4%		63.7%		78.7%		30.8%	
Women	153	77.1%	*	54.1%	*	71.1%	*	45.0%	*
Men	489	89.4%		66.7%		81.0%		26.5%	
Faculty of Color	51	86.0%		68.6%		78.4%		48.0%	*
Majority Faculty	592	86.5%		63.3%		78.7%		29.5%	
Department Chair	43	93.0%		73.8%		85.7%		23.8%	
Not Chair	599	86.0%		63.3%		78.2%		31.4%	
Non-Mainstream	231	76.1%	*	N/A		52.9%	*	46.3%	*
Mainstream	406	91.8%		N/A		93.0%		22.8%	
Attended Hiring Workshop	57	91.1%		75.0%		86.0%		23.6%	
No Attendance	581	86.1%		62.5%		78.0%		31.7%	
Any WISELI Participation	120	84.2%		65.6%	*	80.0%		33.6%	
No WISELI Participation	517	87.0%		63.2%		78.4%		30..4%	
Departmental participation in:									
Climate Workshops	244	84.0%		60.7%		77.0%		30.0%	
No Participation	398	87.9%		65.6%		79.8%		31.5%	
Hiring Workshops	425	86.8%		62.5%		79.4%		30.8%	
No Participation	217	85.7%		66.2%		77.4%		31.2%	
Celebrating Grants	151	87.3%		59.6%		80.4%		31.3%	
No Participation	493	86.2%		65.0%		78.2%		30.8%	

‡ Responses to questions 19h-19k of the 2006 *Faculty Worklife* survey; reported as fraction of respondents *agreeing strongly* or *somewhat* as compared to *disagree strongly* or *somewhat* and non-response.
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. Highlighting indicates significant over-time increase where green and turquoise indicate change is significant at *p*<0.05 and *p*<0.10, respectively.
** Item not included in 2003 survey; longitudinal comparison unavailable.

Isolation and "fit" (Table III-6)

Overall, biological and physical sciences faculty reported an improvement in how well they perceive themselves to "fit" in their work environment. Science faculty were significantly more likely to agree that they "fit" in their departments in 2006 than in 2003. These gains extended to

both men and women. Among non-mainstream science faculty, the proportion of faculty reporting that they "fit" in their department made significant gains. Likewise, a significant decrease in non-mainstream faculty's reports of isolation in the department was also seen. Despite these developments, some faculty continued to report systematically different perceptions of their "fit" and isolation:

- Women science faculty remained significantly less likely to agree that they "fit" in their department and significantly more likely to report feeling isolated within their department and on campus overall as compared to their male colleagues.
- Department chairs in the biological and physical sciences were again significantly more likely to report that they "fit" with their department, as compared to non-chairs. The gap between chairs' and non-chairs' perceptions of workplace "fit" narrowed between 2003 and 2006.

Table III-6 Aspects of department climate: Isolation and "fit" within department (2006).[‡]

	N	"Fit" in Department		Isolated in Department	
All Faculty in the Biological & Physical Sciences	647	81.0%		24.8%	
Women	155	74.3%	*	35.7%	*
Men	492	83.1%		21.3%	
Faculty of Color	51	74.0%		25.5%	
Majority Faculty	596	81.6%		24.7%	
Department. Chair	43	97.7%	*	11.6%	*
Not Chair	604	79.8%		25.7%	
Non-Mainstream	229	61.6%	*	42.2%	*
Mainstream	406	91.1%		15.8%	
Attended Hiring Workshop	57	82.5%		20.0%	
No Attendance	586	80.9%		25.3%	
Any WISELI Participation	121	82.6%		27.7%	
No WISELI Participation	522	80.6%		24.1%	
Departmental participation in:					
Climate Workshops	244	82.7%		22.3%	
No Participation	403	80.0%		26.3%	
Hiring Workshops	429	81.5%		25.2%	
No Participation	218	80.0%		24.0%	
Celebrating Grants	153	84.8%		24.3%	
No Participation	494	79.8%		24.9%	

‡ Responses to questions 19m-19n of the 2006 *Faculty Worklife* survey; reported as fraction

of respondents *agreeing strongly* or *somewhat* as compared to *disagree strongly* or *somewhat* and non-response.
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. Highlighting indicates significant over-time increase where green and turquoise indicate change is significant at *p*<0.05 and *p*<0.10, respectively. Yellow and pink highlighting represent over-time decrease where change is significant at *p*<0.05 and *p*<0.10, respectively.

Departmental Decision-Making (Table III-7)

Faculty responses regarding the departmental decision-making process remained largely stable between 2003 and 2006. Women and non-mainstream faculty in the biological and physical sciences continued to report less positive perceptions of department decision-making processes than their counterparts. Statistically significant differences were observed for all five measures of department decision-making. Science department chairs reported more positive perceptions of their departments' decision-making procedures than non-chairs. These differences were found to be statistically significant for all four available measures.

Table III-7. Departmental decision-making, resources, and committee assignments (2006).‡

		Full & Equal Partici-pant		Voice in Res Allo-cation		All Share Views at Mtgs		Cmttee Assign-ments Rotated		Chair Involves me in Decision-making**	
All Faculty in the Biological & Physical Sciences	643	76.2%		64.4%		85.4%		73.1%		71.7%	
Women	154	60.4%	*	41.6%	*	70.8%	*	61.1%	*	61.3%	
Men	489	81.2%		70.3%		90.0%		76.8%		75.2%	
Faculty of Color	51	78.4%		60.8%		84.3%		64.0%		62.2%	
Majority Faculty	592	76.0%		64.8%		85.5%		73.9%		72.5%	
Department Chair	43	100%	*	100%	*	100%	*	90.2%	*	N/A	
Not Chair	600	74.5%		61.9%		84.3%		71.9%		71.7%	
Non-Mainstream	229	64.8%	*	51.1%	*	80.8%	*	64.8%	*	60.7%	*
Mainstream	405	82.7%		72.2%		87.8%		77.2%		78.4%	
Attended Hiring Workshop	57	87.7%	*	79.0%	*	85.7%		72.7%		79.6%	
No Attendance	581	75.2%		62.9%		85.2%		73.1%		71.0%	
Any WISELI Participation	120	76.7%		70.0%	*	79.0%		68.4%		68.0%	
No WISELI	518	76.3%		63.0%		86.7%		74.1%		72.4%	

Participation							
Departmental participation in:							
Climate Workshops	242	77.6%	62.0%	83.3%		<mark>73.0%</mark>	71.9%
No Participation	402	75.4%	65.9%	86.6%		73.1%	71.5%
Hiring Workshops	425	76.7%	63.0%	85.2%		73.3%	72.1%
No Participation	402	75.2%	67.3%	85.7%		72.7%	70.9%
Celebrating Grants	151	79.3%	66.2%	92.7%	*	71.1%	76.3%
No Participation	493	75.3%	63.9%	83.1%		73.7%	70.3%

‡ Responses to questions 19m-19n of the 2006 *Faculty Worklife* survey; reported as fraction of respondents *agreeing strongly* or *somewhat* as compared to *disagree strongly* or *somewhat* and non-response.
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. <mark>Pink</mark> highlighting indicates over-time decrease where change is significant at <mark>*p*<0.10</mark>.

WISELI Issue Study #1: Department Chair and Climate

After the interview and survey data were collected and analyzed in 2002 and 2003, we wrote an article to highlight the differences in climate as experienced by department chairs and other faculty, especially women. The following summary highlights the findings from this study.[20]

Perceptions of Climate

To examine perceptions of climate for women, respondents were asked to indicate their level of agreement with the following statement: *The climate for women in my department is good*. Most faculty members (84.9%) agreed that the climate for women faculty in their departments is good. Female faculty, however, were significantly less likely than male faculty to agree that climate for women in their departments is good (72.7% compared with 90.4%). Department chairs' responses, with 94.8% agreeing with this statement, differed significantly from women's responses (72.7%), and men and women combined (84.2%).

Workplace Interactions

In the 2003 survey, we gave faculty respondents a series of eighteen statements about their work environments and interactions with departmental colleagues, including five statements specifically about departmental decision making processes, and asked faculty to agree or disagree with these statements. We report on 14 of these items here, dividing them into five categories: Feeling Respected and Valued, Feelings of Isolation and Fit, Informal Departmental Interactions, Recognition of Work, and Departmental Decision Making. For each set of statements, we report the percentage of persons who agreed with the statement (either Strongly or Somewhat). For two questions that ask specifically about the actions of department chairs, we removed the department chair respondents from the analysis.

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[20] Pribbenow, C.M., Sheridan, J.T., Carnes, M., Fine, E., & Handelsman, J. (2007). *Departmental climate: Differing perceptions by faculty members and chairs.* [Accepted and under revision: The Journal of Women and Minorities in Science and Engineering.]

Feeling respected and valued.
We asked faculty if they agree that they are treated with respect by their colleagues and department chairs. Over ninety percent of all faculty agreed that they were treated with respect by colleagues and chairs. Female faculty however, were significantly less likely to agree that they were treated with respect by their colleagues (88.5%) and their department chairs (86.7%), as compared to their male colleagues (92.7%, 92.3%).

We also asked the respondents whether they feel that [their] colleagues value [their] research. Over three-fourths (77.3%) agreed that their research was valued by colleagues, with women reporting less valuation of their research than men (68.7% compared with 80.9%). Department chairs felt their research was valued more, as compared to other faculty members (89.5% compared with 76.4%).

Some of the interviewees described how they feel as if their research is considered less valuable or different from others. Alison, an assistant professor noted:

> I: Do you feel like your work has been supported or recognized, the kind of work you've done so far?
>
> R: *At the departmental level, no. I have not gotten any overt indications that they value my research. Which is part of my trouble with this department. It's to the point where I can't figure out why they hired me. . . I work on [discipline topic]. My department hired me to do this kind of research and I guess I don't understand why they don't see the value in that.*

Or, their research is not recognized at all. For example, one woman noted that the chair always has a "graceful smiley face" when he talks to her and "asks a lot about [her] kids" instead of discussing the research she is doing.

Further, we asked faculty whether their colleagues in [their] department solicit [their] opinion about work-related matters, such as teaching, research, and service. Over 80% of all faculty agreed that their departmental colleagues discussed work-related matters with them; however, women faculty were significantly less likely than men to agree with that statement (74.6% compared with 84.6%). Not surprisingly, department chairs were asked for their opinions the most, with 97.4% of the chairs agreeing with that statement.

Feelings of isolation and fit.
The survey results also show that women were significantly more likely than men to say that [they] feel isolated in [their] department—40.6% of women faculty agreed they felt isolated, compared to 24.0% of men. Department chairs were extremely unlikely to report that they felt isolated in their departments—only 2.6% of chairs who responded to the survey agreed with the statement.

In the interviews, when women talked about feelings of isolation, it was typically in relationship to their departments. Jodi, an associate professor, noted:

In general, I would have to say the chair of the department stays off our back. He meets only as we have to meet—if there is an order of business, a new hire or some protocol that would require faculty vote. Otherwise we don't meet. We don't meet to discuss research we don't meet to socialize. Personally I feel pretty isolated, completely isolated.

The next questions were asked to understand whether faculty members feel as if they "fit" in the department, as well as if they had any feelings of isolation in their department. Overall, most responded that they felt that they "fit" in their departments (74.7%). Women were less likely to agree that they fit (67.0% of women compared to 78.0% of men), while department chairs were significantly more likely to agree that they fit (96.1%).

Informal departmental interactions.
In the survey, three statements were designed to ascertain whether faculty members felt excluded or marginalized in their departments. First, we asked faculty the extent to which, *[they] feel excluded from an informal network in [their] department.* Almost one-third of the respondents— 31.9%— agreed that they feel excluded from departmental networks. Women were significantly more likely to feel excluded than men (47.3% compared with 25.3%). Department chairs felt the least excluded from informal departmental networks (9.2%).

When the interviewees were asked about informal interactions or networks, many provided examples of being "left out." Hannah was sitting with the department chair when she experienced the epitome of what she and other women in her department lacked:

> R: *Yeah, isolation . . . And not a lot of mentoring, not a lot of support. So we've all complained about this . . . So I had just mentioned this to [the chair] and an assistant male professor came in to talk with the chair . . . He came in and he said, 'What about this?' You know, and so they chatted for a minute or two and it was somewhat jocular, but also about research . . .*

> I: This happened while you were in the room?

> R: *Oh, yeah. And it was really appropriate . . . It was a very casual kind of talk I was having with the chair. But anyhow, when the assistant professor left I said to the chair, 'See now? That's what I'm missing. I don't have anybody to joke around with who even has a clue what I'm doing in terms of research.'*

> I: Oh. What a wonderful moment.

> R: *It was. It was perfect because it was so minor. And the chair said, 'Oh, well, that's nothing,' and I said, 'Well, that's what I need.'*

We also asked faculty members if, *[they] encounter unwritten rules concerning how one is expected to interact with colleagues.* Overall, 35.9% said they agree with this statement. Again, women agreed with the statement more often than men (48.5% compared with 30.4%).

Recognition of work.
Next, we asked faculty if [they] do a great deal of work that is not formally recognized by [their] department. We included this statement because it has been reported that women faculty feel as if they are expected to do the "housekeeping" work in their departments—work that has little power or visibility, and not many resources attached. Overall, most faculty (62.9%) felt that they did work that went unrecognized by their departments. No significant differences were found between men and women, or between all faculty members and chairs to this statement.

Despite the fact that the survey revealed no significant differences in responses to these questions, interviewees who were asked about various activities and the roles they perform in their department did report some gender-based differences in work. Some were able to provide examples of this:

> I: *When I was hired, I don't remember who would have said it or where it came from, but I got the distinct message that I would be valued as a female assistant professor because of the ability to mentor female graduate students and help to guide them. I have spent a lot of time with female graduate students who come to me asking me questions about balancing, and I don't know that my department has valued that.*

> I: And is that rewarded in your tenure? Is that considered service?

> R: *It's transparent. They aren't going to know and they don't ask. And I can put it down, but its not valued at that level.*

Conversely, a few of the women faculty felt that they needed to do more work to be recognized at the same level as men. The following interchange provides a glimpse into this:

> R: *I've observed some differences.*

> I: In that men are more respected?

> R: *Yeah. I think that women work hard to achieve the same level of respect.*

> I: What sorts of things do they have to work at in order to do that?

> R: *Proving their competency, in particular.*

> I: So you're suggesting—the flip side of the coin is that men don't have to work as hard to prove their competency.

> R: *Yes.*

Also, there appeared to be unwritten rules about how women were to act. Jaclyn provided an example:

There are some departments here where you may have a chair who is actively antagonistic towards women, who does not have any tolerance for flexibility of schedule, who is not willing to say 'Well we know you get your work done, and so if you're in here on Saturday and Sunday, but you have to be out on Tuesday and Wednesday, that's okay.' Instead they say, 'No, you be here, our hours are from 8 to 4:30, and you be here from 8 to 4:30 every day.'

Departmental decision-making.
We presented faculty with five statements about their participation in departmental decision making processes; the results are consistent with those reported previously, namely that women feel less connected to the department, and the chairs feel the most connected. Do faculty members agree that [they] feel like full and equal participant(s) in the problem solving and decision making in their units? Approximately 75% reported that they agreed with that statement. Women were significantly less likely than men to agree (62.8% compared with 79.9%).

When asked if faculty felt [they] have a voice in how resources are allocated, 65.7% of them agreed. Women faculty were significantly less likely to say they have a voice in resource allocation than men faculty (52.4% compared with 71.6%). Department chairs, not surprisingly, report the highest levels of "voice," as 100% of responding chairs report agreeing that they have a voice in how departmental resources are allocated.

We asked faculty whether they agree that meetings allow for all participants to share their views. Most faculty—85.9%—felt that department meetings allowed all faculty to share their views. Women faculty, however, were significantly less likely to agree with this statement, as only 76.2% of women faculty agreed, compared to 90.1% of male faculty. In the interviews, Gloria offered her experience as an example of this:

> *[Before I came] I had this sort of community of people who all thought I was a really worthwhile individual and that I had a lot to offer . . . I just feel like I showed up at UW and to the extent I have opinions, I'm just a pain in the ass and nobody is the slightest bit interested in what I have to say.*

In her interview, Alison was asked if gender had affected her experience at the UW. She responded that she has "had moments during my time here where I thought, 'You know what. I'm a woman and all these guys are sitting around me and not listening.'"

Next, we asked faculty if they agree that committee assignments are rotated fairly to allow for participation of all faculty in their departments. About three-fourths (74.9%) agreed with the statement. Again, women faculty members were significantly less likely to agree with the statement compared to male faculty (63.7% compared with 79.7%). One of the interviewees commented about this when asked about gender differences she had experienced:

> I: The degree to which people are taken seriously as scholars or scientists?

R: *Yeah. I think that there is a difference. I don't think that I've experienced it. I've observed it.*

I: How does that play out? If a person is not taken seriously and another one is?

R: *It means that the men will be put on committees first, will be asked to be associate editors of journals and they'll move up quickly.*

Finally, we asked a question specifically about how department chairs involve faculty in decision-making processes by asking whether faculty agreed that my department chair involves me in decision-making. Approximately 75% agreed with this statement overall; however, there were some significant differences between groups. Women faculty members were significantly less likely than men faculty to agree that their chairs involved them in decision-making processes (64.8% compared with 79.6%).

In the interviews, an associate professor described her feelings about how decisions are made: Well often when we walk in to a meeting, [the chair] might open up something for discussion, but he'll make his position clear and say, 'is there anybody dissenting?' Well, I don't know I really haven't considered the matter. 'Okay, all those in favor I want to make this 5 – 10 minutes long.' I almost feel like we've been blindsided when we walk in. But this is a departmental style. If I cared enough about those issues that were on the table maybe I would say something. I've dissented from various faculty members they have wanted to hire. I don't feel that my voice has ever been particularly heard, but I've felt that for my own personal principles I make myself clear.

Although most faculty overall seem to be pleased with the interactions they experience within their departments, women appear to be less pleased and identified a number of activities that could be perceived as negative. For all but two of the statements, women faculty members were less positive about their workplace interactions than were their male colleagues. The interviews that preceded the survey provide us with the voice to some of these data.

Summary
The survey results described above are further explicated by the interviews with women faculty who described how a chair can either "make or break" a faculty member's career. Some described their chairs as "supportive," "approachable," and "professional," while others described their chairs as "ineffective," "unsupportive," and "discriminatory." Examples of the different types of experiences that the interviewees had indicate that the chairs can affect many areas of their lives, either negatively or positively.

This study suggests that department chairs perceive their workplaces—academic departments—much differently. It is not surprising that they report better relationships with colleagues and that they are fuller participants in many areas of the department, including decision making and allocation of resources. Ultimately, they are the ones who have the power to do so; it is in using this power effectively that we see how they influence the climate in their departments.

WISELI Initiative: Climate Workshops for Department Chairs

In fall 2003, WISELI began offering a workshop series *Climate Workshops for Department Chairs*. The workshops aimed to improve departmental climate through an intervention with department chairs. As an important part of this intervention, WISELI administers an electronic climate survey to faculty, staff, graduate students, and postdoctoral researchers in a participating department. Responses to this survey are presented to participating department chairs in the course of the workshop. Chairs then use the information gathered in this survey to identify strengths and weaknesses and to structure further actions to improve their department's climate.

To date, WISELI has administered the department climate survey to 26 UW-Madison departments. Not all department chairs choose to survey their entire department population. Some, for instance, choose to survey only faculty and staff. The different populations surveyed as well response rates for each department are reported in Table III-8. This data suggests a notable conclusion:

- There appears to be an inverse relationship between a department's size and survey response rate: smaller departments tended to have higher rates of response to the climate survey while larger departments tended to have lower rates of response.

Table III-8: Detailed summary of survey populations and response rates for participating departments

Dept	Division	Survey Groups	Survey Population	Survey Responses	Response Rate
1	Physical Sciences	Faculty & Staff	17	12	71%
2	Biological Sciences	Faculty, Staff & Graduate students	59	29	49%
3		All	n/a	39	n/a
4	Biological Sciences	Faculty, Staff & Graduate students	60[*]	41	68%
5	Social Studies	Faculty, Staff & Graduate students	45	24	53%
6	Physical Sciences	All	414	124	30%
7		Faculty & Staff	88	61	69%
8	Biological Sciences	Faculty & Staff	16	9	56%
9	Biological Sciences	Faculty & Staff	85	27	32%
10	Physical Sciences	Faculty & Staff	45	34	76%
11	Biological Sciences	All	~650	204	31%
12		All	188	92	49%
13		All	171	104	61%
14		Faculty & Staff	25	15	60%
15		All	n/a	59	n/a
16	Physical Sciences	Faculty & Staff	62	35	56%
17		Faculty & Staff	19	13	68%

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[*] Estimated survey population; response rate is approximate.

18		Faculty & Instructors/Adjuncts	42	24	57%
19	Biological Sciences	All	92	56	61%
20		Faculty & Staff	240	111	46%
21		Faculty & Instructors/Adjuncts	25	12	48%
22	Biological Sciences	All	89	52	58%
23	Physical Sciences	All	290	112	39%
24	Humanities	All	n/a	78	n/a
25	Physical	Faculty & Staff	49	22	45%
26	Sciences	Faculty & Staff	22	12	55%

Comparing overall climate ratings across the different surveyed groups (Table III-9), one can note that a majority of all groups reported positive perceptions of their department's climate. Faculty, academic staff, and classified staff tended to report similar average ratings of department climate. This is in contrast to graduate students and post-docs/fellows, who reported similar ratings that were somewhat more positive than those reported by faculty and staff. Despite the overall positive picture, a significant minority (10-15%) of faculty and staff rated their department's overall climate as *very negative* or *negative*. This suggests the following conclusions:

- Faculty and staff tend to report more negative perceptions of department climate than graduate students and post-docs/fellows.
- While a majority of faculty and staff report a positive overall department climate, a significant minority reports a negative overall department climate.

Table III-9: Comparison of respondents' overall ratings of department climate for all participating departments

Overall climate rating						
	N	Very Negative	Negative	Mediocre	Positive	Very Positive
Faculty	435	3.2%	10.7%	22.0%	44.9%	19.2%
Academic staff	330	1.8%	8.6%	23.6%	49.9%	16.2%
Classified staff	202	4.5%	10.1%	21.6%	47.7%	16.1%
Graduate students	362	0.8%	5.3%	18.5%	58.5%	16.8%
Postdoctoral Researchers	56	0.0%	1.8%	23.6%	49.1%	25.5%

Examining the distribution of faculty and staff responses to individual items from the department climate survey highlights particular issues that may contribute to the negative department climate some faculty and staff report. In particular, the following issues emerge as common to faculty and staff:

- A significant minority, about 20%, of faculty and staff report feeling under-appreciated for their work in the department.
- A proportion of faculty and staff report that they do not have the resources they need to be productive in their jobs. More faculty (about 20%) than staff (about 10%) reported this issue.
- Only about half of faculty and staff indicate that they trust the individuals who make decisions that will affect them.

- Some faculty and staff report that they do not have any agency in departmental decision-making. Such perceptions appear to be more widespread among staff (about one-third) than faculty (less than one-quarter).
- A large minority of faculty and staff report a lack of feedback on their job performance and a lack of support for professional development. This issue appears to be a larger problem for academic staff than for faculty or classified staff.
- Some faculty and staff feel isolated in their departments. Between 15 and 25% of faculty and staff report feeling isolated despite others being around.
- A non-trivial fraction of faculty and staff indicate that differences among people are not valued in their departments.

Table III-10: Distribution of faculty responses to departmental climate statements for faculty (n=435) in participating departments.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My department is a welcoming place to work.	2.5%	8.1%	17.1%	43.0%	29.3%
I understand my role and responsibilities as a member of the department.	0.2%	4.9%	9.7%	44.1%	41.1%
I have the resources I need to be productive in my job.	5.1%	14.4%	22.0%	41.1%	17.4%
I feel appreciated for the work I do in the department.	9.1%	12.3%	21.8%	36.7%	20.2%
The Chair of the department or my supervisor respects my opinions and contributions.	5.1%	6.5%	11.4%	34.1%	42.9%
Others in the department respect my opinions.	2.3%	8.1%	22.8%	45.4%	21.4%
I trust the people who make decisions that affect me.	8.0%	17.2%	24.0%	35.5%	15.3%
I am able to influence the decisions that are made in the department.	7.0%	15.8%	31.1%	30.4%	15.8%
The Chair of the department appropriately consults or delegates decisions to a group or committee.	4.9%	9.1%	19.5%	37.7%	28.8%
I feel safe voicing my feelings in front of others.	6.7%	11.6%	19.1%	38.6%	24.0%
My work contributes to the mission or purpose of my department.	1.2%	1.2%	7.0%	45.2%	45.5%
Others recognize how my work contributes to the mission or purpose of my department.	5.0%	12.3%	18.5%	45.3%	19.0%
I am happy with the professional relationships I've formed with others in the department.	2.6%	9.1%	16.5%	45.0%	26.9%
I have had a thorough performance review in the last year.	13.3%	16.6%	21.4%	28.5%	20.2%
There is somebody in the department who promotes my professional development.	14.6%	17.2%	22.2%	28.1%	17.9%
Resources and other benefits are allocated fairly within the department.	11.1%	13.7%	30.9%	31.8%	12.5%
Even though other people are around, I feel isolated.	29.8%	30.3%	16.6%	16.8%	6.6%
My work is commensurate with my training and experience.	0.5%	2.1%	9.2%	44.0%	44.2%
I have the same level of responsibility and recognition as those whom I consider my peers.	3.3%	10.4%	15.5%	45.7%	25.2%
I experience subtle or overt forms of harassment or discrimination due to my gender, race or other personal attributes	62.6%	19.5%	9.5%	5.8%	2.6%

I feel reasonably accommodated when personal and professional responsibilities are in conflict.	1.4%	8.0%	26.1%	39.0%	25.6%
I am aware of places or people to go to if I am faced with a problem or issue in the department.	4.7%	11.4%	20.0%	40.7%	23.3%
Differences among people are valued in the department.	6.5%	16.4%	25.7%	36.7%	14.7%

Turning to the responses of graduate students and postdocs similar trends can be observed though to a lesser degree. Like faculty and staff, some graduate students and post/docs fellows report feeling unappreciated for their work and unable to affect decision-making in the department. Likewise, minorities report a lack of feedback on their job performance and attention to their professional development. The fraction of graduate students and post-docs/fellows reporting such issues is smaller than among faculty and staff. This might indicate either more positive perceptions or greater reluctance to report negative experiences among graduate students and post-docs/fellows.

WISELI Evaluation: Climate Workshops for Department Chairs

The data gathered from past department climate surveys highlights some common issues that department chairs may seek to address in an effort to build a more positive department climate. These may be indicative of the types of issues *Workshop* facilitators are likely to encounter in future sessions. It also suggests general trends among different groups within departments and response rates, either of which may be useful in considering the deployment of future department climate surveys.

Perceptions of Climate Workshops

Participants were asked if, according to their knowledge, their department chairs had participated in the WISELI climate workshops. In some cases, a brief description of the climate workshop was provided to interviewees for clarification. Only two answered affirmatively. One noted that her department chair had recently participated in the workshop, and that, as a faculty member, she had completed a survey on departmental climate. However, the interviewee had not yet received further information on the survey or the chair's involvement in the climate workshop, and could not report any observed changes in climate yet:

> *Well the [department chair] did alert the department that we were going to have a survey that WISELI was giving, another survey which was part of a workshop she had attended… for chairs to look at ways to improve climate in the department. So she did alert us to that and I did subsequently answer one of those questionnaires…Now I'm motivated to go back and ask her what the outcome of that was. Because she didn't come back with an analysis or report afterwards. So maybe she found that there are no issues to address or I'm not sure what.*

The second interviewee reported that, as a department chair and affiliate of WISELI, she had helped participate in a "trial" climate workshop, and had found the experience to be quite valuable, overall:

> *And the other thing is I helped with the climate workshops. I was in a trial one…I thought I had something to offer because we'd had a lot of climate issues here that I'd actually*

worked on. And that was rewarding. I thought it was a good experience. And they surveyed our department afterwards so I thought that was a positive experience… They asked if I would and I enjoyed it. I thought it was well structured and a useful activity while I was chair.

A member of the Provost's staff provides his perceptions of the workshops and department climate surveys:

The number of chairs, for example, that go ahead and have done their evaluation, the climate evaluations in their departments. And almost all of the ones I've talked to after they've done that, there were one to many surprises. Most, I would say, had many surprises. And to me that's a good illustration, where these were typically well-meaning people who probably had a sense that they, they themselves were working hard to create a positive climate for their faculty and were then surprised to find that that's not what particularly their women faculty and minority faculty too, that's not the experience that these faculty in their own departments were having. So I think that was an eye-opening experience for a lot of chairs. And those that shared it with the rest of the department, if they were paying attention, it was probably sort of eye-opening for the rest of the department as well. To appreciate that it isn't the matter, climate is not an objective thing. And it does matter how people all feel about the climate they find themselves in.

Evaluation by Workshop Participants
In 2005, we conducted a study[21] with the twenty-one department chairs who had participated at that point in time. These chairs were invited to participate in the "climate workshops" by the Deans of their respective Colleges and Schools at UW-Madison. They also received email announcements and publicity about the upcoming workshops directly from WISELI staff. In the follow-up survey of the chairs, 58% indicated that they participated due to WISELI's promotional material and 42% said they heard about it from their respective Deans. Two respondents attended the Academic Leadership Series and continued with the workshop after that event. One respondent said they heard about it from someone who previously participated.

Including the pilot group, 21 faculty members, who were department chairs at the time, began the workshops. Of these, one withdrew after the initial meeting, leaving twenty who attended the full workshop series of three, and occasionally four, meetings.

Nineteen of the participants are men and one is a woman. Most of the participants indicated that their position as chair is an "elected" position (79%). On average, the participants have been chair of their departments for seven years. The length of time that a chair serves in the department is typically eight years.

Workshop Sessions and Goals
According to the WISELI website, the following are listed as goals of the workshops:

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[21] Pribbenow, C.M. (2005). *WISELI's climate workshops for department chairs: Evaluation report.* Madison, WI: The Women in Science and Engineering Leadership Institute.

- To increase awareness of climate and its influence on the research and teaching missions of a department;
- To identify various issues that can influence climate in a department;
- To present research on how unconscious assumptions and biases may influence climate;
- To enable chairs to assess climate in their own departments;
- To provide chairs with opportunities to enhance climate in their departments by learning from each others' experiences and ideas; and
- To provide chairs with advice and resources they can use to enhance climate in their departments.

The following description is provided about each session of the series:
- Session 1:
    - Department chairs will engage in a general discussion of climate and the importance of fostering positive climates.
    - Introduction to web-based departmental climate survey.
    - Presentation of resources to assist chairs in their efforts to enhance departmental climate.
- Session 2:
    - Chairs will receive survey results for their individual departments, spend some time reviewing these results and have the opportunity to discuss survey findings. The main objective of this session will be to share experiences and expertise with other chairs and to learn from each other. Chairs will discuss and develop an action plan to address issues revealed by the survey. Chairs will also learn about resources and people on campus who can help them in their efforts to enhance climate.
- Session 3:
    - Chairs will meet to discuss how they shared survey findings with their departments, what activities they engaged in to enhance the climate in their departments, and how successful they were.
    - Chairs will address specific topics such as the influence of leadership styles, organizational structure, and decision-making styles on departmental climate.

When asked to identify the value of each of the workshop components, the participants indicated that the facilitator (Jo Handelsman), interaction with other chairs, and the department surveys and results/report of the department survey were the most valuable components.

How valuable was each of the components of the workshop series?	Extremely valuable	Somewhat valuable	Not at all valuable
The facilitator (Jo Handelsman)	17 (89%)	2 (11%)	0
Interaction with other chairs	15 (79%)	4 (21%)	0
Campus resources	3 (17%)	12 (67%)	3 (17%)
Reading resources and bibliography	3 (17%)	13 (72%)	2 (11%)
The department survey	16 (84%)	2 (11%)	1 (5%)
The results and report of responses from the survey	15 (79%)	4 (21%)	0
Meeting in a series of three sessions	10 (56%)	8 (44%)	0

When the workshop participants were asked to identify the level to which each of the workshop goals was met, most identified them as *definitely* or *somewhat* met:

Please indicate the level to which each of the following goals was met:	This goal was definitely met	This goal was somewhat met	This goal was not at all met
Increased awareness of climate and its influence on the research and teaching missions	14 (74%)	5 (26%)	0
Identification of various issues that can influence climate in a department	15 (79%)	3 (16%)	1 (5%)
Understanding of research on how unconscious biases and assumptions may influence climate	8 (42%)	10 (53%)	1 (5%)
Assessing climate in your department	16 (84%)	3 (16%)	0
Enhanced climate in your department	7 (37%)	9 (47%)	3 (16%)
Learning from the other participants and the facilitator	16 (84%)	3 (16%)	0
Access to advice and resources to improve climate	7 (39%)	10 (56%)	1 (6%)

Clearly, identifying climate issues, assessing their department's climate and learning from the other participants and the facilitator were goals that were achieved, as indicated by most chairs.

Almost all of the respondents (95%) said that they would recommend others to attend the workshops. When asked *if* and *how* their expectations of the workshop were met, a sampling of the responses they provided included:

- I expected to (and did) obtain better understanding of climate-related issues and how to deal with them constructively.
- To be confident I was not missing something in my attempts to provide a good work climate.
- I had no expectations going in. I have had so much exposure to this area from various sources that I did not expect to learn much that I didn't already know.
- Basic ways to identify problems and formulate solutions.
- Better understanding of climate issues and departmental climate
- Understanding of how departments in other schools were organized and did or did not work.
- I simply felt this was an important activity and the workshops made the survey doable.
- I really wanted to know whether the climate in my dept was as positive and supportive as I perceived it to be. The workshop reinforced this idea but also pointed out a couple of problem areas that we are addressing.
- No pre-existing goals or expectations other than a general interest in fostering a nurturing climate.
- I hoped to gain input from other units on campus and this was achieved.
- I didn't have expectations but was pleased with what I learned.
- I hoped to get a validation of my assessment of our climate. This expectation was met.

- Information on experiences in other departments regarding issues affecting work environment climate, and means to improve it.

They were asked to respond to the following, "Since attending the workshops and doing the survey, how has the climate in your department changed?"

The climate is:	
Significantly more positive	2 (11%)
Somewhat more positive	12 (63%)
The same as it was before	5 (26%)
Somewhat more negative	0
Significantly more negative	0

Most of the chairs indicated that after participating in the workshops, the climate in their department has improved positively. When asked what the WISELI staff could do to improve the workshops, the following responses from some of the participants included:

- The coordinators of the workshop should not require department chairs to do the survey. They should first discuss literature showing that surveys without follow up can do damage. I learned this AFTER the survey was distributed. I felt pressured to respond to the survey in ways that did not feel right. In the end I ignored the workshop coordinators and did what felt right for me.
- Better insight into interpreting survey results. Better advice on including or excluding academic and classified (or separate surveys from survey professors).
- Learn the environment of medical school department, understand the culture, interview chairs and directors, plan a process that looks at the complex issues of clinical work/education/scholarship.
- More information about what other departments at UW or elsewhere have done to enhance work climate.
- One thing that would help chairs of large departments would be to provide as additional service of summarizing the individual comments using social science analysis tools. I would even pay for it.
- It might be useful to add a follow-up session 6-9 months after the workshop.
- Get them to make time to attend. Suggest strong support from Dean.
- Possibly have department chairs present case studies of how units have improved climate. Examples are very powerful to illustrate the impact of relatively small changes. Sharing is very important as departments vary so much across campus.
- Greater structure to portions for sharing of experience between departments.

When the workshop participants were asked if they would like their departments resurveyed, 10 (56%) said "yes," while eight (44%) indicated "no." Open-ended responses included:
- This would depend on timing. To date, I haven't taken any action as a result of the meetings and survey, primarily because I only completed this recently.
- It is likely that my tenure as chair will be up in 3-6 months. It is too soon to see major change. The new chair will need time to "get on her/his feet" before another survey.

- The results of the survey were very positive. It would be useful to survey again after more time has elapsed.
- Overall, I did not find it to be a useful exercise. The response rate especially for faculty and staff was terrible (<30%). The big climate issue right now is that grant funding is down and people are losing their funding and people are going to be laid off. I don't need a survey to tell me how they feel about this issue.
- Always helps to use the yardstick from time to time to see how things measure up.
- After some time has passed, perhaps 2-3 years, it would be interesting and re-energizing.
- Same problems would exist as did in the initial survey - the SURVEY problems, not the climate problems.
- I think these should be done about every three years.
- I would like to do this at a longer interval, say 3 years, to assess systematic, long-term changes in climate. Right now, I am aware of communication issues among a few faculty, which for now have made the dept a less pleasant place to be, but am working toward resolution. I am hopeful that this is a very temporary situation.
- This would need to be discussed with our new Dept Chair, [NAME]. I would be in favor or another survey but [NAME] needs to be consulted first.
- This would be welcome. I believe that departmental climate is somewhat improved, but only a survey could determine this objectively.
- Not sure - I've thought about it. Do not like to impose upon people's time with the survey, although information is useful.
- Our climate is quite good and I expect it to continue to improve based on what we are already doing.
- Good benchmark for new chair incoming.
- Next year would be the appropriate time.
-

One chair requested that we re-survey his department. The first climate survey for this department was sent out on April 30, 2004 and 23 people responded. The second survey was sent on May 9, 2005 and 55 people responded. For this department, the average climate score increased in a positive direction—from 3.21 to 3.71. We have to be cautious when attributing this change to the workshop itself, as the Chair was new in 2004 and some of the respondents may have been evaluating the former chair. The change may also be due to an increase in respondents overall, and who the respondents were for each survey.

The department chair re-surveyed his department in subsequent years. The average score to the question, ***On a scale from 1 (very negative) to 5 (very positive), please indicate the current climate in your department***, increases in each year, as found under the MEAN column:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Y2004	24	1	5	3.21	1.179
Y2005	56	1	5	3.71	.929
Y2006	46	1	5	3.61	.930
Y2007	46	2	5	3.78	.867
Valid N (listwise)	24				

Summary: Departmental Climate

The home department of faculty is often the most immediate, important and influential aspect of a faculty member's working environment. Thus, in accordance with the WISELI evaluation goals of understanding and improving the climate and environment for female faculty at UW-Madison, we asked interview participants several questions about the climate in their department. These questions were aimed at revealing some of the departmental-level, climate-related factors, barriers, attitudes, and experiences of women in science, and also understanding how WISELI interventions might be affecting these factors.

When interviewed in 2006, more participants reported an improving departmental climate than a declining departmental climate. Interviewees attributed improving climates to a number of factors, many of which were specific and individualized to the department and the female faculty whom we interviewed. Common themes included new or improved leadership (generally, departmental chairs), and new faculty hires, particularly women. Although none of the interviews cited WISELI as a source of departmental climate change, the themes raised in the interviews directly relate to the mission and work of WISELI. For example, they offered additional affirmation about the essential role of chairs in setting the tone for departments, and therefore the importance of WISELI's workshops with chairs. Second, the interviewees offered some evidence about the effects of more women and more women leaders on the perceived climate of the department. The majority of interviewees reported that more women in their department make a positive difference for them and their working environments. In this way, the data again affirms the importance of WISELI's varied efforts, including the search committee workshops, to ensure that more women are hired into departments across the UW campus.

To address departmental climate in science and engineering departments, WISELI began offering a workshop series *Climate Workshops for Department Chairs*. The workshops aimed to improve departmental climate through an intervention with department chairs. As an important part of this intervention, WISELI evaluators administer an electronic climate survey to faculty, staff, graduate students, and postdoctoral researchers in a participating department. Responses to this survey are presented to participating department chairs in the course of the workshop. Chairs then use the information gathered in this survey to identify strengths and weaknesses and to structure further actions to improve their department's climate.

Comparing overall climate ratings across the different surveyed groups, one notes that a majority of all groups reported positive perceptions of their department's climate. Faculty, academic staff, and classified staff tended to report similar average ratings of department climate (average of 3.65, on a scale from 1-5 with "5" indicating a positive climate). This is in contrast to graduate students and post-docs, who reported similar ratings that were somewhat more positive than those reported by faculty and staff, with average climate ratings of 3.88 and 4.07 respectively. Despite the overall positive picture, a significant minority (10-15%) of faculty and staff rated their department's overall climate as *very negative* or *negative*. Follow-up surveys with some participating departments show an increase in climate scores. Using one department as an example, the overall climate score increased significantly from a 3.21 to a 3.78 after four consecutive years of re-surveying this department.

The campus climate surveys provide us with an inordinate amount of data—too much to summarize here. Rather, some important findings related to departmental climate include:

- Respondents of the 2006 faculty survey rate their departmental climate slightly better than they did in 2003. Although very few significant differences exist between the results from the 2003 and 2006 surveys, where they do exist they are almost always in a positive direction.

- Results from the 2006 survey suggest that faculty feel respected by colleagues, students, staff, and their chairs, just as they did in 2003. Significant differences between groups did not disappear, however. Female faculty and faculty doing non-mainstream research still report significantly less feelings of respect from their colleagues.

- Departments that participated in WISELI's Climate Workshops for Chairs, had at least one faculty member participate in a hiring workshop, and received a Celebrating grant all reported significantly higher agreement that their colleagues in the department respect them.

- There is a strong tendency for women faculty, non-mainstream faculty, and faculty attending WISELI events to report that climate has very much improved for them personally. Approximately 44% of female faculty in biological and physical sciences report that their own departmental climate is significantly or somewhat more positive in 2006 than it was in 2003. Faculty in departments participating in the climate workshops are not *significantly* more likely to report better climate for themselves personally, but there is a slight tendency to report positive climate change for these departments nonetheless.

- In 2006, we see an increase in agreement with the item "I feel like I 'fit' in my department." This finding is significant, because it most encapsulates what "departmental climate" is. Based on analyses from the 2003 survey, this item had the highest correlation with all of the other climate items in the survey; that is, a faculty member's positive response to this item was highly correlated with positive responses to all of the other climate items. The increase in women's "fit" is of note; women's responses increased over 10% on this item as compared to 2003.

- In 2006, a new climate item was used: "On a scale from 1 (very negative) to 5 (very positive), please rate the climate in your primary department." The new climate item shows a familiar pattern; women faculty rate the overall climate in their departments less positively than the men, and department chairs have the most positive view of the climate overall.

CHAPTER IV: HIRING PRACTICE AND POLICIES

Hiring was one of the initial areas that WISELI staff prioritized, recognizing that before female faculty can be retained, they must be recruited. This section identifies hiring trends[22] from 2001 to 2006; describes and evaluates WISELI's *Searching for Excellence & Diversity* workshops; and provides data to evaluate other campus-wide initiatives that are intended to increase the number of women hired at UW-Madison.

WISELI Research: Hiring Trends and Survey Results through 2006

Percentages of Female Faculty in STEM

In the previous six years, the percentages of female faculty in biological (BS) and physical (PS) sciences at UW-Madison have been increasing, as has the proportion of women in all divisions. Since 2000, the annual rate of increase has been faster in the BS and PS divisions, compared to the social studies (SS) or arts & humanities (AH) divisions. The PS division was 9.2% female in 2000, and 12.9% female in 2006—an average growth of 5.6% per year. Similarly, the BS division was 19.1% female in 2000 and 24.2% in 2006, which is an increase of 3.9% per year. The corresponding numbers for SS and AH divisions are 2.7% and 2.6% per year, respectively.

Percent Women Faculty, by Division

Physical Sciences   Social Studies
Biological Sciences   Arts & Humanities
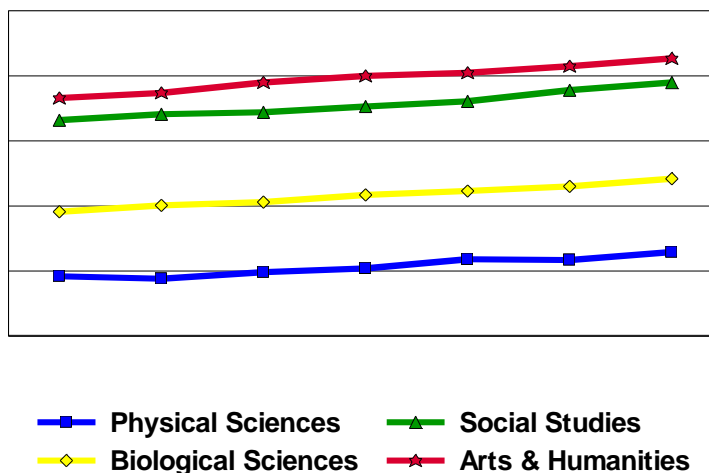
Hiring Trends

For new faculty offers in PS departments, in the earlier years there is a higher percentage of offers being made to women than are actually being accepted by women; that is, women are not accepting the offers made to them by PS departments. By the years 2002-05, this seems to have been corrected, and now the percentage of women receiving offers is the same as those who accept them. An opposite pattern appears for BS departments. Fewer women are getting offers, compared to those who are accepting them. Also, once an offer is made in a BS department, a female candidate is more likely to accept it than a male candidate. As with the PS departments, these rates may be converging in the later years.

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[22] Sheridan, J. (2007). *Gender equity by the numbers: Status of women in biological & physical sciences at the University of Wisconsin-Madison, 2002-2006*. Madison, WI: The Women in Science and Engineering Leadership Institute.

Percent Female, New Faculty Offers

Legend: PS-Offers Made, PS-Offers Accepted, BS-Offers Made, BS-Offers Accepted
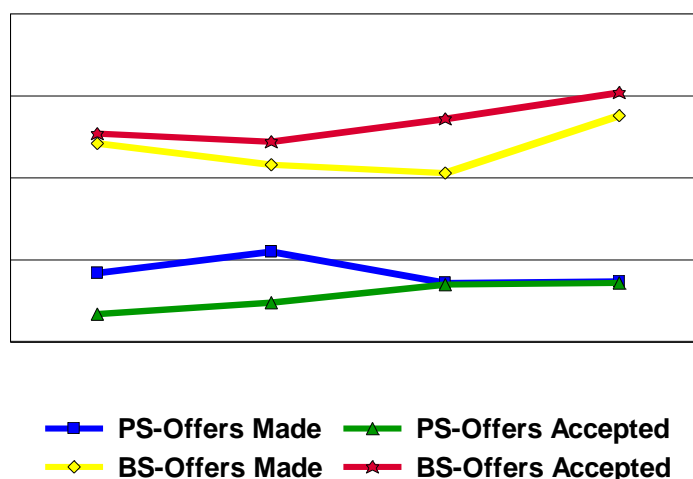
The percentage of new hires in PS and BS departments, both tenured and untenured who are female, has increased at UW-Madison since the beginning of the WISELI project in 2002. A glaring exception is academic year 2005-06, when the percentage of new hires who were women dropped to very low levels, especially for hiring of untenured faculty. This one year aside, the UW-Madison has been increasing the numbers and percentage of women new hires in the past 3-4 years. Almost 40% of new senior hires are women, an appreciable increase from the years prior to WISELI's creation. The patterns are remarkably similar in the PS and BS divisions, and for untenured vs. tenured hires.

Women as Percentage of New Hires
Physical & Biological Science Faculty Only

Legend: Untenured, Tenured, Total
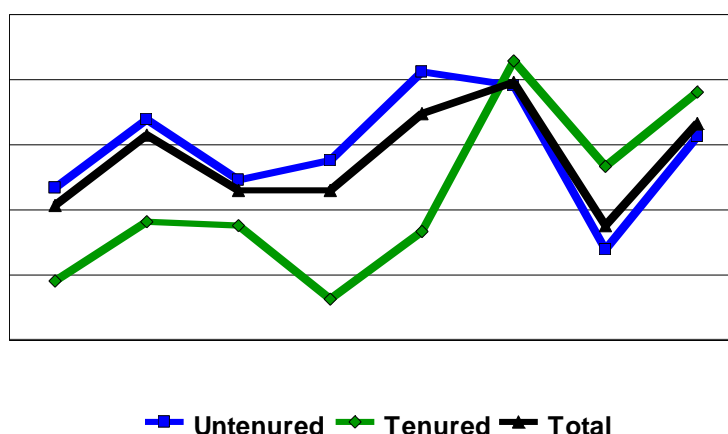
Recruitment of Female and Minority Faculty

According to the Faculty Worklife Survey, little change is seen in the recognition that there are "too few" women in our biological and physical science departments. The percentage of faculty reporting that there are "too few" women stayed the same overall at about 61%; however some

groups saw larger increases in reporting there are "too few" women in their departments, such as men faculty (61.7% in 2003 and 62.3% in 2006), department chairs (52.5% in 2003 and 67.4% in 2006), and those who attended hiring workshops (61.4% in 2003 and 65.5% in 2006).

Table IV-1: Science faculty's perceptions of their departments' status and efforts to address diversity issues.[‡]

	Too Few Women Faculty		Identified Ways to Recruit Women		Women Faculty Actively Recruited	
All Biological & Physical Sciences Faculty	61.2%		65.1%		82.9%	
Women	57.9%		46.3%	*	65.4%	*
Men	62.3%		70.6%		88.2%	
Faculty of Color	46.8%	*	52.3%		82.2%	
Majority Faculty	62.4%		66.3%		83.0%	
Department Chair	67.4%		73.8%		90.7%	
Not Chair	60.8%		64.4%		82.3%	
Non-Mainstream	62.9%		61.1%		78.3%	*
Mainstream	59.8%		66.9%		85.0%	
Attended Hiring Workshop	65.5%		60.7%		76.8%	
No Attendance	60.6%		65.4%		83.5%	
Any WISELI Participation	66.4%		54.8%	*	71.6%	*
No WISELI Participation	59.8%		67.7%		85.6%	
Departmental participation in:						
Climate Workshops	66.7%	*	67.1%		84.4%	
No Participation	57.9%		63.8%		81.9%	
Hiring Workshops	64.0%		63.4%		82.0%	
No Participation	55.9%		68.8%		84.8%	
Celebrating Grants	61.1%		68.9%		84.8%	
No Participation	61.3%		63.9%		82.3%	

[‡]**Responses to questions 51a-51c of the 2006 *Faculty Worklife* survey.**
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. Highlighting indicates significant longitudinal change where <mark>yellow</mark> indicates change is significant at *p<0.05*.

Satisfaction with Hiring Process

Overall satisfaction with the hiring process decreased between 2003 and 2006, but not significantly for most groups of new faculty (Table IV-2). Over 90% of new hires in the biological and physical sciences were satisfied with the process, and over 50% report "strongly agreeing" that they are satisfied. In contrast, significantly fewer new hires in 2006 report being satisfied with their startup packages. In 2003, around 95% of new hires reported satisfaction with their startup packages, and in 2006 it is around 83%. New faculty in departments who did not participate in WISELI's hiring workshops reported the least satisfaction with their startup packages, with only 76.7% reporting satisfaction (down from 94% in 2003).

Table IV-2: New science (hired since 1/1/2003) faculty's reported satisfaction with aspects of the hiring process.[‡]

	N	Satisfied with Hiring Process Overall	Pleased with Start-up Package
All Faculty in the Biological & Physical Sciences	89	91.0%	82.8%
Women	34	91.2%	81.3%
Men	55	90.9%	83.6%
Non-Mainstream	29	96.6%	82.1%
Mainstream	54	88.9%	81.5%
Departmental participation in:			
Climate Workshops	39	92.3%	86.8%
No Participation	50	90.0%	79.6%
Hiring Workshops	57	93.0%	86.0%
No Participation	32	87.5%	76.7%
Hiring Workshops in 2004	45	93.3%	86.7%
No Participation in 2004	44	88.6%	78.6%
Celebrating Grants	21	100.0%	85.7%
No Participation	68	88.2%	81.8%

[‡] **Responses to questions 2a and 2h of the 2006 *Faculty Worklife* survey; reported as fraction of respondents agreeing *strongly* or *somewhat*.**
* Highlighting indicates significant longitudinal decline where yellow indicates significance at *p*<0.05.

Accepting a Position at UW

Some changes in the positive factors faculty considered in accepting their UW-Madison position occurred between 2003 and 2006. The "prestige of the university" was not generally the top-ranked choice among the 2006 respondents; rather, "research opportunities" was the top-ranked choice. A couple of the larger changes occurred for "quality of public schools"—the rank for this choice dropped several notches from 2003. The importance of "salary and benefits" as a positive factor declined between 2003 and 2006 as well, especially for women new hires. The top reasons new faculty cited as disadvantages of accepting a position at UW-Madison include the

geographic location of the university, and the (lack of) opportunities available for their partners. Low salary and weather were also cited.

Experience of New Hires
Despite efforts to improve hiring processes at UW-Madison, new hires appear to be significantly less happy with their hiring experience than new hires from the past. These changes are seen especially in the percentage of those who "agree strongly" to the items "The department did its best to obtain resources for me," "Faculty in the department made an effort to meet me," and "My interactions with the search committee were positive." New faculty in 2003-06 were significantly less likely to strongly agree to these items compared to new faculty in 2000-03. Women faculty new hires, however, did NOT change their perceptions—these negative experiences seem to be only for men. For the item about interactions with the search committee, women actually increased in the percentage agreeing strongly (although this is not significant). Note especially that the experience of new hires in departments participating in the hiring workshops (using either measurement) was more negative in 2006 compared to 2003; the participants in the workshops may not be communicating the messages they receive in the workshop to all of their departmental colleagues, or may be ensuring that women's experiences are very good while neglecting the experiences of men.

Table IV-3: New science (hired since 1/1/2003) faculty's reported satisfaction with aspects of the hiring process.[‡]

	N	Dept Tried to Obtain Resources	Faculty Made Effort to Meet	Interactions with Search Committee were Positive
All Faculty in the Biological & Physical Sciences	87	92.0%	93.0%	98.8%
Women	32	93.8%	90.3%	100.0%
Men	55	90.9%	94.6%	98.1%
Non-Mainstream	29	89.3%	89.7%	100.0%
Mainstream	54	92.6%	94.3%	100.0%
Departmental participation in:				
Climate Workshops	39	97.4%	94.9%	100.0%
No Participation	49	87.8%	91.5%	97.9%
Hiring Workshops	57	93.0%	91.1%	100.0%
No Participation	30	90.0%	96.7%	96.6%
Hiring Workshops in 2004	45	95.6%	93.2%	100.0%
No Participation in 2004	42	88.1%	92.9%	97.6%
Celebrating Grants	21	100.0%	100.0%	100.0%
No Participation	66	89.4%	90.8%	98.4%

WISELI Initiative: Searching for Excellence & Diversity Workshops[23]

WISELI convened a design team consisting of faculty and staff from across the campus to assist in the creation of a workshop series that would educate faculty and staff about best practices surrounding the hiring of faculty. Included on this team were personnel from human resources, faculty with great knowledge of and success in chairing hiring committees, an ombudsperson, the Equal Employment Opportunities (EEO) officer, and others. The design team assisted the WISELI team with understanding what the content of the workshops should be, and gave advice on the implementation of the training throughout the campus. Workshop materials were designed and piloted in 2003. Feedback from these pilots was incorporated into the final materials developed for the workshops, formally named *Searching for Excellence & Diversity* in 2004, when the workshops were implemented campus-wide for the first time. The target audience of the workshops is chairs of search committees, although others (e.g., search committee members, departmental administrators who assist with a search) also attend.

The workshops are implemented using a variety of formats, but common elements include:
- *Peer Teaching*: Incorporating faculty from the unit to deliver short presentations and serve as discussion facilitators;
- *Active Learning*: Most time is spent in discussion and a sharing of practices from different departments; presentation is kept to a minimum;
- *Unconscious Biases & Assumptions*: Participants are introduced to the social psychological literature on unconscious biases and assumptions, and learn how these tendencies might impact the hiring process;
- *Accountability*: Participants report on their success at recruiting diverse applicants to their pools.

In the biological and physical science departments (70 departments at UW-Madison are classified as housing disciplines in the biological or physical sciences, and approximately 1200 faculty are employed in these departments), 48 faculty representing 31 departments attended a *Searching for Excellence & Diversity* workshop in 2004, and 49 faculty representing 28 departments (10 of which were new departments to our training) attended in 2005. Eighteen academic staff members representing an additional 5 departments (two new) have attended these workshops in 2004 and 2005 as well. Thus, in two years the *Searching for Excellence & Diversity* workshops have affected the searches in 43 biological and physical science departments at the UW-Madison, 61% of the total.

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[23] The following pages in this report, 83-88, are taken directly from the following manuscript: Sheridan, J., Fine, E., Winchell, J., Pribbenow, C.M., Carnes, M., & Handelsman, J. (2007). *Searching for excellence & diversity: Does training faculty search committees improve hiring of women?* Paper presented at the American Society for Engineering Education conference in Honolulu, HI.

<u>Evaluation of the Workshops by Participants</u>
Post-workshop evaluation surveys we distributed to participants provided an opportunity for
workshop participants to comment on both the format and content of the *Searching for
Excellence & Diversity* workshops. In these surveys, a number of participants mentioned that
they enjoyed meeting and learning from the experiences of faculty in different departments. One
participant noted that "it was nice to share experiences with other search committees," while
another noted that they would utilize the "experiences of faculty from other departments" that
they gained in the workshop in their search committee role. Other respondents noted that they
had found it useful to connect with university staff and faculty whom they could use as a
resource in their efforts to achieve excellence and diversity through the hiring process. A few
specifically suggested that they appreciated hearing from their peers and campus leaders. For
instance one respondent from the Medical School stated that it was, "nice to see [a high-level
dean's] involvement." Several respondents also pointedly commented on the *peer teaching*
design of the workshop. As one participant put it, "I enjoyed the many voices approach in giving
this workshop. Generally a workshop is richer if more than one person presents—excellent
presenters." Another noted that, "The variety of perspectives and discussion groups were
helpful." Taken together, data gleaned from evaluation surveys tends to support the conclusion
that the *peer teaching* design successfully enhanced the workshop experience for many
participants.

In evaluation surveys, some participants reported that the discussion and interaction aspects of
the workshop had a positive effect on their learning experience. As one participant noted, "I
think the conversations and Q&A can be the most valuable parts of a workshop like this –
providing committee members time and opportunity (and direction) to think about key issues."
Others commented that they found the active discussions and interactions both enjoyable and
productive. One respondent noted that, "I liked the localizing of facilitators at each table and the
back-and-forth between localized discussion and whole-room discussion." Another commented
that, "I found the mix of presentation and discussion … [to be] valuable for me." A number of
participants also suggested that their workshop experience could have been improved by the
inclusion of "more opportunities for discussion" and "as much interaction as possible." Taken
together, these comments suggest that the *active learning* techniques we employed accomplished
their aim for at least some workshop participants.

Responses from our post-workshop evaluation survey indicate that many participants have found
our review of the research on biases and assumptions in the hiring process and the tools we
present to minimize these influences to be enlightening, valuable, and readily applicable to the
search committee. In an open-ended item that asked workshop participants to *identify up to three
things that you gained at this workshop and will apply in your role as Chair or as a member of
your search committee*, the most common response pointed to the third element of the workshop
(*Raise awareness of unconscious assumptions and their influence on evaluation of candidates*).
With comments such as "specific biases to be aware of in the search process and how to identify
and address bias in the recruitment process," and "knowledge of likely biases and tools for
limiting their influence," respondents indicated that they had both gained a new appreciation of
the pitfalls of biases and assumptions in the hiring process and that they intended to utilize our
suggestions on how to minimize the influence of biases and assumptions in their role on the
search committee. A few comments also pointed to the importance of our evidence-based

approach. As one skeptic noted, "The idea that college professors discriminate because of (maybe) unconscious bias is, probably, a tough sell; thus, the need to be convinced with hard evidence." One respondent even suggested that given a longer workshop, they would have liked to learn *more* about the research.

Aggregate ratings of the workshop also point to participants' high perceptions of the *unconscious biases and assumptions* components. Our post-workshop evaluation survey asked respondents to rate the value of each aspect of the workshop on a scale from one (*not at all valuable*) to three (*very valuable*). The *raising awareness of unconscious assumptions and their influence* component, where we present evidence from the literature, received higher average ratings than any other part of the workshop (mean rating of 2.7 among 98 respondents). Similarly, the *ensure a fair and through review of candidates* component, in which we suggest tools to minimize the impact of unconscious bias on the evaluation of candidates, also received high marks (mean rating of 2.6 among 97 respondents).

Finally, for those search committee chairs we have the opportunity to work with over the course of their entire search in the two-session model outlined above, the element of *accountability* that is produced has been very useful. It is useful not only because it provides us, the workshop developers, with direct feedback about the use of the information we provide and its implementation in the "real world" of an actual search, it also creates a motivation for the search chairs to actually do something differently. When the search chairs know that they will be reporting back to their peers, and sometimes even their dean (who often attends the beginning of session two), about what specifically they did to increase the diversity of their pools and what their pool composition looks like—the competitive nature of the faculty present often takes hold and action occurs where it might not have if they did not have to return to the workshop to report.

The post-workshop evaluation surveys provided us with less feedback on the *accountability* aspect of the workshop than the other key features discussed here. This lack of feedback might be partially explained by the relatively fewer number of participants who were trained in the two-session format. Nevertheless, the comments we did receive about the two-session format suggest that the *accountability* aspect of the second workshop was at least partially successful.

Among those participants who did comment on the two-session format, most agreed that two sessions were needed to successfully meet the workshop aims. As one participant stated, "generally [with] these types of workshops it is best to have multiple sessions with time in-between to allow us to process the information." Several respondents also suggested that the second workshop enabled participants to follow-up on what had happened during the course of their searches. One respondent noted that, "The two sessions were useful; the first gave some important data and the second a useful way of checking that ideas had been implemented." In a similar vein, another suggested that in the second session, "results and problem-solving discussions become relevant." A few respondents suggested that differences between departments and inconsistencies with the timing of searches across departments limited the effectiveness of this aspect of the workshop.
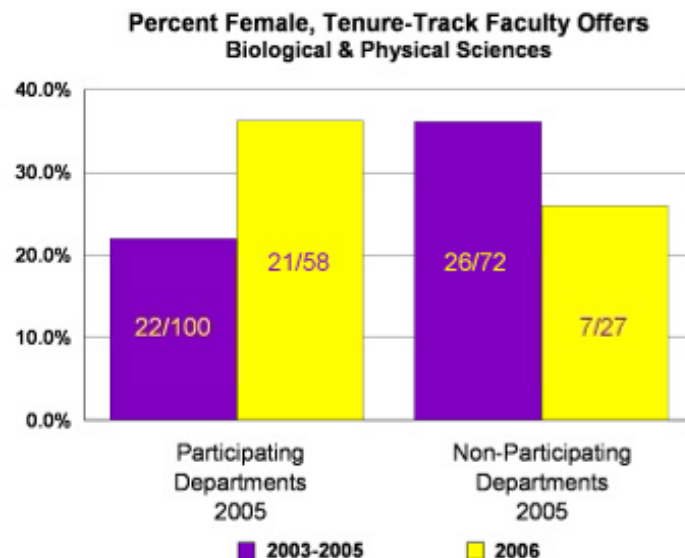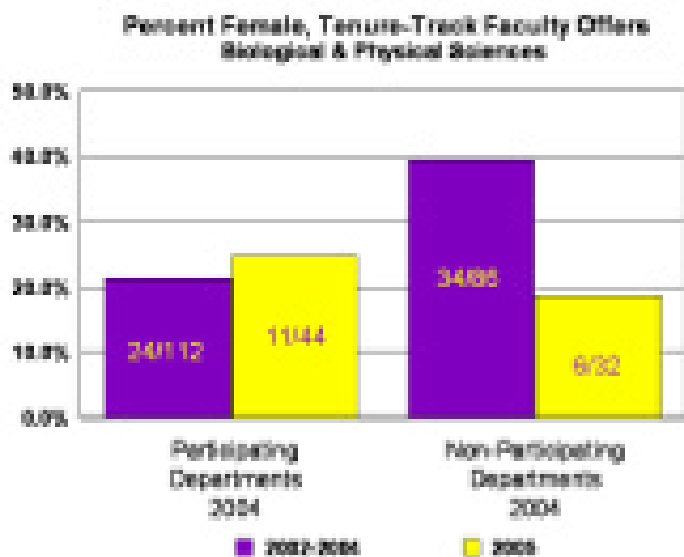
<u>Evidence of Workshop Success</u>
Although it is encouraging that workshop participants report a good experience in the workshops and almost all participants report that the workshops are useful and that they would recommend the workshops to others, it is most important to know if the workshops are meeting their goal of diversifying the new faculty hires in the sciences and engineering on the campus on which they are implemented. The implementation of these workshops across campus has costs associated with it, and in an era of tight budgets it is helpful to know if resources spent on such an initiative will be rewarded with more diversity in the faculty. At the UW-Madison, the answer appears to be "yes." The effectiveness of a workshop series in creating a more diverse set of newly-hired faculty can be measured at many points along the hiring process.

Hiring Outcomes
In the analyses that follow, the data is restricted to only biological and physical science departments, the primary departments to which the workshops were advertised. Two years worth of data will be presented individually; combining data from the few departments who did not participate at all in either 2004 or 2005 but did make an offer creates numbers that are too small for meaningful comparison. We are comparing the outcomes (offers made, offers accepted, and new junior hires) for those science and engineering departments who participated in our workshops in 2004 and 2005 to those who did not. We will compare their numbers from the three hiring seasons prior to workshop implementation, to the hiring season following implementation. For example, for departments that participated in 2004, hiring seasons from 2002-2004 are compared to outcomes in 2005; for those departments that participated in 2005, hiring seasons from 2003-2005 are compared to 2006. The participation year is included as a "pre" measure because most of the workshop participants take the training in the fall; thus, participants in the 2004 workshops would not make offers to candidates until spring 2005 at the earliest, and the new hires would actually arrive on campus in fall of 2005 at the earliest.
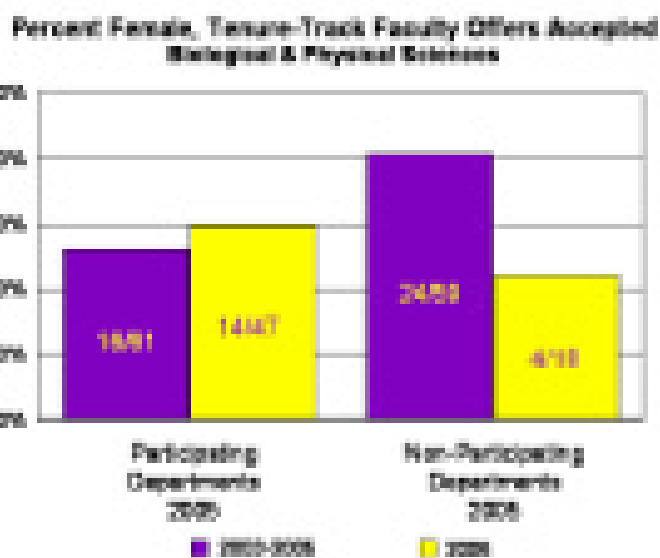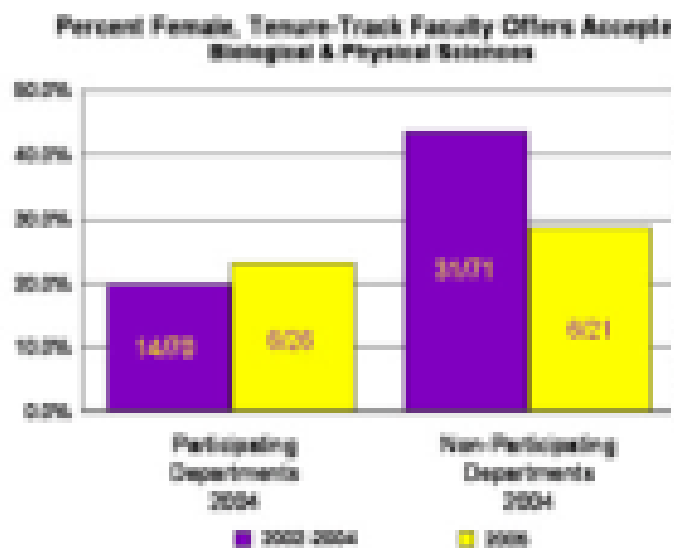
Offers Made
As the figures below indicate, departments that participate in our hiring workshops have tended to slightly increase the percentage of offers they extend to women in the year following their workshop participation, while the departments who did not attend have actually shown a decrease in the percentage of their offers to women.

Percent Female, Tenure-Track Faculty Offers
Biological & Physical Sciences

Percent Female, Tenure-Track Faculty Offers
Biological & Physical Sciences

Offers Accepted
The same patterns of slightly improved outcomes for women candidates appear when we examine the gender proportions of offers accepted. In general, women comprised greater proportions of the persons accepting offers in the departments who attended the training, while the proportion of accepted offers going to women tended to decrease over time for those departments who did not undergo the training.

Percent Female, Tenure-Track Faculty Offers Accepted
Biological & Physical Sciences

Percent Female, Tenure-Track Faculty Offers Accepted
Biological & Physical Sciences

New Faculty Hires
Next, we examine the composition of incoming cohorts of new tenured and tenure-track faculty at the UW-Madison. This measure is ultimately the one that our university is hoping to change—increasing the percentages of new hires who are women.

Percent Female, New Tenure-Track Faculty, Biological & Physical Sciences
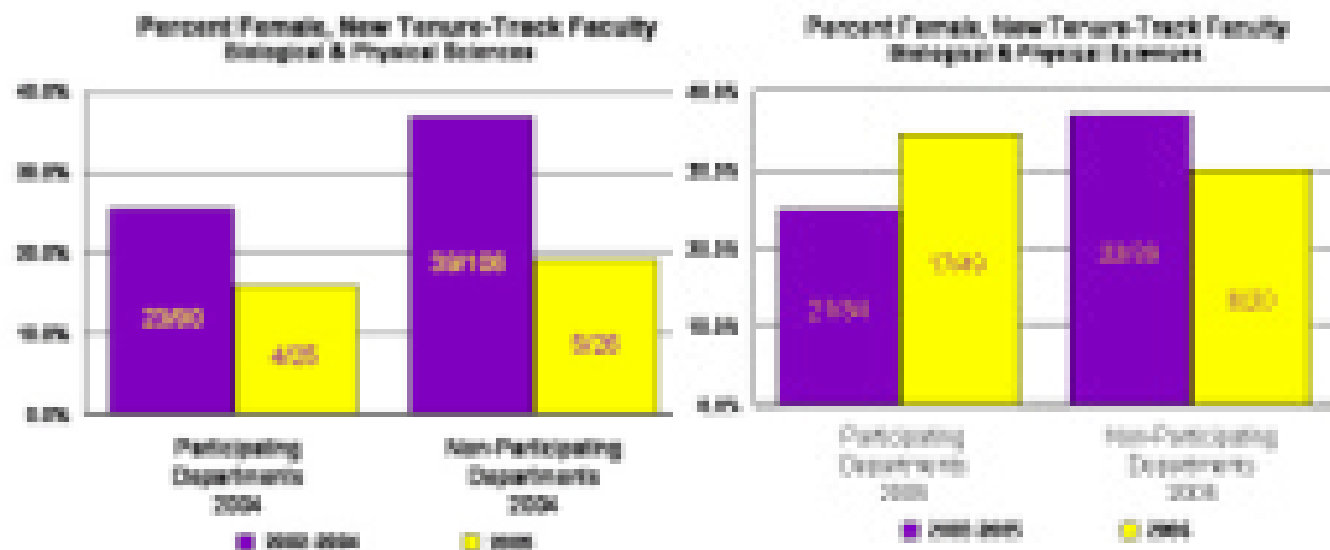
The incoming cohort of 2005 had very few women. The departments that participated in our workshops the year before, as well as those who did not, show decreases in the percentages of women beginning their faculty careers at UW-Madison that year. In 2006, we saw an increase in the percentage of women assistant professors for those departments trained the previous year, while for those departments not trained, the precipitous decline continued. It should be noted that the UW-Madison has had low hiring in the past few years, compared to the level of hiring in past years. Biological and physical science departments hired 70 new faculty on average in the years prior to 2005. In 2005 and 2006, approximately 50 new faculty were hired each year in these departments, a loss of 40 positions in two years. Restricting the overall number of positions might be especially harmful for hiring women.

Summary
In summary, it does appear that participation in the *Searching for Excellence & Diversity* workshops is associated with increased offers made to women candidates and increased presence of women assistant professors on campus. Offer acceptance does not appear to be increased due to participation in the workshops for women. It is important to note that the relationships reported here are correlations only. With the exception of some departments in 2005, participation in these workshops was entirely voluntary. Thus, many of the effects could be due to the search chairs being committed in general to hiring diverse candidates, and their attendance at the workshops and their final results are merely coincidental to that initial commitment.

WISELI Research: Hiring Workshop Results from Surveys, 2003 and 2006
In the 2006 faculty climate survey, we asked about the use and value of the *Searching for Excellence & Diversity* hiring workshops. We did not ask about the workshops on the 2003 survey, because when the survey was developed in 2002 we were still designing them; thus, we have no way to measure changes in perceptions over time. We can report that about half of all physical and biological science faculty have heard of the workshops, and almost all department

chairs have heard of them. While faculty overall place only some value on the workshops, those who are in a position to know the most about them—department chairs, those who attended them, and those who attended any of WISELI's initiatives—report that the workshops are valuable over 70% of the time, and significantly more often than their counterparts.

Table IV-4. Science faculty's knowledge, use, and perceptions of WISELI's Hiring Workshops.‡

	N	Never Heard of Program		Program is Very, Quite or Somewhat Valuable**		Ever Used Program	
All Biological & Physical Sciences Faculty	614	51.0%		43.6%		18.3%	
Women	149	49.0%		47.0%		18.7%	
Men	465	51.6%		42.6%		18.2%	
Faculty of Color	47	40.4%		55.3%		23.7%	
Majority Faculty	567	51.9%		42.7%		17.9%	
Department Chair	43	2.3%	*	79.1%	*	67.6%	*
Not Chair	571	54.6%		41.0%		14.5%	
Non-Mainstream	215	54.4%		43.7%		16.1%	
Mainstream	384	48.7%		44.0%		19.6%	
Attended Hiring Workshop	56	3.6%	*	89.3%	*	81.1%	*
No Attendance	554	55.6%		39.2%		11.2%	
Any WISELI Participation	118	17.0%	*	72.9%	*	51.9%	*
No WISELI Participation	492	58.9%		36.8%		9.7%	
Departmental participation in:							
Climate Workshops	238	46.6%		44.5%		20.1%	
No Participation	376	53.7%		43.1%		17.2%	
Hiring Workshops	411	46.5%	*	47.2%	*	22.3%	*
No Participation	203	60.1%		36.5%		10.2%	
Celebrating Grants	144	47.2%		48.6%		19.2%	
No Participation	470	52.1%		42.1%		18.0%	

‡ Responses to question 35e and 36e of the 2006 *Faculty Worklife* survey.
* T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons.
** Compared to *not at all valuable* or *never heard of program*.
Note: Item not included in 2003 survey; longitudinal comparison not available.

Effects of the Workshops on Offers and Hires

Using data on faculty offers and faculty new hires, we have found that the departments who sent at least one person for training ("participating departments") did increase the percentage of offers that went to women as well as the number of new assistant professors who are women. In this same time period, non-participating departments actually saw the percentage of offers made to women and their percentage of women new assistant professors *decline*. Additionally, using data from our faculty climate surveys, we found that new hires in participating departments reported increased satisfaction with the hiring process overall, compared to new hires in non-participating departments which saw a decline in their new hires' satisfaction from 2003 to 2006. Although a number of factors likely combined to produce these positive results (most significantly a selection effect, whereby those faculty most motivated and committed to faculty diversity in the hiring process were likely those who chose to attend the workshops), our data show that given a willing audience, our training appears to be correlated with increased hiring of women faculty, as well as other desirable changes to our hiring processes at UW-Madison.

WISELI Evaluation: Perceptions of Hiring Workshops

Only a small number of female faculty interviewees had attended WISELI's *Searching for Excellence & Diversity* workshops. Many had either served on search committees with colleagues who had attended the workshops, or had received the written materials from the WISELI search committee. We asked participants how and what information was provided to search committee members, and how this information affected the activities of the search committee. While limited by participants' personal memory and reflection, this information provides us some data about how the WISELI trainings are applied in actual hiring situations, and how workshop attendees are transmitting their learning to others.

In several cases, interviewees reported that the chairs of hiring committees had actively brought information from the WISELI workshops to the entire hiring committee. In at least three cases, WISELI brochures about gender bias were distributed to the committee. In other cases, committee members verbally shared information from the workshop, or specifically implemented techniques suggested in the workshop.

> *[The Dean] had the chair of the search committee go to a WISELI seminar and when we started off, one of the things the chair says is that one of our goals is if we have two candidates that are equally qualified than we have to really look seriously at the woman.*
>
> *****
>
> *So, before we started deliberations about what we wanted from a new candidate…We did get handouts from when he'd gone to that workshop and then he briefly touched on the main points that were covered in the workshop, including that we cannot ask personal information about a candidate…He was very serious about it too. He could have, he could have passed it off as 'this is something I was required to do,' but he was very, very serious.*
>
> *****
>
> *I know that, at least one of the search committee members, when they started getting down to the finals list, and he recognized that women were underrepresented, you know*

he basically raised his hand at a meeting and said 'you know, red flag here, are we really looking at the qualified ones?' So at least it was brought out into the open and discussed.

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R: *I'm on a hiring committee for faculty hire so it's nice to know that WISELI is providing information on the gender and race issues, and I know that someone in my department had attended the workshop…*

I: *How did they—or did they bring those issues to the committee?*

R: *Yes, it was definitely mentioned. I mean, after we sort of had our initial discussion about the candidates' qualifications, then we sort of said, 'Let's look back at our conversation and see, 'Are there any general issues that were brought about by our biases?' So, it was definitely talked about.*

Some interviewees commented that issues of diversity in hiring were perhaps taken more seriously than they would have if a member of the search committee had not attended the WISELI hiring workshop.

[Attention to gender and diversity] happened in every single search that we ran, you know, which may not have happened naturally.

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[The search committee chair] said there were useful things, especially in the part about how to evaluate applications. There were some things in there that he, biases that—they had talked about how bias could be introduced into the review process and he had not recognized the potential for that. And we hired a woman out of that search.

In one case, a participant reported that information gained during the WISELI search workshops was inappropriately manipulated or misunderstood. In this case, the participant described that the general climate in the department was somewhat hostile towards gender issues, more broadly. Faye describes her experience:

And so it was really interesting because the hiring committee had identified diversity as one of the goals of hiring. And immediately all the men on this committee, they're like stuck on that…all of a sudden it's not the merits or the case anymore, it's whether or not you can make that mark on the diversity thing…And then they came back [from the hiring workshop] and all they're thinking is 'how am I going to get my white man candidate to check that box?' So they sit there in the meeting and have a twenty-minute discussion about it—you know, just because this guy is not diverse he can still have a contribution to our diversity.

Interviewees with both administrator and faculty participants also suggest that WISELI search committee workshops were part of broader initiatives to enhance the overall participation of women and minorities at the UW. In these situations, administrators required or strongly encouraged hiring committee chairs to attend WISELI workshops, provided verbal endorsement

for increased hiring of women, and in some cases provided financial and other resources to support these efforts. For example, if a committee selected three top candidates and the fourth was a woman, one College would provide additional funding to bring the fourth candidate on campus for an interview. In other cases, particular effort was made to leverage spousal hires, and to help a female candidate with children reset her tenure clock. These cases provide an example of the synergistic and systematic effects of WISELI's efforts on campus, particularly in relation to hiring. Carrie, currently an administrator, describes her overall satisfaction with these endeavors:

> *I think that [WISELI search committee workshops] was a really good target, to work with the search committees to try and make them aware of things up front. I really think that has some benefits. And it has long-reaching benefits because even if in this particular search they end up with you know a candidate that doesn't have a lot of diversity, that is fine. They thought about the process, it becomes a more conscious examination of these issues. And I think that's valuable and I think, actually chairs have been quite happy with that because they didn't quite know how to approach that issue too. And it kind of gave them a framework to look at.*

Finally, the same interviewee made an important point about how the current rate of turnover and retirement at the University makes this an especially beneficial time for WISELI to continue and extend its emphasis on hiring and search committee workshops:

> *In our college and I think across the rest of campus as well, there's going to be a very large number of retirements. A very large cohort of new faculty hired. And that's an opportunity for a lot of change in attitudes, the opportunity to hire more women, but the opportunity to have a different group of men coming in who are more used to seeing women in the work place. It seems to me that this is a crucial time to have these discussions because of the large cohort of turnover that's coming in. And that really gives us an opportunity for change. So I think this is a good time.*

While participants were not asked explicitly whether they thought search committee workshops should be made mandatory or not, some interviewees independently offered their opinion on the matter. One felt that it was important that WISELI offer materials in a non-mandatory, non-threatening way:

> *I think we've seen the top-down approach not be effective when someone says 'you must' coming from the chancellor's or the provost's office. You must take diversity training or something. You know, people don't like that, whereas WISELI has been strategic about providing the search committee chair training and then bringing in the department chairs and starting with the Deans. They are doing it in the right way because they are not making it feel—from my perspective—as if it is a heavy-handed approach, which makes people feel defensive.*

Another interviewee felt strongly that, unless the workshops *were* mandatory, than they would not reach those that most needed to participate in them.

I think there should be workshops that all faculty should have to go to personally, because we have nine faculty who are [removed for privacy] and they generally don't go to these…And that's almost half our department.

Elaborating further hiring biases that she perceived in her department, she again raises the issue of mandatory attendance:

R: *Because I think we've just tipped the iceberg on this issue and it's a huge issue and it's not just gender. I think it's also about ethnicity and minorities, actually bringing up minorities. So we've had several positions in the department where we've had female applicants. One of which I can think of right off the top of my head. She was clearly much more qualified than the guy.*

I: So it sounds like these hiring workshops could be a benefit to…

R: *Again, it's not mandatory. They're not going to go.*

In summary, these interviews offer some insight into the ways that WISELI search committee workshops and materials (e.g., brochures and booklet) are being utilized on campus. The quotes from interviewees above enrich the existing evaluation information collected from search committee workshops, which have been primarily limited to participant satisfaction data attained after workshop participation. While the interviews above certainly do not represent the experience of all search committee workshop attendees, they do offer rich anecdotal information about both the potentially positive outcomes as well as the limitations of the WISELI search committee workshops and materials. Finally, given the substantive investment made by WISELI in these search committee workshops and materials, and the intention to continue them, the interviews suggest the importance and potential value of a follow-up study that would investigate the application and impact of WISELI search committee workshops in a more systematic manner. Clearly, the administration finds them of value. An Associate Vice-Chancellor provides his perspective on WISELI's search committee workshops:

People talk about them. By looking carefully at processes, conversations, decisions, exclusions of people—people who have attended seem to be using this information— people who are part of search workshops—information is shared. People who have attended seem more cognizant of various issues. WISELI gives both law and policy, but also research and impact on search committees and others. Anecdotally, they definitely have made an impact. More people are requesting WISELI workshops—people are seeing them as innovative and different, it gives people the capacity and the skills to recognize bias and assumptions. Many people refer to it and want to know more about it—it is a quality product and a credible process and initiative. Otherwise, you wouldn't be able to get people to go.

Another Vice-Chancellor comments:

I don't know of any ways in which WISELI has been unsuccessful making changes within the UW. I think everything that they've developed has been top notch, it's been

successful. If I'm going to go by the evidence-based criterion, I don't know that. I was really excited that in [Jenn Sheridan's] report to the Diversity Forum, her preliminary results from the 2006 Survey of Faculty indicated that if faculty had participated in the Search Chair Workshop or any WISELI program, their attitudes toward the climate for faculty of color within the department changed. And I see, that attitude change as a very positive one. It's, it's the chairs and majority faculty now say the climate for faculty of color in their department is worse than it was three years ago. And I think that's increasing awareness.

WISELI Evaluation: Dual Career Hiring Program

The Dual Career Hiring Program (DCHP) has the highest name-recognition and value of any of the hiring-related campus programs we studied, while the WISELI workshops have the lowest, even though "use" of the programs is about the same in the biological and physical sciences faculty overall, at about 18%. Significantly fewer faculty in 2006 said they had never heard of the program, while significantly more said they program is valuable, "very" valuable, and said that they had used the program. These results are not significantly affected by the variables investigated in this analysis.

Table IV-5. Science faculty's knowledge, use, and perceptions of UW-Madison's *Dual Career Hiring Program*.[‡]

	N	Never Heard of Program		Program is Very, Quite, or Somewhat Valuable**		Ever Used Program	
All Faculty in the Biological & Physical Sciences	612	22.5%		73.9%		19.0%	
Women	151	15.9%	*	82.1%	*	25.2%	
Men	461	24.7%		71.2%		17.0%	
Faculty of Color	49	20.4%		77.6%		9.3%	*
Majority Faculty	563	22.7%		73.5%		19.8%	
Dept. Chair	42	11.9%	*	83.3%		47.2%	*
Not Chair	570	23.3%		73.2%		17.0%	
Non-Mainstream	220	23.6%		71.8%		18.9%	
Mainstream	377	21.2%		75.9%		19.2%	
Attended Hiring Workshop	57	8.8%	*	87.7%	*	32.0%	*
No Attendance	551	23.8%		72.6%		17.8%	
Any WISELI Participation	120	7.5%	*	90.0%	*	29.8%	*
No WISELI Participation	488	26.0%		70.1%		16.6%	
Departmental participation in:							
Climate Workshops	234	23.1%		73.5%		15.6%	
No Participation	378	22.2%		74.1%		21.1%	

Hiring Workshops	410	22.7%	73.9%	20.1%
No Participation	202	22.3%	73.8%	16.8%
Celebrating Grants	145	17.2%	77.2%	16.0%
No Participation	467	24.2%	72.8%	19.9%

‡ **Responses to question 35b and 36b of the 2006 *Faculty Worklife* survey.**

* **T-test between groups significant at *p*<.05; no adjustments made for multiple comparisons. Highlighting indicates significant longitudinal change where yellow indicates decrease is significant at *p*<0.05 and where green indicates increase is significant at *p*<0.05.**

** **Compared to *not at all valuable* or *never heard of program*.**

WISELI Issue Study #2: Why Women Leave and Dual Career Hiring Study

The second issue study identified by WISELI sought to examine the reasons why women faculty in the sciences and engineering leave UW-Madison. Based on the interview data collected from women who left the UW, WISELI hoped to discover ways to retain more women. In a separate study, WISELI wished to explore dual-career hiring experiences of university employees. It was only after the interview data from both studies were analyzed that we began to see how many of the findings were actually related.

Interviews with seven men and women who were hired at the UW-Madison with their spouses indicate that the university is doing good things to attract dual-career couples.[24] The interviewees described how the university had been "accommodating," "proactive," and "helpful" overall. In these cases, each member of the couple was offered a position at the university—the ideal situation for the couple's personal and professional needs. In all cases, the initial hire received the desired faculty position and in two cases, the spouse/partner went into an academic staff position, the other five went into faculty positions.

Decision to Apply to UW

Several of the interviewees discussed the deliberate decision that both they and their spouses made to come to UW-Madison so that they could be together. This seemed to be a good draw for these professional couples. For example, Susan explains:

> *One of the reasons that we chose UW in the first place was that both of us would be able to come. That was one of the things that we had decided earlier in our marriage, that we didn't want to be separate because we had seen too many of our friends separate, both in their academic locations and then subsequently marriage. And we just didn't want that to happen. So we were determined that we were either going to take positions, academic positions together, or if he wanted to go into academe and I went into industry, but it would be in the same place. And Wisconsin gave us the opportunity to both be in academe and the same place.*

Tim describes how this strategy affected his decision to accept the position:

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[24] The dual-career study was a joint effort with Virginia Tech, another ADVANCE site.

The University has this spousal hire program that worked really well for us, and I am sure it made the difference in whether or not we came here or went somewhere else. We had three offers and we chose to come to this university largely because we thought it was not only the better place for our family and had the right level of sort of pressure on two of us since we were both going to be assistant professors at the same time, and moreover we had simultaneous offers because of the spousal hire program.

As seen in these examples, many of the interviewees had positive reactions to this recruitment strategy. Jane and others also describe how surprised and even shocked they were at receiving two offers for the couple:

Actually I was amazed at how well the university functioned in spousal hiring. I came from a place where this was unknown. It just absolutely floored me, how proactive they were, how accommodating. I didn't bring up the issue, they did…they just assumed that to attract me, they would also need to come up with a second position. Well, we both came in at the same time initially, but then they asked him to come back once they decided. We actually applied for one position. We said we would compete for it or share it. And then they went through their process and offered me the position. And then they indicated that they would try to come up with a comparable position. There's actually a person whose job it was to develop spousal hires. I was so impressed. And then they asked my spouse to come back and interview again. At UW, it's a matter of finding the right place. It's not a matter of 'if.'

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It just sort of happened as far as our offers were concerned after I interviewed. Once I had the first offer and at that stage I told them that it would be very important that [wife's name] also get an offer or find something that is meaningful here, and then within a week, I think she had three different departments that were all sort of interested in having her be a part of their faculty. And, she came out and interviewed and everything sort of worked smoothly.

Positive Strategy for Recruiting

In addition, co-workers within the departments seemed to agree that this was a plus not only for the couple, but for the department, as well.

I think it's only positive… in the [NAME] department where I am, we've hired during the last 5 years, two women have joined our program that we would say, that both came on as spousal hires, but very senior spousal hires and they have been extremely high caliber people. I think they are equivalent to the top 10% of our department, one came from the university of [NAME], one was a tenured faculty member in a more prestigious department than ours, the other person was very well known from the University of [NAME] and she came here and also added clout to our department. The interesting thing is in both of these cases, they would have been first round people all by themselves, we would have bent over backwards to recruit them, but they happened to just show up as spousal hires for our department, and so in that sense it seems to work really, really well in our case. We are getting some high quality people in areas that we wouldn't have

necessarily been able to hire before. I think my colleagues have a very high opinion of [dual-career hires]; it seems to work really well for us.

Generally, across campus, dual hires also seemed to be perceived as a positive strategy for attracting quality people. Tim notes:

> *I think that the answer there is 'yes,' across the university it has worked out, it works out really well, the only criticism that you could have is that you would be bringing in people who aren't as high of quality, the quality level could drop, but in fact I think it is just the opposite. I think we've gotten higher quality people overall because we have been able to simultaneously hire couples that are really both superstars, so that seems to work pretty well. And, I think that is the general opinion.*

Concerns

Though most of the dual hire stories shared were positive, a few interviewees shared concerns about their departmental experiences. These centered on the perceptions voiced by various departments, worries about potential divorce and "voting blocks," lack of transparent policy implementation, and the lengthy period of time for the hiring process. Karen explains:

> *We wanted to be in different departments which we thought was good, because bringing two people in who are in different departments, I think people have fewer issues associated with that than bringing a married couple into the same department, whether they be in the same area within the same department. And I initially had thought, well, why are people prejudiced against that, why would they not want to bring a married couple in? I guess there is the horrible thought that they are going to get divorced and then you're going to have this situation, I think there is also the issue that they are going to be a voting block, that there is going to be two people that are probably going to have the exact same beliefs and it's going to be hard to work with these people on committees, especially if they are in the same area.*

She also shares concerns about ensuring that it is handled smoothly:

> *I don't know anywhere where [dual hiring] is really streamlined, it all seems to be, it is not as straightforward to bring in two people as it is to bring in one, and it just adds further complications and stress to it.*

Tim echoed Karen's uncertainty in regard to the formalized workings of the program:

> *I didn't, we didn't see too much of the inside workings of the program if you will…I am still not fully aware of what the policy is. I think I appreciate that there is a chunk of money that is made available to departments to hire that is outside their normal hiring plan, that they have agreed with the Dean on, and it happens at [UW], so I know those two things happen.*

Michael had concerns about the possibility of policy inconsistencies in varying departments across campus:

I think there is quite a bit of variation among departments. I think it also differs when it comes to faculty positions. There is more resentment in general, than towards an academic staff position for two years and things like that.

Finally, Margaret shares how the "receiving department" with the dual-hire can sometimes be an obstacle to be overcome:

The difficulty was in the receiving department that didn't initiate the hiring, they emphasized that this additional hiring has to fit their long-term plans. And obviously they found it did fit into their long-term plan, so they did. But it was a big barrier to overcome.

Improving the Process

From those interviewed about the dual-hire experience, some did offer recommendations for improving the overall process. These suggestions included establishing and streamlining a standardized process, making this process transparent for campus and potential university candidates, encouraging collaboration across campus departments, identifying funding for permanent dual hire positions other than soft monies, and the establishment of an ombudsperson for dual hire inquiries.

I think it would be good to say, this is our spousal hire policy and provide that to every job candidate during an interview, because there is a lot of advice given—'don't mention spousal hire during an interview, it may work against you.' And I think just being up front about it would be good… there is a lot of rumors about what the university would do for an assistant professor, an associate professor, for spousal hires, but no one quite knows. So, having a more explicit policy… I think that would be good. Maybe even having an ombudsman that you could ask on campus. If I would interview again, someone who I could talk about the spousal hire process, not the department chair or someone on the search committee to whom if I may have just mentioned it, I could have blown my chance. I think that would be good.

*****

I think being as open and honest from their side from the very beginning…it seemed a little bit like smoke and mirrors here a little bit, I didn't know what was going on for a while… there is a lot of, 'we are going to make you an offer,' but it took a long time to see it in writing—a really long time—and just ways that it could be made more clear, that would have helped. More transparent…we felt a lot of the time that we did not know what was really going to happen; it was really stressful.

*****

I hope there is a standard policy or program across colleges and when this type of issue comes up it is able to be handled professionally and timely…because in many spousal hiring cases it doesn't always happen within the same college. In our case, one was the [NAME] and one was in [NAME]. And there had to be a discussion between these two colleges and then it had to be forwarded to the graduate school. I think it is important for

the university or institute to have a program established to facilitate the discussion across colleges.

Recommendations

Based on the stories of the women and the dually-hired faculty described in the technical report, several recommendations emerged. These recommendations are aimed at improving the overall experience of faculty in science and engineering departments with recruitment, retention and improving the climate for all.

Recruitment
➢ Make sure start-up packages include items such as space, personnel, and other resources—enough to ensure a successful beginning for a new hire.
➢ Honor contracts offered during recruitment efforts.
➢ Delineate tenure guidelines immediately.
➢ Make spousal hire policies transparent; document and communicate what they are and how they are implemented.
➢ Disseminate information regarding sick and maternity leave, tenure-clock extension, and other UW policies.
➢ Ensure that the dual-career spouse/partner is offered a position that is consistent with her/his professional and personal needs and goals.
➢ Encourage collaboration across departments to make spousal hires a possibility.

Retention
➢ Integrate new faculty into the department with deliberate strategies to address isolation.
➢ Offer an initial reduction in teaching loads, advising, and committee work for new hires.
➢ Delineate and document tenure and promotion guidelines.
➢ Support realistic performance expectations within varying specialties (i.e., clinical expectations in addition to grants, teaching, research, and publishing).
➢ Provide guidance for junior faculty in seeking grants, teaching, publishing, research, and clinical work.
➢ Improve departmental mentoring, both formal and informal.
➢ Implement strategies to decrease isolation felt among women, those doing non-mainstream research, etc.
➢ Invest in a new hire for their own well-being, the department's and for the university.
➢ Fund permanent positions for dual-career hires.
➢ Offer life-cycle research grants in times of personal and professional struggles.
➢ Create and sustain zero tolerance policies on illegal and unethical practices in departments.
➢ Designate an ombuds position to address dual-career and climate issues on campus.
➢ Develop and disseminate information about work life-family balance policies.
➢ Increase opportunities for networking with women scientists and other professionals.

Summary: Hiring Practice and Policies

The goal of increasing the representation of female faculty in the sciences and engineering called for many of WISELI's resources to be focused on hiring practices and policies. Some resources

went to collecting data about the numbers of people hired in any given year, some went to studying current UW-Madison policies (e.g., dual-career hiring), and much went towards the development and implementation of the *Searching for Excellence & Diversity* workshops, often referred to as WISELI's "Search" or "Hiring" workshops. The collection of data from each of these activities provides us with a snapshot of hiring at UW-Madison since WISELI began.

In the previous six years, the percentages of female faculty in the biological and physical sciences at UW-Madison have been increasing, as has the proportion of women in all divisions. Since 2000, the annual rate of increase has been faster in these two divisions, as compared to the social studies or the arts & humanities divisions. The percentage of new hires in physical and biological science departments, both tenured and untenured who are female, has increased at UW-Madison since 2002. Besides the 2005-06 academic year, the UW-Madison has been increasing the numbers and percentage of women new hires in the previous four years. Almost 40% of new senior hires are women, an increase from the years prior to WISELI's creation.

A design team consisting of faculty and staff from across the campus assisted in the creation of *Searching for Excellence & Diversity* workshops to educate faculty and staff about best practices surrounding the hiring of faculty. These workshops have been the subject of intensive research and evaluation since their beginning. Interviews with campus administrators suggest that this initiative has the greatest potential to impact the UW campus because it is through the process of hiring that long-standing changes in the faculty can be made. In the first two years of the implementation of these workshops, searches in 43 biological and physical science departments at the UW-Madison (61% of the total) have been affected. Evaluation of these workshops suggests that participation is associated with increased offers made to women candidates and an increased presence of women assistant professors in the participating departments.

Besides focusing on improving hiring practices, WISELI staff also used funds from the ADVANCE grant as an opportunity to evaluate current UW policies and practice. Interviews with seven men and women who were hired at the UW-Madison with their spouses indicate that the university is doing good things to attract dual-career couples. The interviewees described how the university had been "accommodating," "proactive," and "helpful" overall. In these cases, each member of the couple was offered a position at the university—the ideal situation for the couple's personal and professional needs. In all cases, the initial hire received the desired faculty position and in two cases, the "trailing" spouse went into an academic staff position. It appears from the interviews that these hires are a very attractive means for recruiting professional couples to campus. Once the couple is here however, both individuals are not necessarily happy. Surprisingly, approximately half of the interviews with women faculty who left revealed that their husbands were not having positive experiences within their departments, which ultimately prompted both to seek positions elsewhere. In these instances, the wife made the decision to leave the university, which is of particular concern since many of these women were successfully recruited into a science or engineering department.

Results from all of WISELI's studies indicate that attention needs to be paid both during and after the process of hiring. Some of the suggestions to improve recruitment to UW include: Ensuring that start-up packages include items such as space, personnel, and other resources— enough to ensure a successful beginning for a new hire, honoring contracts offered during

recruitment efforts, delineating tenure guidelines immediately, making spousal hire policies transparent, disseminating information regarding sick and maternity leave, tenure-clock extension, and other UW policies, and encouraging collaboration across departments to make spousal hires a possibility.

CHAPTER V: LEADERSHIP

The overarching and long-term goal of WISELI is to have the gender of faculty, department chairs, and deans reflect the gender of the student body at the University of Wisconsin-Madison. In order for this and other goals of WISELI to be achieved, more women need to ascend to both informal and formal leadership positions on campus. Through the 2006 follow-up interviews, we sought to ascertain the current leadership roles undertaken by female faculty as well as interviewees' desires for future or extended leadership positions. Without defining leadership in any detail, we asked interviewees about their leadership roles and motivations for undertaking them, and also whether they anticipated taking on leadership roles in the future and why.

The responses about current leadership roles and the motivations accompanying them were rich and varied. The interviewees defined leadership broadly, to include not just formal authority positions, but also participation in committees and mentoring of faculty and students. Reasons for taking on these roles were individualized, but some common motivational themes did emerge. For example, several women noted that they took on leadership because they didn't want to "grouse" about problems or programmatic inadequacies unless they were willing to do something about them. Similarly, several women described "stepping up" to leadership roles not out of desire but because they were asked, they wanted to help, and/or because there was a significant need created, for example, by a colleague's serious illness. In describing the rewards and responsibilities of leadership, many women also spoke about the emotional tolls of formal leadership positions. In these cases, interviewees felt that they carried problems or duties "home" with them, emotionally if not literally. In the following sections we summarize the responses to our questions about leadership and elaborate on some of the common themes that emerged in the interviews.

Leadership Roles and Experiences

Female faculty members who were interviewed participated in a wide array of leadership activities. These included informal and formal mentoring, participation on departmental and University committees, directing programs or section activities, and serving as departmental chairs or college administrators. In general, there seemed to be a high level of participation in formal leadership activities among the mid-career and senior faculty. At least six of the 19 interviewees served as an administrator (chair or college-level) in the past five years. An additional three were program directors. Among the more junior faculty, committee participation was a more common form of cited leadership.

When asked whether they would consider future leadership opportunities, the majority of women were open to the possibility. They generally felt that it would depend on the role or opportunity and their circumstances at the time. At least one quarter of the interviewees expressed an affirmative or avid interest in future leadership. Only three women said they would definitely not pursue future leadership options, and two of those negated only full-time administrative roles, such as a Dean position. In general, the most reticence about pursuing future leadership was expressed in regard to full-time administrative positions.

<u>Motivations for Current and Future Leadership Roles</u>
When asked why they took on or would take on leadership roles interviewees offered several explanations. A primary reason, which was also cited in the 2002 interviews, was that they were asked and/or wished to assist the department. In some cases, the need was brought on by difficult circumstances such as a colleague or chairperson's illness or departure. Here, interviewees often felt compelled to assist, even if they did not desire the position. Carrie, who initially took on an interim position to fill such a need, explained, it was "more to help out the [colleague] than from any reason that I thought I wanted to do it…I was told it would be a couple of months." In this case, as well as others, while the interviewee was initially reticent to assume the leadership role, she reported that she eventually found it to be a rewarding and interesting position. In a different and somewhat converse case, the interviewee described her acceptance of a chair position as "coercion," and did not relish the role:

> *It felt like almost like coercion. Department chair is a service role. You know you say leadership, and you say yeah okay. But it doesn't have power in the sense of controlling resources and things like that, which is fine by me. But it is a very heavy service role taking care of other people's problems basically, in some ways. The buck stops here, they all land in your lap.*

Whether or not they had already been asked or "coerced" to take on a leadership role, a majority of interviewees expressed a desire to improve their program, department, or the University as a motivating factor. A few interviewees suggested that they didn't feel right "complaining," unless they were willing to step up and make changes. Another pointed out that taking leadership allows one to affect one's own destiny and position. The following quotes provide elaboration from interviewees' perspectives on their motivation to be department chairs:

> *I mean at some level it's saying 'well, if I don't take the job, which is an opportunity to try to improve things, then I don't have the right to complain.' You know what I mean? Here is this chance to try to make things better, if you don't do it, you can't complain about how sucky things are. So it was this idea of about twenty years of not being able to complain. And that was the price. That - so it was sort of like three years of my life versus twenty years of not complaining. And so that was my criteria.*

> *****
> *Why did I agree to do it? Um, I thought I could do it. There were problems, there were things that I thought I could fix and I did. I mean there were - I've always been sort of a leader, as a young person, so I wasn't afraid of it at all. I felt I was the best person to do it at the time and that I could - that I would have the support of the faculty. I never would have considered it if I wasn't asked to do it by the faculty. I had very, very strong support. So I did it because the support was there from the faculty as well. There were things that I thought I could fix.*

Interviewees expressed a variety of other motivations for taking on leadership, some personal and some more general. For example, some interviewees viewed leadership as opportunities to make new things happen, express creativity, and stay personally energized about their work. Others saw leadership, especially project directorships, as a way to have control over activities

that were important to them. At least two interviewees were partially motivated by the idea of having more women (in this case, themselves) in leadership roles. Personal motivations, such as a desire to teach less or to improve one's own leadership skills, were also expressed. One interviewee attributed her increased interest in and exposure to leadership in part to WISELI and women's initiatives on campus. She explained how her involvement in one campus-wide leadership project spiraled into another and how she benefited from meeting women involved with WISELI:

> *[And then] making connections with WISELI so these things began to evolve and merge together when I had a chance to meet more people on campus and realize that the campus was, the network was something that I could become part of. And I finally did become part of it.*

Rewards and Benefits of Leadership

Often, but not always related to their initial motivations for taking on leadership, many interviewees pointed to a range of benefits they received or reasons they eventually enjoyed these roles. A theme repeated by a few interviewees was that they appreciated the interaction with colleagues across campus. As Elaine explained, "It took me about ten years to do this but then learning about all the other resources on campus and great, great people on campus that are so fun." Mary elaborates on this idea:

> *What I really actually enjoy that's common to all of these is the interaction with different kinds of people. We're reaching out, instead of just looking at people in my department or people in one field. I get to interact, in [Department], I got to know a whole range of people I'd never met before who are interested in [Topic]. And with being the department chair, I got to meet all the chairs and all the other departments and all the administrators in the college and got to go to various meetings where there were all different sorts of people from the university. I got to go to meetings with department chairs at other universities and with the editorship I get to communicate with people all around the world. They're all in my field, but they're people I have never encountered before from all over the world. So I like that.*

Other interviewees reported that they had enhanced their skills, their ability to work with people, and ability to influence the department, college, or University by taking on leadership roles, as described in the following quotes:

> *[A]nd I think was a leader in that endeavor. And I think succeeded very well and that made me think, 'You know I like this. This is what I want to do.' And I like team building and getting groups to agree to change even though it's painful.*

> *******
>
> *I have found myself taking on more responsibility in terms of chairing committees and helping with these kinds of redesign questions and that experience has been worth every minute too. Because it has helped me see things in a different way and I think to improve my own personal skills and abilities to work with people and to develop the insights on how to work with people who see things very differently than me.*

Other interviewees reported additional and often individualized benefits of leadership roles, including the opportunity to exercise creativity, the ability to create and manage new programs, and the appreciation received from colleagues or students.

Drawbacks of Leadership Positions
In addition to describing motivations for and benefits of pursuing leadership, interviewees provided a variety of reasons why they were disinterested in future positions or dissatisfied with current or past leadership roles. By far, the most common theme was that leadership positions were time consuming and would detract from their research agenda and research progress. This theme was also expressed in the 2002 interviews. Although willing to fulfill service roles, some women declared a near complete lack of interest in leadership—particularly administration—because of their passion for their research. Amy explains:

> I: Would you like to kind of have more leadership roles in the future and possibly even administrative roles? Is that something you envision for your -
>
> R: *No, absolutely not. I try to avoid that as much as possible.*
>
> I: And why is that?
>
> R: *I got into [field] to do research. I didn't get into it to be an administrator. I just feel very strongly about that. So I like the research. And I know when you become an administrator you just don't have time for that.*

Other women also described a tension between pursuing leadership opportunities and keeping time to engage with and succeed in their research. These women enjoyed leadership roles, but worried about losing touch with their research or work. Most believed that some balance could be achieved between the two, and that certain stages of the career were more conducive to taking on leadership roles.

> *I would be willing to be department chair before I retire you know at the point when I feel like I can be facilitating things for others and as my research career is waning. But I love research and I'm reasonably good at it and so I think, you know, I should stick with that.*
>
> *****
>
> *So I really enjoyed [being a leader] but I was doing that to the exclusion of doing my personal research and so I've really backed off from the leadership role…and I said I fully expect that if the research progresses and takes off and succeeds that then I'll be able to re-obtain a lot of the leadership roles.*
>
> *****
>
> *I've been thinking about that, because I do like to try to make things happen on an administrative level, but I can't stand the bureaucracy….I've been feeling lately like I'm doing more puppeteering than actually advising residents on cases, or advising my grad students, where they're actually doing the research. And I feel like I'm getting farther*

and farther away from the things that I like to do, so I'm actually trying to be more involved with the lab now, and be more involved in clinics… So I don't know if I'd want to get farther away from it than I even am…I guess I would keep it open as an option.

Other women, particularly those who had already held administrative positions, discussed the emotional toll of these positions. Even when they enjoyed the role, they felt burdened by taking on responsibilities that involved other people's problems or that could affect a large number of people, for example. They often carried these burdens with them beyond the normal work day, as described by the interviewees in the following quotes:

I think the balance that I was definitely struggling with was the [work-life] balance. I think that the administrative role is a very difficult one, because there just isn't an end to what you can do. There's always many more challenges than you can take on so it's hard to draw the line…because I felt in my faculty role I could make the decisions and they would only affect me if I chose not to do something. That wasn't so true once you're into an administrative role. So dropping the ball on something is going to affect a lot of people.

*****

But it is a very heavy service role taking care of other people's problems in some ways. And the first year, I found that extraordinarily difficult because I took everybody's problem's home with me. I'd sit there, 'oh my gosh, it's all up to me to solve,' and it isn't. And it isn't. And it's taken me a little more maturity and reflective to tone that down a little bit, so that it's less emotionally draining to do.

*****

Well the thing with the administrative challenge and maybe this is a gender thing… I kind of carry it with me - and I'm working on it and sometimes that helps - looking for new insight... But when you do that, even though you're with your family, you may bring it home then. It could be even working on a grant also - but this is a much bigger pull—when you've got human beings in your department worried about this.

Additional reasons provided by interviewees for not taking on addition leadership included a desire to preserve or create a better balance between work and life, the need to focus on first achieving tenure, or perceived lack of skills or confidence needed to carry out leadership tasks.

In summary, the participants in this study were experienced and interested in a wide array of leadership opportunities. They took on or considered taking on these roles for several reasons, including a desire to help and to make positive changes in their departments or on campus. They accrued myriad benefits from their participation in leadership, including expression of creativity, ability to influence important decisions, and opportunities to network with and meet new colleagues. However, interviewees also described the disadvantages that accompanied leadership roles, especially administrative positions. In particular, leadership detracted them from their research, which they usually viewed as their first priority. In addition, some felt that leadership positions carried heavy emotional burdens. For these and other reasons, many interviewees reported that they would maintain and pursue additional leadership roles, but some were quite adamant that they would not undertake a full-time administrative position.

Too Few Women in Leadership Positions
Those interviewed felt that the lack of visibility of women in prominent leadership positions played a role in climate being slow to change. They advocated for more women to aspire to and be promoted to these positions. This is, as mentioned previously, the overarching and long-term goal of WISELI—to have the gender of faculty, chairs and deans reflect the gender of the student body at the University of Wisconsin-Madison.

> *It doesn't seem to me that we've had much change in the number of women in administration. Indeed we lost some prominent ones and it's not an easy role for anyone to be in those administrative positions and I think it's been pretty status quo in terms of climate for women and there are not very many in those roles. In terms of participation, I think it's been the same; we may even have lost a little…*

In the following section, we see how many women are actually in formal leadership positions at UW-Madison.

Leadership, by the Numbers
The presence of women in administration is important, as it is the faculty and staff in those positions who have a great deal of influence over university policy and how it is implemented. These leaders also have a great deal of influence over the climate experienced by faculty. The following results are derived from the climate surveys, 2003 and 2006, and the tracking of women in leadership positions.

Departmental Committee Leadership
Due to a change in question wording, almost all of the 2006 percentages are lower than the 2003 percentages, so change over time was not analyzed for the following items (Table V-1). Only a few interesting differences appear in this table. Women and men tend to serve and chair most of these committees at about the same rate, except that women are significantly less likely to report chairing a salary committee, compared to men (even though they are equally likely to serve on such a committee).

Table V-1: Comparison of men (n=322) and women (n=54) full, science professors' service on department committees.

	RESOURCES					
	Space		Salaries		Awards	
	Served	*Chaired*	*Served*	*Chaired*	*Served*	*Chaired*
All	30.6%	11.8%	46.5%	16.3%	34.0%	16.1%
Women	26.0%	8.3%	38.5%	8.2% *	38.5%	26.0%
Men	31.4%	12.4%	48.0%	17.7%	33.2%	14.4%
	MEMBERSHIP					
	Promotion				Faculty Search	
	Served	*Chaired*			*Served*	*Chaired*

	Served	Chaired	Served	Chaired
All	67.0%	24.3%	62.5%	30.0%
Women	64.7%	14.9%	53.7%	23.5%
Men	67.4%	25.9%	64.0%	31.1%

	LOW REWARD					
	Curriculum		**Grad Admissions**		**Diversity**	
	Served	*Chaired*	*Served*	*Chaired*	*Served*	*Chaired*
All	46.8%	17.0%	35.2%	12.3%	14.0%	6.0%
Women	50.0%	27.1%	40.0%	12.8%	23.3%	9.3%
Men	46.3%	15.3%	34.4%	12.2%	12.6%	5.5%

‡ Responses to questions 15a-15h of the 2006 *Faculty Worklife* survey.
* T-test between groups significant at *p*<0.05.
Note: Identical items not included in 2003 survey, longitudinal comparison not available.

<u>Campus Committee Leadership</u>
At a university where faculty governance is so strong, tracking participation on key committees is especially important, because much of the university's selection of leadership, access to resources, evaluation of faculty, and changes/additions to policy occur through these committees. Using the annual list of committee membership published by the Office of the Secretary of the Faculty, we tracked women's participation on a number of key committees: Faculty Senate, Divisional Committees, Graduate School Executive and Research Committees.

Percent Women Committee
Physical & Biological Science Faculty Only
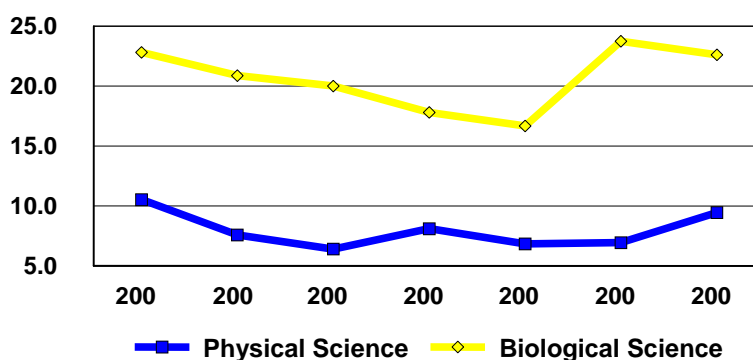
*Faculty Senate, Divisional Committees, Graduate
School Executive & Research Committees

A steady decline in the percentage of women participating on these important committees was evident up through the early years of WISELI. Recently (2005, 2006) a slight increase in the percentages of women on these committees is clear. Although the declines in women's participation from 2000-2004 are striking, it is important to note that in most years, their representation on these four committees is still higher than their representation among full

professors in their divisions (most of the faculty on these four committees are tenured); therefore, women's participation has generally been consistent with the percentages of women eligible to serve on these committees. Nevertheless, these declines are recently reversing, and women are again over-represented on these committees (as compared to their representation among full professors in their divisions).

Interest in Formal Leadership
Interestingly, biological and physical science faculty in general are indicating an interest in taking on formal leadership positions much more often in 2006 than they did in 2003. Most of these significant differences are occurring when the responses of all ranks of faculty are considered, but further analysis indicates that the changes are universal across ranks and genders; it is the larger sample sizes of the full sample, or of men, that is driving the significance. The large difference in leadership interest between faculty who attended a hiring workshop and those who did not is striking. Again, this may be due to the relatively large proportion of chairs in the group who attended a hiring workshop. Regardless, the faculty WISELI trains in the *Searching for Excellence & Diversity* workshops are the very ones who will be the leaders of UW-Madison (e.g., department chairs, associate deans) in the future (see Table V-2).

**Table V-2: Science faculty's interest in formal leadership positions at UW-Madison.** [‡]

	All Faculty			Full Professors Only	
	N	Interest		N	Interest
All Faculty in the Biological & Physical Sciences	625	41.8%		371	39.1%
Women	153	42.5%		54	46.3%
Men	472	41.5%		317	37.9%
Faculty of Color	50	40.0%		27	33.3%
Majority Faculty	575	41.9%		344	39.5%
Dept. Chair	37	73.0%	*	36	72.2%
Not Chair	588	39.8%		335	35.5%
Non-Mainstream	225	43.1%		122	40.2%
Mainstream	386	41.2%		244	38.1%
Attended Hiring Workshop	57	63.2%	*	46	65.2%
No Attendance	563	39.8%		325	35.4%
Any WISELI Participation	116	56.0%	*	77	58.4%
No WISELI Participation	504	38.7%		294	34.0%
Departmental participation in:					
Climate Workshops	235	41.3%		140	38.6%
No Participation	390	42.1%		231	39.4%
Hiring Workshops	410	44.2%		246	44.3%
No Participation	215	37.2%		125	28.8%

|				
Celebrating Grants	145	41.4%	95	39.0%
No Participation	480	41.9%	276	39.1%

In reviewing the actual numbers of faculty in various positions, we see a large increase in the percentage of women PS and BS faculty who are entering formal leadership positions at UW-Madison. The year 2002 seemed to be a low point, with rapid increases after that. Much of the change is driven by the large increase in women department chairs in the approximately 70 departments comprising the physical and biological sciences. In 2002 we had only two women department chairs in these departments; by 2006 we had 10. The numbers of deans and chancellors/provosts who are women does not change appreciably over time, partly because there are so few of these positions available. The other major administrative leadership role, that of center director, has also not yet seen a major change in the numbers of women leaders; in fact the number of women leaders of the approximately 35 largest centers/research institutes on campus has actually been declining, from three in 2002 to only one in 2006. In the seven years WISELI has been measuring this, there has never been a female director of any of the approximately 20 centers in the physical sciences that we track.

Percent Women Department Chairs
Physical & Biological Science Faculty Only
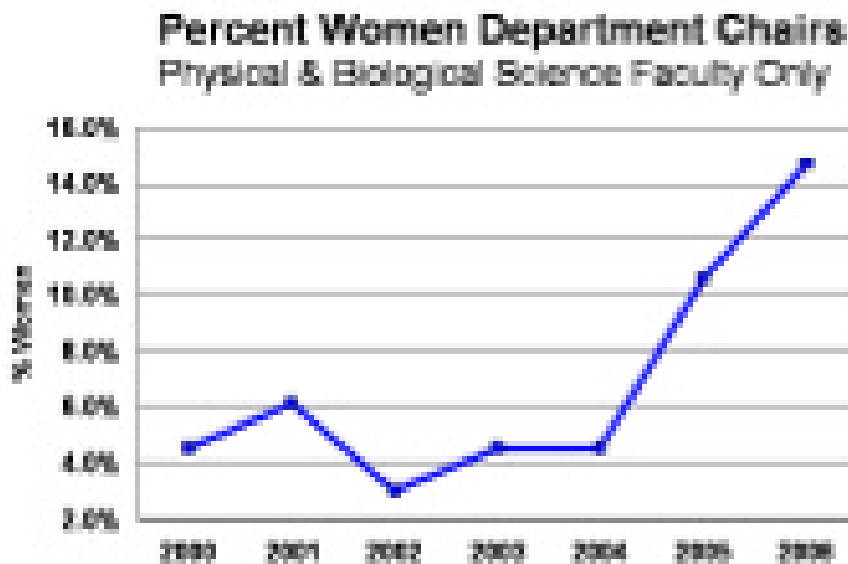
Endowed Professorships
The award of an endowed professorship allows a faculty member considerable freedom to pursue new research that s/he might not otherwise have if forced to compete for grants to perform the same work. In addition, these professorships confer prestige and respect on the recipient, making them a very valuable resource for faculty. Each year, WISELI receives the current list of faculty who hold named professorships from the Office of the Provost, and we track the gender distribution of those awards, looking at the list as a whole, and also looking at groups of awards
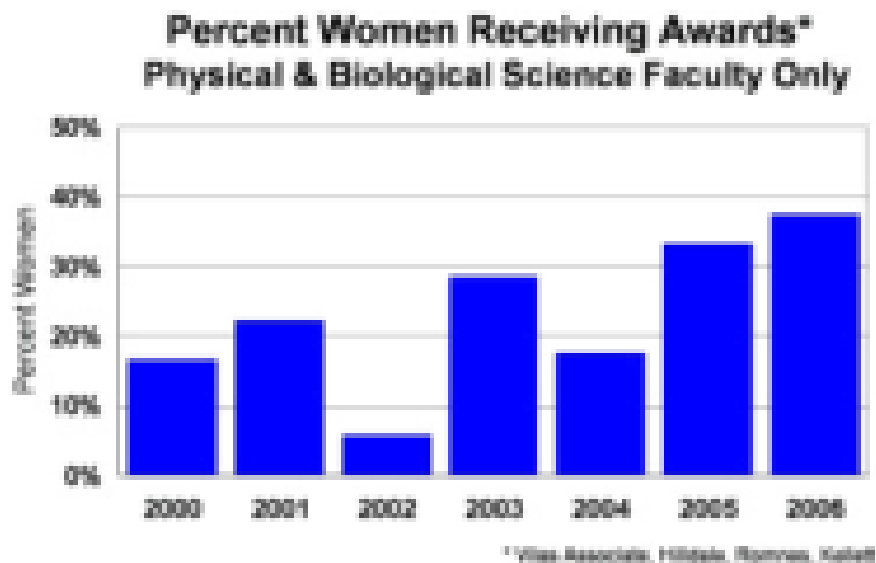
where numerous faculty are awarded professorships from the same funding source. Because some of the awards are not made by division, we have only looked at the gender distribution of awardees for campus as a whole; we have not attempted to track gender equity by division for this measure.

Percent Women Endowed Professors
All Divisions
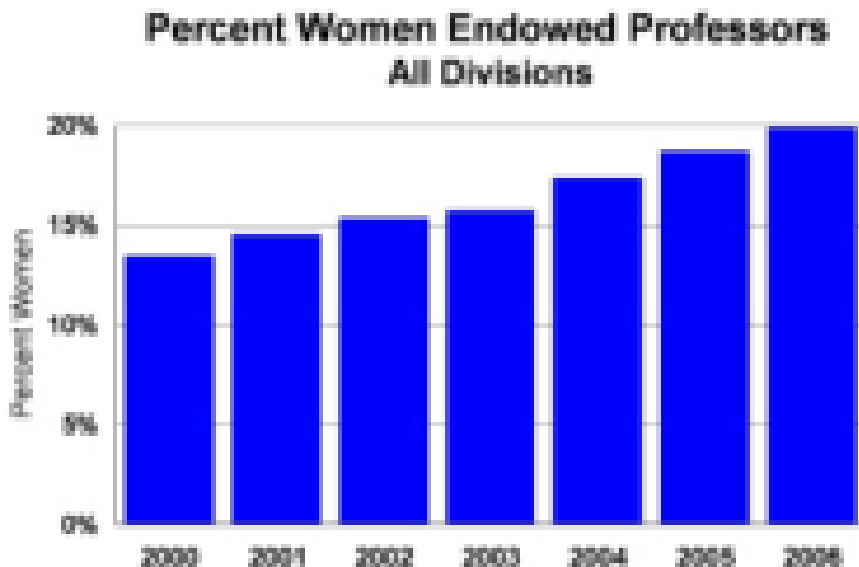
The percentage of faculty receiving these prestigious awards who are women has risen steadily since 2000, increasing by approximately 6.5% each year, such that the percentage of women holding an endowed professorship in 2006 (19.9%) is almost the same as the percentage of women full professors (22.6%)—the eligible pool of possible recipients. In contrast, women were 17.1% of full professors in 2000, and only 13.5% of endowed professors.

Despite this impressive increase, there are still some inequities in particular professorships, especially the Wisconsin Distinguished Professorships (which have never had a woman recipient), and the Steenbock Professorships. The percentage of women receiving named professorships controlled at the departmental and school levels are also lower than what we would expect given their proportion of all full professors. Therefore, some attention must be paid to particular professorships and their award processes.

In addition to tracking endowed professorships as required by the NSF, we also tracked the gender equity of four major campus awards: Vilas Associates, Hilldale Awards, Romnes Faculty Fellowships, and WARF Kellett Mid-Career awards. These four awards are highly visible at UW-Madison; recipients often get a front-page article in *Wisconsin Week*.

Percent Women Receiving Awards*
Physical & Biological Science Faculty Only

* Vilas Associate, Hilldale, Romnes, Kellett

When all divisions of faculty are combined, we see some improvement in the percentages of women receiving these four prestigious campus awards over time. We see a similar improvement when only the PS and BS faculty are tracked. The trend is increasing percentages of women, except that 2004 seemed to be a very bad year for women. In 2005, when some women faculty complained about the lack of awards to women, the Graduate School provided data on ten years of applicant pools and awards of the major campus awards that they control. We found that given their representation on the faculty overall, women in physical sciences are being nominated for and receiving awards in approximately their proportions in the pool. In the biological sciences, however, women are being nominated in proportion to their representation on the faculty, but are not receiving the awards. We suggested that biological science evaluation committees become educated on the impacts of unconscious biases and assumptions on their evaluations; we also recommended training for department chairs to produce recommendation letters and packets that are equitable. The associate deans in the Graduate School promised to act on these findings when working with the committees who make these awards.

Summary: Leadership

From the beginning, the creators of WISELI believed that women's participation in leadership roles at the University were necessary to improve climate, yet very few women were in higher-level positions or had any interest in doing so. Since the beginning of the grant, there have been some strides in this area, yet more still needs to be done.

On a positive note, women's representation on important campus committees had been declining before 2005; however, currently the proportion of women participating on those committees is consistent with the proportion of women who are eligible to do so. Interest in formal leadership roles such as chair and dean, has been increasing among all faculty in the biological and physical sciences. In terms of actual participation in formal leadership, women's numbers have been increasing rapidly at the department chair level in the physical and biological sciences. On the other hand, women's leadership at the center/institute director level is changing very little, and

has even decreased in some cases. While this could be attributed to the fact that these positions have a slow rate of turnover, it is nonetheless troubling that in the past seven years that WISELI has been collecting these data, there has never been a female director of any of the approximately 20 centers in the physical sciences on campus.

Approximately 25% of the interviewees in 2006 expressed an active interest in pursuing leadership opportunities in the future. For the female faculty who had already taken on various roles, they described "stepping up" during times of need, taking the reins to make change instead of just "grousing," and sometime succumbing to "coercion." Regardless of their initial reasons for participating in a leadership position, most described their experiences as rewarding. In another component of leadership—distribution of awards and endowed professorships—we see more encouraging numbers. The percentage of women faculty receiving prestigious awards campus-wide has been steadily increasing since 2000, and currently the proportion of women holding endowed professorships is equal to the proportion of women in the eligible pool of recipients. Unfortunately, there are still inequities at both the nomination stage and the distribution stage. WISELI staff continues to rely on the literature regarding the impact of unconscious bias and assumptions and training for department chairs to produce recommendation letters and packets that are equitable for men and women.

Despite a number of gains in this area, some would like the idea of "leadership" to be broadened. For instance, a female staff member notes: "There were things that [WISELI] wasn't able to do in developing leaders. I think we should have explored leadership that isn't just in the faculty—it's in academic staff too. The proportion of women in staff roles is high. They don't see themselves as leadership potential or playing a role in that. What are we missing out on? There are lots of ways to be leaders without being faculty. I think we missed the 'LI' part of WISELI."

CHAPTER VI: NETWORKING AND VISIBILITY

One of the main objectives of WISELI was to, *"Develop Networks, Promote Communication, and Increase Visibility of Women in Science and Engineering."* According to the original proposal:

> Women consistently cite professional and personal isolation as a contributor to a chilly academic climate. To address this issue, WISELI will develop list serves and email distribution lists to connect WISE faculty, staff, graduate students, and postdocs; maintain a web site, sponsor receptions for the Celebrating Women in Science and Engineering Seminar Series, publish a WISE Research Resource Book with a picture and academic sketch of each woman faculty member in the biological and physical sciences; and publish a newsletter on the web to provide updates on arrivals of new women faculty, accomplishments and milestones, and research news from the women faculty in science. The Leadership Team will serve as a nominating committee, actively seeking awards for eligible women at UW-Madison. Further linkages with other campuses will be achieved by sending women to the CIC WISE and other national WISE meetings.[25]

The majority of these activities were indeed conducted. The following sections document a number of ways in which WISELI served as a means to network faculty across the UW and country through face-to-face meetings, as well as through electronic means.

WISELI Initiative: Town Hall Meetings [26]

Two Town Hall Meetings were sponsored by WISELI, both of which were held in 2002. They were designed to introduce WISELI to the community of women scientists and engineers on the UW-Madison campus and to gain feedback from this community on how to prioritize the many initiatives WISELI had proposed for the five-year grant period.

The first goal was to introduce WISELI to the UW-Madison community. The target audience was female faculty and academic staff in the sciences and engineering at UW-Madison. There are roughly 532 women in our target audience, and approximately 43 of the 70 meeting attendees were in this population; thus, eight percent of the target audience was reached. The second goal was to find out what concerns were most important to the women in science and engineering on the UW-Madison campus.

From these meetings, work/family issues were identified as of primary importance. In both meetings, the Life Cycle Research Grant program received a high priority rating (both "overall" and personally to individual women). In addition, work/family issues were identified as creating a large impediment to achieving the professional potential of the women who attended the meetings. A second priority identified by the Town Hall meetings was the development of workshops for faculty and staff. They were not specific about the topics to be covered in such

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[25] WISELI Grant Proposal (2001), p. 14.

[26] Sheridan, J., Handelsman, J., & Carnes, M. (2002). *Current perspectives of women in science & engineering at UW-Madison: WISELI town hall meeting report.* Madison, WI: The Women in Science and Engineering Leadership Institute.

workshops, but the examples given—negotiating, leadership training, working with difficult people, managing a research program—were intriguing enough that the meeting attendees showed great interest. Finally, two proposed research studies—the resource study and the climate study—received fairly high priority rankings at both Town Hall meetings. Other results from these meetings served to help WISELI staff prioritize future activities.

Electronic Means of Networking

- Listserv: The Town Hall meetings served as one of the initial means to allow people to sign up for listserv notices from WISELI. The list has grown from less than 100 in 2002 to ~300 currently. It serves to publicize events, announce grant opportunities, and be a means for deploying information.

- Website: The website was designed and "live" in 2002. In 2004, it underwent a major revision and looks similar to it's current state found here: http://wiseli.engr.wisc.edu

Besides providing "static" information about WISELI, its goals and initiatives, the website serves as an ever-changing newsletter about the arrival of new women faculty, accomplishments and milestones, and research news from the women faculty in science. It also serves to publicize upcoming WISELI and other campus-sponsored events related to women in science and engineering.

Since February 2005, we have been able to identify "unique visitor" hits, which is a recording of one visit per IP address (single computer location) in a 24-hour period. For example, someone can access the WISELI website 50 times in one day, but the data collector will only record their visit once, as one "unique visitor." For WISELI, it was the best way of gauging traffic on the site and communicating how many different people visit the website, not just how many "hits" it gets. Using these criteria, the following are **average monthly** unique visitor hits during the following time frames:

Feb 2005-Dec 2005:   2,765
Jan 2006-Dec 2006:   2,892
Jan 2007-May 2007:   3,017

The top ten countries most frequently accessing the WISELI website in the previous three years include:

	2005	2006	2007
	Feb. – Dec.	*Jan. – Dec.*	*Jan. – June*
1	United States	United States	United States
2	Great Britain	Unknown IP	European country
3	Netherlands	Australia	Unknown IP
4	Canada	Canada	Canada
5	Australia	European country	Australia
6	Unknown IP	Great Britain	Italy
7	European country	Netherlands	Great Britain
8	Romania	India	Netherlands
9	Czech Republic	Germany	India
10	Japan	Spain	China

In the previous six months, the following web pages have been accessed most frequently:

Top 10 WISELI pages accessed (January - June 26, 2007):
1. http://wiseli.engr.wisc.edu/ (Front page of website)
2. http://wiseli.engr.wisc.edu/news/Summers.htm (Archive of news stories surrounding Harvard President Lawrence Summer's January 2005 comments about different aptitudes for science and engineering disciplines based on gender)
3. http://wiseli.engr.wisc.edu/office_library/Library_Alpha.htm (Alphabetical organization of WISELI's bibliography)
4. http://wiseli.engr.wisc.edu/initiatives/hiring/Bias.pdf (Online PDF version of WISELI's brochure entitled *Reviewing Applicants: Research on Bias and Assumptions*)
5. http://wiseli.engr.wisc.edu/Products/Sex_and_Science.pdf (WISELI document entitled *Sex and Science: Tips for Faculty*, which addresses creating a positive climate for women in academia)
6. http://wiseli.engr.wisc.edu/people.html (List of WISELI's directors, staff, leadership team, and other affiliates)
7. http://wiseli.engr.wisc.edu/about.html (Short description of WISELI with links to the complete text of WISELI's original NSF grant application, and to the NSF ADVANCE Institutional Transformation Awards web page)
8. http://wiseli.engr.wisc.edu/initiatives.html (Complete list of initiatives, linked to each initiative's individual web page)
9. http://wiseli.engr.wisc.edu/initiatives/survey/results/facultypre/sexharass/summary.htm (Summary and charts of the results of the Sexual Harassment section of the campus-wide faculty survey distributed in 2002)
10. http://wiseli.engr.wisc.edu/office_library/Race.htm (List of WISELI's bibliography items with the subject of race and ethnicity)

- Electronic Resources: One of the critical features of the WISELI website is its library. Currently, there are 1152 references in this database, which includes articles and reports related to the following:
- Advice
- Balancing family and work
- Campus Climate
- History of Women in Science and Engineering
- Lab Management
- Psychological Studies of Sex Differences
- Organizational/Institutional Change
- Race and Ethnicity
- Search Committee Training
- Sexual Harassment
- Surveys
- Tenure
- Women and Leadership
- Women in Science and Engineering
- Women in Medicine
- Women in Higher Education
- Women Students in Science and Engineering

WISELI Initiative: Documentary Series

Although not listed in the original grant application, WISELI committed to creating a documentary video to disseminate in a more public way the transformation of the UW-Madison campus. Eclipse Multimedia Productions, Inc./Dan Schwartzentruber was chosen to create our documentary videos. Each of the three documentaries has been run on *The Research Channel* and can be accessed electronically.

The documentary project was completed in three phases:

- *Phase 1: History and Beginnings of WISELI*

WISELI: Advancing Institutional Transformation

This documentary on the Women in Science and Engineering Leadership Institute, based at the University of Wisconsin-Madison, captures the first year of a five-year National Science Foundation-funded effort to investigate why such a small percentage of faculty in the biological and physical sciences are women. The documentary looks back on the remarkable efforts of UW-Madison administrators and female faculty over the years to enhance the working environments of women scientists and engineers, and shows how WISELI is currently using the campus as a living laboratory to study and test interventions expected to have a positive effect on the advancement of women in science and engineering. This video was also awarded two bronze "Telly Awards" in 2004: one for Documentary Video, and one for Educational Programming.

The video is available for viewing online:
http://www.researchchannel.org/prog/displayevent.aspx?rID=3742

- *Phase 2: Highlighted WISELI Programs*

WISELI: Building on a Legacy

This video covers in detail some of WISELI's most exciting new programs: the Life Cycle Research Grants, the Workshops for Hiring Committee Chairs, and the Climate Workshops for Department Chairs. In addition, the video discusses some unanticipated outcomes and highlights from partners WISELI had have been working with in their quest to transform the UW-Madison.

The video is available for viewing online:
http://www.researchchannel.org/prog/displayevent.aspx?rID=3750&fID=345

- *Phase 3: UW-Madison Transformed?*

WISELI: FORWARD with Institutional Transformation

This video combines footage from videos 1 and 2, and contains interviews from various stakeholders to create one final product highlighting the entire 5-year WISELI project. The video addresses the questions, "Was the UW-Madison transformed by the ADVANCE Institutional Transformation award?" and "What next?"

This video is available for viewing online:
http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345

WISELI Initiative: Celebrating Women in Science and Engineering Grant Program

The Celebrating Women in Science and Engineering Grant program offers funding that enables sponsors in the physical and biological sciences and engineering to bring prominent women speakers to the University of Wisconsin-Madison campus. The program aims to expose students and faculty to accomplished women scientists and engineers and to advance women in science and engineering on the UW campus. While on campus, invited speakers are able to contribute to these aims in a variety of venues, including research talks, small-group discussions, and one-on-one meetings.

This particular program was suggested by one staff member as being the most valuable WISELI initiative because:

> *It doesn't come from WISELI central; it empowers the people in the trenches. A number of people, who aren't in the most powerful positions, had the money to bring women in. The introduction of the speaker empowered women and affected climate. Perhaps some of those women should have been funded by regular dollars…We can't underestimate the power of validating women.*

Since the grant's inception, 36 groups were awarded monies to sponsor a number of events on campus. Typically, the invited guest(s) present at a large-group event. On average, forty-four people attended these presentations. Often, the invited speaker also attended a meal (breakfast, lunch, or dinner) or a reception, and also a small-group meeting, typically with graduate students.

WISELI Evaluation: Celebrating Women Grant Program

Each grant recipient was required to complete an evaluation of his or her program. Grant sponsors solicited feedback on their program through questionnaires or informal discussions, and then presented their findings in an evaluation report. The evaluation focused on the impact of the Celebrating Women program on participants and on its contribution to the goal of advancing women in science and engineering. Evaluation questions focused on three main issues: participant reactions, promotion of women in science and engineering, and best practices.

On the first issue, WISELI solicited general feedback on the audiences' experiences: what they thought of the speaker, what they learned, and how the program affected their outlook. Responses to this question were overwhelmingly positive, with every evaluation indicating that the audience learned a lot from the speakers and felt that the events were beneficial. Several major themes emerged within these positive responses. Overall audiences felt that the speaker(s) were:

- **Interesting:** "lively discussion," "wonderful insight," "engaged audiences asked multiple questions," "among the best seminars [participant had] ever attended" ;
- **Encouraging:** "extremely open and encouraging," "provided direction for future plans," "helpful guidance," "good suggestions on pursuing science & engineering careers";
- **Inspirational:** "supplied them with an example of success," "encouraging thoughts," "sparked interest in a new research area or career choice";
- **Informative:** "learned new information," "gained insight into a scientific problem," "learned about a new technique," "provided a broader perspective."

On the second issue WISELI asked how audiences' experiences and the program overall helped to support women in science and engineering. Responses indicated that invited speakers helped support women in a variety of ways. Several of the most common themes included:

- **Providing a role model:** "clear demonstration that women can and do flourish [in science]", "opened eyes to the relevance/competence of women in [science]," "inspirational," "example of someone [women in engineering] could 'look up to'";
- **Addressing career/family concerns:** "made it seem more possible to manage a career in science and also have a life," "specific advice on becoming successful and tenured while beginning a family," "I think the talk will help me to find a balance";
- **Speaking to climate challenges women face in science and engineering:** "good to hear about how people have dealt with the politics of being female in a mostly male world," "good to get a variety of perspectives on what it's like to be a female academic";
- **Suggesting alternative career paths:** "new ideas about non-academic scientific careers;" "insight into career options and opportunities";
- **Providing research support:** "presentations and small group discussions allowed for research feedback and suggestions," "in depth discussions about everyone's research," "[speaker provided] a good suggestion specific to my research project that I hadn't thought of before";
- **Leadership and networking opportunities:** "helped me understand networking," "great ways to network," "encouraged publishing efforts," "suggestions on how to maximize mentoring relationships";
- **Mentoring:** "learned a lot about techniques to get where I want to go," "more direction for future plans," "advice useful for any career path in science," "addressed many questions that are important at a transitional phase in a person's career."

Finally, WISELI asked evaluators to provide feedback on what they would do differently if they were to organize the same program again and what WISELI could have done differently to help make their program a success. For the most part, most respondents indicated that they would not change anything in the planning, organization, or implementation of their speaker program. Most noted that they appreciated WISELI's support of the Celebrating Women grants and that they felt WISELI had provided all needed assistance. A few sponsors, both student groups, stated that they would want to advertise their program more effectively if given the chance to plan it again. They also indicated that WISELI could provide "promotional assistance."

Evaluations from the first two years of the program illustrate an overwhelmingly positive response to the program and very good success in supporting women in science and engineering. Overall, the cumulative evaluation indicates that the Celebrating Women in Science and Engineering Grant Program was positively received, helped to encourage and support the efforts of women scientists and engineers, and was generally well organized and coordinated. In the future, WISELI could improve the effectiveness of the program by providing additional promotional support or guidance. Student group sponsors, who presumably have less experience with organizing events, would particularly benefit from this extra help.

WISELI Initiative: Seminar Series

Seminars on various topics have been a major aspect of WISELI services and activities on the University of Wisconsin-Madison campus. Since 2002, 23 seminars were conducted, with an

average of twenty people attending each. Attendees always include a number of faculty, academic staff, and graduate students. In total, approximately 60 members of the faculty attended at least one seminar.

A complete listing of the topics and presenters include:

- *WISELI Video Documentary #2*: This documentary video profiles several initiatives WISELI has undertaken during the past several years.
- Sue V. Rosser, Dean of the Ivan Allen College and Professor of History, Technology, and Society at the Georgia Institute of Technology: *"The Science Glass Ceiling"*
- "*Honors and Awards for Women: Issues of Equity*," a panel presentation examining the following questions: Does gender bias play a role in the process of bestowing academic awards and honors? Is the nomination process equitable? Are women equitably represented among the recipients of awards and honors?
- Angela Byars-Winston, Ph.D., Department of Counseling Psychology: *"Examining diversity within diversity: Retention of underrepresented students in STEM fields"*
- Judy Houck, Ph.D., Women's Studies, Medical History and Bioethics, History of Science, and the Center for Women's Health and Women's Health Research, presents: *"Race, Gender and Personality: Putting Student Evaluations of Faculty in Perspective"*
- Sheryl Sorby, Ph.D. , Associate Dean of Engineering & Chair of Engineering Fundamentals, Michigan Technological University: *"Removing Barriers to Success in Engineering: Interventions that Reduce Gender Differences in 3-D Spatial Skills"*
- Annie Stunden, UW-Madison Chief Information Office and Director, DOIT (Div. of Information Technology): *"Reminiscences of an Accidental Programmer"*
- Margaret Harrigan, Office of Academic Planning and Analysis: *"The Impact of Strategic Funding on Hiring Minority and Women Science Faculty at UW-Madison"*
- Patricia F. Brennan, Ph.D., MSN, Professor, Industrial Engineering and Lillian Moehlman-Bascom Professor of Nursing: *"Discovering the experiences of senior women in academic science & engineering"*
- *A WISELI Panel: WISELI Update* – Status of our efforts to promote the advancement of women in science and engineering.
- Sally G. Kohlstedt, Ph.D., Professor, History of Science and Technology, University of Minnesota: *"The Rajender Consent Decree: Discrimination, Institutional Response, and Women's Alliances"*
- *"Child Care on the UW-Madison Campus: Past, Present, and Future":* Presenters: Lorraine Meisner, Professor, Cytogenics; Cyrena Pondrom, Director, L&S Honors Program; Lynn Edlefson, Office of Campus Childcare; Vicki Bier, Professor, Industrial and Systems Engineering
- Catherine Middlecamp, Distinguished Faculty Associate, Chemistry: *"Teaching Chemistry: The Intellectual Challenge of Diversity"*
- Virginia Sapiro, Ph.D., Sophonisba P. Breckinridge Professor of Political Science and Women's Studies, and Associate Vice Chancellor for Teaching and Learning: *"Through a Glass Ceiling Darkly: The Political Psychology of Not Getting to the Top"*
- Christine Pribbenow, Ph.D., WISELI Evaluation Director: *"The Climate for Women Faculty in the Sciences and Engineering: Their Stories, Successes, and Suggestions"*

- Cecilia Ford, Ph.D. Department of English: *"Getting our Voices Heard: Patterns of Participation in University Meetings"*
- Jennifer Sheridan, Ph.D. WISELI Research Director: *"Faculty Worklife at the University of Wisconsin-Madison: Preliminary Findings"*
- Ramona Gunter, M.S., Research Assistant (WISELI) and Ph.D. Candidate (Educational Policy Studies): *"Science Faculty Talk about Self, Home, and Career"*
- Anne Miner, Ph.D., UW School of Business: *"Affirmative Action and Organizational Change"*
- Rima D. Apple, Ph.D. School of Human Ecology: *"Women, science, and the home: A history of women scientists' early years in academia"*
- Shelley J. Correll, Ph.D. Department of Sociology: *"Cumulating Disadvantages: Gender Stereotypes, 'Small Inequalities,' and Women's Careers"*
- Pascale Carayon, Ph.D., Department of Industrial Engineering: *"Quality of Working Life Concepts and Methods for Diversifying the IT Workforce"*
- Janet Hyde, Ph.D. Department of Psychology: *"Girls, Women, and Math: Implications for Science and Engineering"*

WISELI Evaluation: Seminar Series

The faculty interviewees provided us a chance to ask in-depth questions about attendance at these workshops, their motivations to attend or not, and any perceived benefits from participation, and application of material learned. In the sections below, we discuss these issues in relation to the WISELI speaker and seminar series.

General Patterns of WISELI Seminar Attendance

All interviewees were asked if they had attended any WISELI seminars. Among the nineteen respondents, nearly all were regularly informed about the WISELI seminars, and the majority had attended at least one seminar. Among this group, however many women reported that they had not recently attended a WISELI seminar. There were a small portion of participants who reported regular attendance at WISELI seminars; these participants generally attend from one to four seminars per year.

Approximately one-quarter of the interviewees could not recollect having attended a single WISELI event or seminar. The most common reason provided for not attending one or more seminars was a lack of time. This problem was especially salient among faculty who were also mothers. Nearly all interviewees who reported not having time for the workshops had children, and several of them were untenured or only recently tenured.

> *I'm notoriously very frugal with my time…time is so precious and I don't know, my guess is that there's a lot of women who don't participate in your activities who would like to, but there's not enough time to do it all. So I hope that the younger women who don't have the excessive family time commitments, hopefully they're getting involved now.*
> (Rebecca, mother, recently tenured)

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> *Well, a lot of stuff's not in the building. It's hard for me to get the motivation to do it. So anything that's toward the end of the day, because of the kids and stuff. So I've been kind of selfish about not going to those kinds of things because I've kind of had my nose down.* (Renee, mother, untenured)

Interviewees also gave other reasons for not attending one or more WISELI seminars. Some felt that they did not need to learn the content or skills provided at WISELI seminars. These interviewees mentioned that they had sufficient skills, support, mentoring, and sources of advice in their own department or personal networks. Other interviewees felt the topics were not pertinent to their needs, or simply were not appealing or did not interest them. For example, when asked why she did not attend more WISELI seminars, Joanne responded:

> *I never actually asked myself, 'Why am I not going to these things?' And—I didn't think at the time that it was relevant to what I'm going to try to do or what I believe in. 'How to mentor,' you know, I've been mentoring Assistant Professors for a while now. I go by my gut feeling.*

Three of the participants who noted time as a constraint to seminar attendance suggested that they would or had appreciated the information in alternative forms. One mentioned that she was "interested in these topics," but reading papers would fit better with her scheduling needs for flexibility. Another mentioned that she had successfully requested tapes of the seminars from WISELI staff, and had listened to them in her spare time. A third mentioned the importance of having access to written materials, in addition to the website that addressed topics relevant to women in science and engineering.

Whether or not they attended many WISELI seminars, several women reported that they had passed information along to colleagues or students, or recruited their peers to attend the workshops with them. Some interviewees felt that graduate students and postdoctoral fellows especially valued the WISELI seminars:

> *What has been really awesome is that there are a group of graduate students here who have really picked this up and run with it. [Name of Student], who I sent all the WISELI stuff, I don't know what she has all gone to, but she's doing this for graduate students—diversity training, bringing in speakers, getting people to events on campus.*

Finally, two additional issues emerged in terms of general WISELI seminar attendance. The first issue centered on location and atmosphere of the seminars. Here, at least two faculty mentioned the location of WISELI seminars as a hindrance to attendance. They suggested that meetings outside of their own buildings, and in particular in the Union South building (due to lack of parking), were difficult to attend. Another mentioned that the format of seminars at Union South was not as inviting as those that had been held in Memorial Union, another campus building. The second issue that became apparent in the interviews was that interviewees had difficulty discerning whether events or seminars they had attended had been sponsored by WISELI, or by another campus entity. Many respondents would recall a workshop they had attended and query the interviewer as to whether the workshop in question had been a WISELI event. The

observation by one interviewee: "I don't know if that was sponsored by WISELI or not. I get them all confused," was certainly not anomalous.

Topics of Interest and Benefits of Seminars

Many participants particularly remembered and appreciated the WISELI luncheon held at Memorial Union that featured Dr. Virginia Valian as a speaker. Participants commented on the useful content provided by the speaker, the question-and-answer session with senior women on campus that followed, and even the luncheon format as all being particularly valuable.

> *But when we had that luncheon over at the Union, it was just phenomenal to hear the patterns and to hear her speak. It was so empowering that it just kind of revitalized me… 'Okay I can do this, you know, this is something we're all struggling with.' Just knowing the network was there and knowing that other people were dealing with these issues and to hear senior women reflect on their experiences…*
>
> *******
>
> *If you do something special, like you have lunch or whatever, you bring in a big speaker or something like that—I think the last one I went to they had a little reception….And if nothing else, it says to the women faculty - we care. And that's good. That's very powerful.*

In addition to that luncheon, interviewees described a variety of different topics and speakers that they had found helpful. These included workshops about tenure, mentoring, campus climate, and women and awards. Although many participants were not always able to identify the speaker or the precise title of the workshop, they were able to comment more generally on the value of the workshop or particular issues that piqued their interest. Rebecca comments:

> *There was one particular good one. It was titled like 'Why do I think I don't belong here?' That wasn't the title. It was like 'Why do I feel like I'm faking it?' The whole premise was: 'I'm a really successful woman but why do I feel like a poser?'*

In addition to being motivated by the topic or the speaker, a few participants mentioned that attending seminars offered them an opportunity to participate in a joint activity with fellow faculty members, or to network with colleagues in their own department.

> *It would be a social thing. 'Do you want to go?' and then it would give us a chance to kind of talk. It could be about department things or whatever…I usually wouldn't be the only one that went to them.*
>
> *******
>
> *And now that we hired that new assistant professor, I drag her to them sometimes. It's kind of really more fun and then I figure people are trying to drag them [assistant professors] into all kinds of directions, but I think this is probably a good one.*

Others stressed the fact that attending the WISELI seminars helped them connect with other women on campus, and to feel part of a larger support network outside of their department. In one case, an interviewee met one of the principal investigators of WISELI at a seminar, where

the interviewee shared some difficulties she was experiencing with her department and with tenure. A mentoring relationship developed, and the WISELI principal investigator became an ally and advocate on campus. In other cases, interviewees described the value of knowing that other women on campus struggled with similar challenges and issues. Elaine describes this:

> *Well, I started going to WISELI seminars as well, and as I started going to seminars and meeting more people who had some of the same issues, and realized that 'no, I'm not crazy—this is a pattern'... Other people were concerned about the same issues I was, and had experiences that were similar to mine.*

Participants were not asked in any detail about how they had applied the information they learned at WISELI seminars. In a small number of cases however, interviewees described taking back data or information that they had gathered from a seminar to colleagues or to help make a case for women's issues. In another case, a participant described how attending a WISELI seminar on "women and awards," and seeking advice from the speakers there ultimately caused her to self-nominate herself for a campus award. Another woman reported that data she had learned from a WISELI seminar caused her to be more thoughtful about her own biases when writing references letters for her students. Alison notes:

> *Just going to [WISELI seminars] and hearing about the different studies that have been done, knowing that letter writers tend to use less superlatives for women - fewer superlatives for women than they do for men—both men and women writers. Understanding that it's not just men in society who 'diss' women, it's everybody...Now it's an awareness when I'm writing letters.*

Participants were asked two questions about mentors and networks. The first focused on whether they had participated in WISELI networks, and the second on whether they felt WISELI was enhancing networks and mentorship among women. In addition to responding to these questions, some participants used other opportunities in the interview to comment on mentoring and networks. In general, many participants seemed to feel that WISELI was enhancing networks among women on campus, although several indicated that they had not personally participated in such networks. Several participants also indicated that it was likely that WISELI had enhanced networks, but could not be certain. For example, in response to the question, 'Do you think WISELI is enhancing networks among women on campus?' the following comments were offered:

> *I'm sure it is even if I haven't been in the midst of it. I mean the fact that you have a group of people focusing and bringing these issues to the attention of others and getting people together and talking about it, I'm sure it does.*

<div align="center">*****</div>

> *Yes, and that's again because they provide an opportunity for women to cross paths in their busy lives that.*

Responses to these questions are complicated by the fact that interviewees did not always know which activities and networks WISELI sponsored, and by the fact that an established Women's

Mentoring Network existed prior to the establishment of WISELI. In this way, interviewees tended to describe WISELI as one aspect of a larger system of personal and campus networks.

> *Um, in a subtle way - women, colleagues on campus will write to me and say, 'Hey, are going to that one or are you going to [WISELI seminars]?' So yeah - I don't know that it created a network for me. In other words I don't think that I actually met people through WISELI that I wouldn't have met otherwise. But it's a focal point for many…*

Networking: Areas for Improvement

Overall, most participants in the study described WISELI in positive terms. In a small number of cases however, participants offered criticisms and suggestions of how WISELI could improve its programs and services. In one case, an interviewee felt that she had not been adequately informed about WISELI activities. In particular, she mentioned that she would like to receive information about WISELI in print form, rather than in e-mail notices. She knew about WISELI's web site, but said she was not inclined to visit it, whereas she would have read a newsletter or other print publication had she received it. She comments:

> *I would say that I was disappointed at how little I've been made aware of what they're doing. I actually had to review an Advance proposal for somewhere else and I didn't actually know WISELI was funded by Advance until I'd gone to this talk and I don't remember if this is WISELI sponsored. It might have been partially WISELI sponsored, it was at the Engineering building, and it was this woman who was, it was actually a very disappointing talk, I remember it didn't really tell me much, and I can't remember what it was about, but she mentioned that Wisconsin had an Advance grant and this is while I was still, I hadn't sent out my review yet. And I said, 'Wait, what's that? What are they doing with it?' And I hadn't realized it was funding WISELI. I mean here I'm a woman in science on campus and I feel so clueless about WISELI other than those women's lunches. That was the only thing I ever had any awareness, and the survey obviously. So I think they could have done a better job of letting women in science and engineering know what was going on.*

Gloria felt that WISELI's emphasis on workshops was not the best use of resources, and that WISELI would have been able to make a greater impact on campus had they pursued other strategies and activities:

> R: *Well the push to—it is saying that we're going to push women into administration that I thought was misguided.*
>
> I: *You do not think that's an important priority?*
>
> R: *No I don't think that that's—well I mean I think—again there was a lot of focus on workshops. I just find workshops—there are so many workshops on campus and I just found like yet more workshops to be not really so valuable.*

Summary: Networking and Visibility

WISELI staff used a variety of methods to connect female faculty and staff with others across the campus and country, including listservs, the website, seminars, and the Celebrating Women in Science and Engineering Grant program. WISELI also sponsored large-scale events, such as the hosting of Virginia Valian, which included a networking luncheon. Each WISELI initiative provided a service or met a particular need for networking or publicity.

The electronic means of networking, including the listserv and website, allows information to be disseminated to a large number of recipients quickly about events, upcoming workshops, grant availability, and other initiatives of interest. The website gets thousands of hits monthly and per year and was of particular interest after the former president of Harvard University, Lawrence Summers, made comments about women in science. The WISELI site was accessed for its response to his comments, links to other related articles, and for its library and other resources. It continues to be updated regularly and "holds" hundreds of references for books and articles, and also includes an online store for people to order brochures and workshop guides.

WISELI Seminars on various topics had been a major aspect of the center's programming from the beginning of the center. In the first few years (2002-2006) twenty-three seminars were conducted, with an average of twenty people attending each. Attendees always included a number of faculty, academic staff, and graduate students. Interviews with female faculty showed that the participants took back data or information that they had gathered from a seminar to colleagues to help make a case for addressing women's issues. In another case, a participant described how attending a WISELI seminar on 'women and awards,' and seeking advice from the speakers there ultimately caused her to self-nominate herself for a campus award. Another woman reported that the data she had learned from a WISELI seminar caused her to be more thoughtful about her own biases when writing references letters for her students.

Unfortunately, the potential for the seminars was never realized, and they were discontinued. Even though the topics cut across many areas of interest for female faculty and staff, they suffered from low attendance. Approximately one-quarter of the interviewees could not recollect having attended a single WISELI event or seminar. Interviewees gave many reasons for not attending these events—they felt that they did not need to learn the content or skills provided at the seminars or the topics simply did not interest them. The most common reason provided was lack of time. Nearly all interviewees who reported not having time for the workshops had children, and several of them were untenured or only recently tenured.

Many participants particularly remembered and appreciated the WISELI luncheon held at Memorial Union that featured Dr. Virginia Valian as a speaker. Participants commented on the useful content provided by the speaker, the question-and-answer session with senior women on campus that followed, and even the luncheon format as all being particularly valuable.

The Celebrating Women in Science and Engineering Grant program has been far more successful than the seminar series and according to one of the campus level administrators, is one of WISELI's most valuable initiatives. This is so because it "empowers the people in the

trenches." This program enables sponsors to bring women speakers to campus and to expose faculty, staff and students to accomplished scientists and engineers. While on campus, invited speakers describe their research, participate in small-group discussions, and engage in one-on-one meetings. Evaluation of this program suggests that it has been positively received, is successful in supporting and encouraging women in science and engineering, and is generally well organized and coordinated.

CHAPTER VII: TENURE PROCESS AND POLICIES

Regarding the raw percentages of women vs. men who are awarded tenure, given that they have submitted their materials to the appropriate divisional committee, very few gender differences are seen in the tenure rates.[27] Women in the PS division have achieved tenure 100% of the time that they have been recommended by their departments, in contrast to their male peers who are denied tenure about 10% of the time. Women in the BS division have been achieving tenure at slightly lower rates than their male colleagues; however, in recent years this trend has shifted and women are increasing their chances of achieving tenure, while their male counterparts have declining tenure rates in 2005 and 2006.
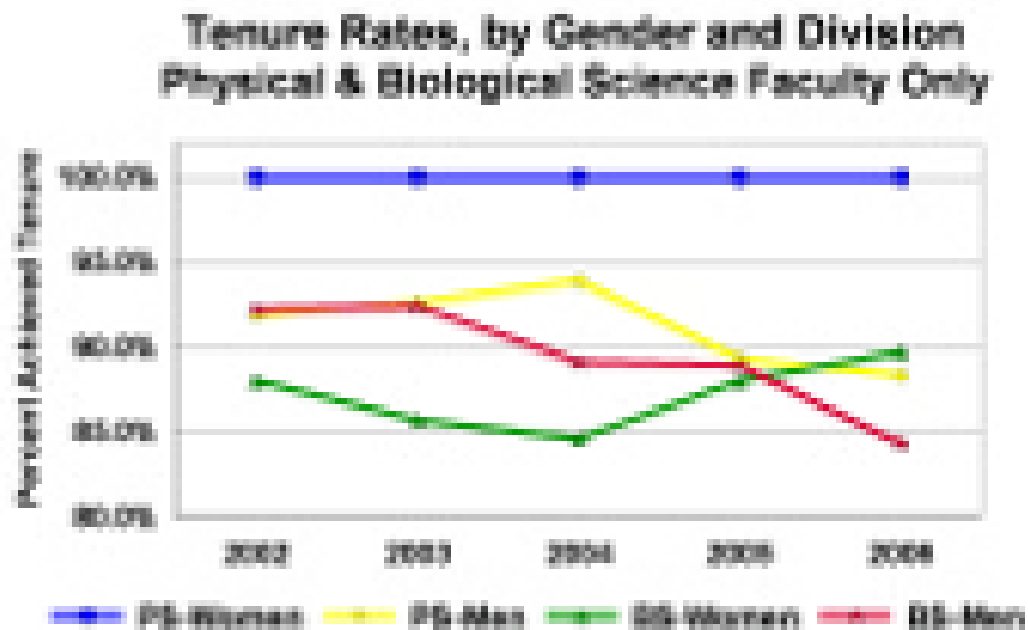
Examining trends by rank, we can see some areas of positive change for women in PS and BS departments, but also an area of concern. For assistant professors in PS departments, the trend has generally been an overall increase in the percentage of female assistant professors; while in BS departments this trend has been flat or even slightly decreasing. For both PS and BS departments, the percentage of women in the associate rank has been increasing in the past several years, which indicates that women are getting tenure at strong rates once they are hired, or it indicates that we are hiring more women with tenure. Finally, although it is slow, the percentage of full professors who are women has been rising over time. It is most difficult to show increases in the percentages of women among full professors because this is the terminal rank; faculty can spend thirty or more years in this rank, while there is more turnover in the lower ranks.

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[27] "Tenure rates" are measures as rolling 5-year rates, summing the numbers reviewed and numbers awarded over a five-year period, and with each year removing the oldest year while adding the newest. This method decreases the large year-to-year fluctuations in rates due to low numbers, especially for the women's rates.

Percent Women Faculty, by Rank
Physical Science Departments
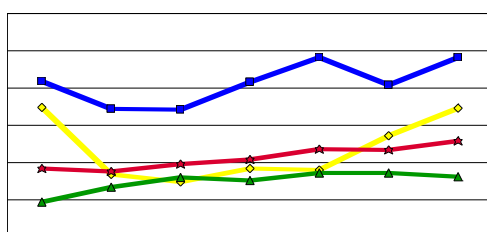
Assistant — Associate — (Full) — Total

Percent Women Faculty, by Rank
Biological Science Departments
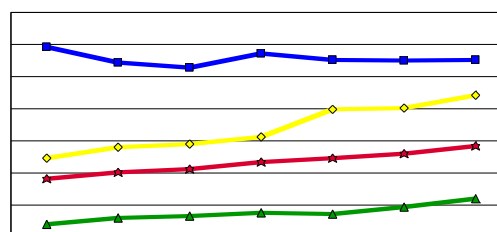
Assistant — Associate — (Full) — Total

Female Faculty Perspectives on Tenure and Success

Parenting and Academic Careers

Nearly all of the women—including those that did not have children—noted that the nature and demands of academic careers made them very difficult to balance with raising children. In fact, when asked what gender challenges they or other women encountered in academia, the vast majority of women pointed to the difficult work-life balance for mothers. The difficulties faced by academic women with families were also a substantive area of discussion in the report from 2002 interviewees.

The Challenges of Raising Children

In 2006, all of the interviewees reported that they struggled in maintaining a balance between their academic career and their personal lives. For the majority of women (14 out of 19), this struggle involved negotiating parenting roles along with their academic careers. Additional work-life balance challenges described by participants included caring for aging parents, accommodating the needs and careers of spouses/partners, and making time for personal pursuits and recreation. In elaborating upon work-life challenges, the 2006 interviewees noted that women often bear the burden of raising children, and the time frame for both having children and achieving tenure are often in conflict.

Both mothers and non-mothers observed that women bear a greater burden than men in raising children. In ways that resounded with the 2002 interviews and the broader academic literature on this topic, this burden was described as biological, physical, and emotional. For example, women experience pregnancy and often nurse babies for an extended period of time. Women also tend to take on a greater percentage of childcare duties, including staying at home if a child is sick. Finally, interviewees reported feeling and observing a greater sense of emotional tension among academic mothers than fathers about balancing their dual roles as parents and academics. Several women described often feeling inadequate in at least one of their roles, and many described the emotional difficulty in leaving their children in the morning to go to work and/or to travel. Faculty members Jaclyn and Rebecca sum up some of the physical, biological and emotional tensions for academic mothers:

> *I would say the major impact has been through being a mom, because that's a challenge like balancing your science and being a parent. Now this is my observation of life without*

having any basis in psychology or anything like that, but there is fundamentally a difference between the mom and the dad thing…Well for one thing nursing a baby for a year. You know you've got to juggle that. And the other thing is my kids, and I've heard this from so many other moms. You know if I travel or I'm gone—it's like 'Oh, Mommy!' and if dad goes it's like 'Okay, bye' you know?

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It is true that women are more profoundly impacted by the birth of their children and that's just true in the societal and biological sense, and they get beaten up physically during and after childbirth. So it's ridiculous to say that it's the same for men and women. Women are biologically impacted by having children the months before and the months after birth. So for me too— if there's a sick child and there's two working parents. Usually it's the woman who is going to be more likely to stay home.

Several women reported feeling very challenged by trying to achieve tenure in the expected time frame while raising young children. Even with the opportunity to stop the tenure clock for one year, some interviewees felt extreme pressure to meet the tenure expectations. Several women pointed out that it is not only the first year of a child's life that warrants additional labor and tenure extension, but rather the first five years of children's lives. Mara and Alison explain:

You know they give you a year when you have a baby. Well you need four. My youngest is five now and it's finally sane. Five is sort of natural. It's when they go to kindergarten. All of a sudden you say, 'put your shoes on' and it doesn't happen immediately but it happens you know, and you don't have to do it. And the thought of getting up and getting everybody going in the morning without having to do everything yourself, it occurs. So I think having children under five and trying to accomplish other things expected in the first seven years of tenured faculty appointments is just not feasible.

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I'm pretty sure that I would have said at the last meeting that I was encouraged not to take a tenure extension and my son was eleven months old when we first moved here. And I think having small children is just as hard as having a baby and I should have been given two years of tenure extension because I had two children under the age of five. This whole thing of a year old when they get here that's, that's insane…And what that does is to encourage women to wait until they are assistant professors to have children because then they'll get their two years. I had mine as a graduate student and post doc. It's not any less work, you know once you got them, you got them, and I don't understand this idea of not giving some support or help for women with small children.

In particular, the interviewees from academic medicine in this study with young children felt particularly challenged in trying to achieve tenure. Even with tenure clock extensions of two years, these women had been unable to meet their requirements in the expected time frame. One interviewee had switched to the clinical track because of this. In the interviews, these women pointed to particular difficulties relevant to women in academic medicine, such as clinical responsibilities, hospital emergencies, the lack of reliable staff to fill in for them, and the unpredictable timelines for publishing when one's research depends upon human subjects. These

pressures, combined with the general tensions described by all academic mothers in caring for small children, teaching, publishing, and conducting other responsibilities, often "doesn't work":

> *I don't think in retrospect that it's a reasonable pathway for a woman or a man who is in a two family working household, you know the average working family who's also a physician and has clinical duties to do. It doesn't work for me. And it doesn't work for a lot of the women.*

This same interviewee stated that while she loved her particular field of study, the challenges had been so great, that "if I had to start all over again, I'm not sure that I would have done it in the end."

When asked about their experiences with tenure, most of the women interviewed talked about the need for visible, clear, and consistent promotion and tenure guidelines. They often described a sense of frustration regarding the subjectivity of the process. They suggested that guidance be provided in regard to research, funding, number and types of publications, as well as responsibilities regarding teaching or clinical service:

> *It's not about the work you do, and I've realized that now. You could do ten times more work, it's all politics and whether you play the boys game, at least in some departments. And then it's bean counting—how much research money did you bring in, how many research pubs did you do? It's not about teaching at this university. It's a research university and I was naïve, I was right out of graduate school. I didn't know what was going on. I came here with these great ideas and ruined it.*

Another woman describes the reactions from colleagues at other institutions:

> *I've talked to colleagues in other universities and they are absolutely appalled. They can't believe—I'm not making any of this up—I mean this is the honest to god truth. They couldn't believe especially how my tenure case was handled. They said, 'that wouldn't fly at our school.'*

The interviewees also felt that mentoring was a significant aspect of the tenure process and was absent for them, as opposed to their male counterparts. Furthermore, they perceived inequities on how departmental service and teaching responsibilities were allocated:

> *I'm not the first woman or minority to be hired and dumped on with course work and committees. Here's the new kid on the block. Dump it on her. And if a person is going succeed, they need to be given the best opportunity. Well I never would have said anything until I saw the men come in the department at assistant professor levels and they're protected. They have collaborators in the department almost immediately. They're given research space. They don't have to teach the first year. You know, I didn't see that with myself.*

Another woman shared this:

I'm fed up, I'm bitter, I'm disgusted. I have thoroughly thought about leaving academia all together. It is a very dysfunctional place to work. They work you like a dog for six to seven years and then gee, if you're not one of them, then we don't want you. And I've recently talked to a woman in [department] who was denied tenure at the divisional level. She got through her department just fine, and she was denied at the divisional. They said she didn't have enough research pubs. She had nine; they wanted ten to twelve. This is sick. And so she went back to her department. Her department immediately filed an appeal. She had all these great letters. She had a number of grad students and she went in front divisional again—the vote came back two in favor and ten against. So she's done. And I talked to her on the phone the other day and she says, 'I think this is a horrible place for women.' She's the only woman in her department. It doesn't matter, and you shouldn't get tenure based on your sex, but many of us women are given these positions and dumped on. I was, as well as teaching too many courses my first year I was in charge of the undergraduate club because no one else wanted to do it. I was assigned to four, maybe five departmental committees. I was on review panels for experiment stations. I mean, I was way overloaded.

Many of the administrators and staff who were interviewed provided a campus perspective about tenure, which resonated with the faculty members' perspectives:

In the last 5 years, as women come up for tenure and don't get it there have been lots of appeals, which is when they actually get it. Problems with tenure—women make choices about what they are going to do. They choose to teach instead of focusing on publications in the first 7 years. How they spend their time—they make bad choices. Also, so many issues—women on committees instead of focusing on research. Some of the women who aren't getting tenure are exactly the women we need on campus. The tenure process if such a problem because it's about how we look at time and how we define success.

*****

With tenure, there is not overt bias, but there are some subtle things that go on. I don't know how to attack that because it is covert. It really does depend on the culture of the department. Some are more "old-school" and if women are inclined to do non-mainstream research, they won't get tenure.

Tenure-related Policies and other Institutional Supports

WISELI researchers were interested in institutional supports used by interviewees to manage their professional worklife and their personal commitments, especially in regards to tenure. For the most part, participants talked about personal coping mechanisms for balancing work life, although in some cases they referenced institutional supports (see Section VIII: Work-Life Balance for a full discussion of coping mechanisms). In the following section, we consider institutional issues, in particular maternity leave and the tenure-clock extension, both of which can serve as supports during the professional life of a faculty member.

Some interviewees who recently had children took advantage of family leave, although they discussed it only briefly. The comments of these few interviewees indicated that there are limitations with the use of this policy. In one case, a woman gave birth in the summer and

presumed that she was not eligible for any type of maternity leave. None of the administrators or colleagues in her department discussed potential maternity leave options with her, although when asked by the WISELI interviewer, she stated that she would have liked to take maternity leave had she known it was available. In another case, one interviewee who was department chair expressed her frustration with the existing maternity leave policy. Alison describes a case in which a recently hired faculty member had not accrued enough vacation or sick time to earn the needed time for maternity leave.

> R: *…to find that if you don't have built up leave, there is no recourse. I just went through that with an assistant professor who hadn't been here long enough to accumulate the necessary leave. Oh my gosh.*

> I: So what did you do, what did she do in that case?

> R: *She actually was partly working from home, and so we were able to say that she gets partial credit for work hours to spread it out so that she could have six weeks. Because otherwise the hours would be used too fast, you know I mean here she's just had this baby and she calls me in this panic one day, saying 'I have to come back.' So yeah…I was shocked, I was shocked by it. No idea and partly because she was not here long enough to accumulate sick and vacation leave.*

In the summative interviews with a number of administrators at UW-Madison, a paid family leave is one policy that they would like to see enacted at some point.

Some interviewees with children and interviewees in administrative positions discussed the use and importance of tenure clock extensions, as well. All except one of the interviewees who had children in the previous five years took advantage of a tenure clock extension. At least two interviewees discussed some personal concerns about taking an extension and whether it would be viewed negatively by colleagues and/or their tenure committee. This concern was also raised in the 2002 interviews. Rebecca describes her current experience:

> *And my chair is [name], and she was a very good mentor and advocate for me. So one thing that she advised me to do is to get a year extension for maternity…*
> *Regardless of whether or not I would be judged, I was a little bit fearful that there was a stigma associated with that. I said, 'oh I want to be a good example for [name]' and she said, 'you can't worry about that—you just have to do what's best for you.'*

Three interviewees reported that they were actively encouraged to take the tenure clock extension by their mentors, and that there seemed to be an increasing effort by administrators to "de-stigmatize" tenure clock extensions:

> *No, in fact, my chair kind of made me do it. I was going to try to go up early for tenure; I took the extension, but then I was going to try to go up a year early, which was really like the normal thing, and he said, 'you know, you should wait because it'll be considered early if you do go up,' and I mean the extra year, I needed to do it anyway. So there was no sense of, 'you're being weak if you do this,' sort of thing.*

Rebecca describes how she was proactive with the policy:

> *I was sort of debating about whether or not to take the extension—I was talking to other junior faculty who started the same time as me and I had heard of three men who took an extension. I didn't hear of any women and I don't know what that means… So I had read an article in the New York Times about Princeton just making it automatic that with each childbirth you get a year. So I forwarded that to [administrator name] and I think she talked to the provost and now you just have to push a button…I think those types of things are exactly what you need to do to de-stigmatize these extensions.*

Results from the 2006 interviews did reveal that there continue to be some limitations and/or problems with the tenure clock extension policy. As discussed above, several interviewees felt that tenure clock extensions should be broadened for faculty who have children under age five, and/or who arrive with children close to one year of age. Another interviewee was confused by the wording of the tenure extension policy, and thought that she was eligible for one-year total of extension (regardless of her number of children). This caused her to take only six months of extension for one of her children. There was also evidence and personal testimony that the stigma with tenure extension has not totally disappeared. One interviewee did not take an extension at all, and another took only one year of extension for a total of three children. The latter describe her decision this way: "I guess I really wanted to get my tenure done in my six year time because I wanted to prove to myself and the world that you can have a family and be a success."

WISELI Evaluation: The Tenure Clock Extension Policy at UW-Madison

The following is a summary of one of WISELI's Issues Studies,[28] in which the tenure clock extension policy was reviewed and evaluated in the context of the tenure process at UW-Madison. Data within the following summary stem from the 2002 faculty interviews and the 2003 climate study.

The probationary period, or tenure clock, at the University of Wisconsin-Madison was created to 1) provide a deadline by which a faculty member would be granted employment security, guaranteeing their academic freedom, and 2) define academic excellence by both quality and rate of scholarly productivity. At its inception, the probationary period was highly inflexible, serving to ensure equal competitive conditions for faculty. Unfortunately, that inflexibility also created a disadvantage for many probationary faculty, particularly women, who generally tend to have more responsibilities outside of work, and who tend to be going through the tenure process during typical childbearing and childrearing years. For these reasons and others, the *Faculty Policies and Procedures* guidelines went were revised in 1994 and now declare that "adjustment of the probationary period can be made in [certain] conditions, 'when those circumstances significantly impede the faculty member's progress toward achieving tenure, [such as] childbirth or adoption responsibilities, significant elder or dependent care obligations, disability or chronic illness, or circumstances beyond the control of the faculty member.'"

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[28] Pribbenow, C.M., Sheridan, J., & Benting, D. (2007). *Extending the tenure clock: The experiences of faculty at one university*. [Manuscript ready for submission to Educational Evaluation and Policy Analysis.]

<u>The Tenure Process at UW-Madison</u>
Studies have shown that men and women faculty experience the tenure process differently: they
have different access to information and mentor relationships; their achievements are valued
differently; and family events such as childbearing in this early part of the career differently
impact women's chances for tenure.

Satisfaction with the Tenure Process at UW-Madison
Results from the 2003 *Survey of Faculty Worklife at the University of Wisconsin-Madison* show
that most faculty (77%) were satisfied with the tenure process at UW-Madison. Women (67%
overall satisfaction rate), however, were significantly less satisfied compared to men (82%
overall satisfaction rate). Also, those who took a tenure clock extension (56% satisfaction rate)
were less satisfied with the tenure process than those who did not take an extension (56% vs.
78%). One dissatisfied interviewee suggested the tenure clock period be extended to ten years to
allow for more flexibility, while on the other hand, another discussed how an extended period
could create negative consequences by complicating funding structures and time commitments at
work.

Access to Information and Resources for Tenure Process
There are two important variables that may contribute towards one's success in achieving tenure:
access to information (e.g., a helpful advisor or mentoring committee, and procurement of
additional resources (e.g., a reduced teaching load). The tenure clock extension policy is an
important resource that faculty member should be aware of; unfortunately, some do not hear
about it until after they are no longer eligible to use it. One indication that the University's
efforts to provide more information and help is working is that faculty who are currently going
through the tenure process reported being better informed about it than did their more senior
colleagues. Those who took a tenure clock extension were at a disadvantage, however, as they
reported being less informed about the tenure process in general, having less access to resources,
feeling less supported, and having less helpful advisors and/or mentoring committees.

Strong Fit between Job and Evaluation for Tenure
Research indicates that the traditional ideal of a strong emphasis on research with fewer teaching
and service duties does not match the reality of the way women and minority faculty tend to
perform their jobs. In particular, women and minority faculty are often called upon to perform
more service activities than majority men faculty. They also tend to put more emphasis on their
teaching duties overall. Unfortunately, these activities are not as valued as research output in a
tenure evaluation, leading to a disadvantage for women and minorities in the process. In our
survey we asked faculty whether they agree that they feel a strong fit between their job and how
they were evaluated for tenure. Overall, 71% of respondents reported a fit, but women faculty
and/or minority faculty were significantly less likely to agree with this statement than male
faculty and/or majority faculty.

Use of Tenure Clock Extensions
Among the 508 faculty who experienced the tenure process at UW-Madison in 1994 (the year
the tenure clock extension policy was implemented) or later, 122 (24%) used the tenure clock
extension policy. Of those, the majority (87%) felt their departments were supportive of this.

Differences in the use and satisfaction with the policy emerged, but not many. Survey results show that reasons for taking a tenure clock extension fell into four main categories: family/personal issues (e.g., illness in family), university factors (e.g., excessive workload), career factors (e.g., transferred from another institution), and leave and tenure policy issues (e.g., procedures not followed fairly, accurately). Female faculty were significantly more likely than male faculty to use the policy, and they reported their departments were equally supportive of their use as men's. Despite this, some women faculty we interviewed still felt that using a tenure clock extension might create a false perception that they were not dedicated to their career or research.

Summary: Evaluation of the Tenure Clock Extension Policy
The tenure process is a stressful, complicated period in the academic career. Many have hypothesized that the system disadvantages women. Our findings show that gender does not always correlate with disadvantage and that the tenure clock extension policy, which was designed to mitigate some of the disadvantage, does not necessarily increase satisfaction with the tenure process for those who use it. In our survey, female faculty reported being less satisfied with the tenure process overall, for a variety of reasons. Prior to 1994, women had more disadvantage and less satisfaction based on gender alone. However, there is no overall gender difference in satisfaction among faculty tenured in 1994 or later. Instead, those most dissatisfied with the tenure process were women who used tenure clock extensions—not all female faculty. Thus, the University appears to be doing a better job at educating faculty, providing them with mentoring, and giving them reduced responsibilities; however, the policy is not fulfilling its promise to alleviate stressors among those who need it most. Finally, although some faculty decide to forgo using the tenure clock extension policy for fear (real or perceived) of negative repercussions, it is not widespread at UW-Madison. Very few eligible faculty indicated that they did not take an extension, even if they wanted to; and no significant gender difference appeared in responses to this item.

WISELI Issue Study #3: Moving Academic Staff into Tenure-track Faculty Positions
Examination of data on staff positions indicates that we could increase the number of women faculty in many departments simply by converting academic staff positions to faculty positions for women who wish to expand their roles. A number of women on our campus who hold academic staff titles pursue independent research and have teaching reputations and credentials equivalent to those in faculty positions. Many of these women entered science at a time when nepotism rules, prejudices, or their own life choices prevented them from entering tenure-line faculty positions. In the present era, a number of these women might have become faculty members through dual career recruitments. Case studies were conducted to study the feasibility of switching from a non-tenure to a tenure-track position at UW-Madison.

Background
There has been little reported in the literature about professional staff switching from non-tenure to tenure-track positions. There is, however, emerging documentation showing a substantial increase in the proportion of faculty who hold full-time non-tenure track positions. Data from a number of sources indicate that full-time non-tenure-track positions are disproportionately being filled by women. This disproportionate growth in number and proportion of women among full-time non-tenure track faculty in most recent years has prompted concerns.

Methods

The following summary documents the third and final issue study[29] identified by WISELI, which examined obstacles to tenure conversion for non-tenure track faculty and staff and the identification of strategies in overcoming those obstacles. In the spring of 2006, WISELI researchers approached the Executive Director of WISELI and requested contact information for women who had attempted tenure-track conversions at the UW in recent years. Ultimately, two females were identified and contacted regarding their willingness to participate in the investigation. One individual was originally hired at UW in 1979 in the College of Letters and Sciences in a non-faculty position, as a part-time lecturer. The other individual was hired in 1984 as an assistant scientist in the medical school. Upon their consent, these two individuals were selected for case study. One individual case was identified as an unsuccessful attempt and the other was identified as a successful attempt at a tenure track-conversion. The study results are from interviews with twelve faculty members and administrators who were intricately involved with two tenure-conversion cases at the University of Wisconsin-Madison. The following research question guided the development and analysis of the case studies:

What are the strategies that lead to a successful tenure-conversion attempt by a non-tenure track staff member at UW?

Results

Through the development of these case studies, fifteen strategies emerged. These strategies can be understood within the process of a conversion, the stages of which include *Consideration*, *Action*, and *Attempt*. *Consideration* stage strategies encourage one to consider a tenure-track placement early in their career, address isolation, 'act' like a faculty member, prioritize time and energy, secure and maintain funding and learn what colleagues are doing. *Action* strategies guide professional staff to transfer national recognition to local respect, align champions from within and outside the department, identify mentors and seek out administrative support and guidance. Finally in the *attempt* stage toward tenure conversion, individuals are advised to maintain the highest professional standards, be vocal about accomplishments and goals, be persistent, be politic and assemble a stellar tenure package.

Recommendations

One cannot address issues of tenure-track conversion without examining structural constraints and barriers within the institution. These issues emerge at the intersection between tradition and the tension of needing to meet demands placed on the University of today. It is inherent on administrators and leaders to find new and creative ways to address these needs, especially in regard to moving more women into the sciences and engineering.

Addressing these issues may encompass examining, a) the perceived two-tiered system between faculty and academic staff, and b) policies and structures of the promotion and rewards system. Interviewees discussed the desire to redesign the present system and be able to place, and consequently reward, professionals where their passions and talents lie. Ultimately they envision

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[29] O'Connell, K., & Pribbenow, C.M. (2006). *She's got a ticket to ride: Strategies for switching from a non-tenure to a tenure-track position at the University of Wisconsin – Madison.* Madison, WI: The Women in Science and Engineering Leadership Institute.

putting people where they fit best and where they want to be, and as one administrator shared, "implementing recognition and rewards to ensure square pegs in square holes."

Change the System
Fred, an administrator within the medical school, illustrates this point with the following thoughts:

> *I think we do a terrible thing for people, we kind of tell them what the currency is and then kind of wave that in front of them and make them go in the direction that we – it's not me, but that culturally the academic health center thinks is right and I think we pull people away from doing the things they really love and we get them confused and we get them unhappy and I think it's one of the reasons why people are not staying at academic health centers. They're just torn in too many directions and don't feel as free as I think they should to pursue their interests. I believe there's value in all the things we do from clinical work done in a scholarly way to bench research. But there's not general acknowledgement that that's true.*

He continues with what he would do if he "ran the world":

> *My own view is that our real problem is that we have a caste system – in our medical school that really does delineate between three different classes if you will – the clinical track, the CHS track and the tenure track. And it's my belief that in a modern medical school, this kind of class system is based on a false premise which is that one of these activities is more important than the others, and I simply don't believe that's true. So my goal, if I ran the world, is not to have people aspire to get into the better class, but aspire to be in the right class and for that route to be equivalent, whichever group it was, to the other two groups. So I think this is a matter of not striving to get to the top, but striving to be in the group that is the best reflection of your professional interests and talents. So again, I think the best system would be to take everybody in and I'd get rid of the classes. Take everybody in, let them do whatever serves them best and wherever their talents lie and then sort it out down the road as they start to present the picture of what their professional lives are going to be like.*

Gary, another administrator, discusses the importance of university rankings and the oversupply of Ph.D.'s, which contribute structurally to the perceived *caste* system:

> *Now, more and more faculty don't want to teach. And so you see this increasing number of either full-time or part-time lecturers. And so, then what's left is the research. And the reason that I think this has happened is that among the top 20 research universities, particularly since rankings came out—everybody is driven by rankings, you've got to be—if you drop down in the rankings, then the good graduate students don't come, if the good graduate students don't come, then the good faculty don't come. And the way you get rankings is through scholarly reputation. Well, you only have 24 hours in a day, and so I think it's that pressure from all institutes, it's an Arms Race, to get higher and more visible faculty research. And so this is why we've off-loaded these other activities onto professionals. And so we've become more specialized, as an academy. So this probably*

also contributes to this tier-system because look at what is most rewarded among scholars themselves-your scholarly reputation. Look at what the faculty 'choose' to off-load; clearly that creates a hierarchy. But those are the external forces that conflict, so if you're a department chair and you have new lecturers-it may be the intellectually honest thing to do to say, 'Look, we've created a system where we're very efficient at generating Ph.D.'s-I read once the average physics professor will generate a dozen Ph.D.'s. You need one to replace yourself, you need two to be the research scientists in industry, maybe another couple in the liberal arts colleges. What about the other half dozen? So the academy has produced enough qualified people to ensure an oversupply for these other, you know, to fulfill all of the obligations and responsibilities that a university has to do. And so would you say, 'Well, you're part of the oversupply?' It makes it a very competitive system.

Create Objective Policies
Administrators and faculty referred to the tenure process as being vague and ambiguous. If the tenure process is perceived as such, converting from an academic staff position to a tenure-track position is even more so. There do not appear to be any policies that departments can refer to when these circumstances arise. Articulating consistent and objective policies is an important step to address the subjectivity associated with conversion requests. Objective criteria and guidelines may work to eliminate bias, such as the personality and gender of an individual.

Samantha relays the subjectivity associated with departmental decisions:

> *Well you know my experience has been that if a department doesn't want a person, it doesn't matter what the person does, they'll make a way to not let them in, or if they want them they'll make a way to let them in.*

And Susan shares how her request for tenure conversion could have gone either way:

> *And then you come back to what the two people said to me. One is 'Don't set your mind on things too high for you.' And two, 'It's very hard to get tenure in this department.' By their rules, a hundred percent, they're right that they denied me tenure. But let me give the other half of the sentence. By their rules they could also be a hundred percent right in granting me tenure. In other words, they could have done it either way by their rules and they'd be right. So you could say completely, of course we said 'no.' And then you could also take the exact same playback because I think I would have gotten by the divisional committee. I don't think they would have stopped me. I got stopped at the department. I think also by their rules, I've seen how quickly they can work when they want to do something. Had they wanted to do it, they could have opened the door and rolled out the carpet. So I think it really has come down to they didn't want to. So I think basically they didn't want to and they didn't.*

Richard, an administrator, shares how his department initially struggled but ultimately came together in determining criteria for tenure conversion situations:

What emerged from all of that was a clearer picture of what the case really was. And broad outline, it would be what is the nature of a faculty position versus a staff position? And so almost everyone struggled with this question about what are the appropriate requirements for being a faculty member. What defines a faculty member as opposed to an academic staff member? And it really came down to their own judgment about what is the nature of this department and what is the nature of a faculty member in this department, in particular a tenured faculty member.

Institutions must work to develop new policies that support performance and promote the ongoing professional development of its staff. Once policies are established, it is important that they be documented and accessible for individuals considering a conversion. It is also imperative that department chairs have an accurate understanding of tenure and promotion criteria and are able to articulate them to their department members.

In addition, although we have identified strategies for overcoming obstacles to tenure-track conversions, there are significant concerns for women once this has been successfully achieved. Linda raises the following concerns, which ultimately, require further investigation and subsequent action:

Once these obstacles are hurdled, and a woman is moved to tenure track, the issues and obstacles merely continue on the other side of that appointment. That is 'tenure' is denied any practical meaning-nothing at all has changed in my case and the hurdles just continue, but we have a new 'title.' It is exhausting because we are not ever admitted into the 'men's leadership network.' Tenure doesn't crack open the door at all unless they WANT it to…[Essentially] the success in that switch was extremely limited—it was a conversion we 'extracted' with little positive result; certainly nothing ensued that facilitated my work, subsequent to that switch.

Summary: Tenure Process and Policies

Tenure appears to be an area in which there are mixed indications of success. In general, the percentage of women on the UW-Madison faculty has been increasing in all divisions due to an increase in hiring, as well as to the attrition of male faculty. In both the physical and the biological sciences, the percentage of women at the associate rank appears to be increasing, either due to achieving tenure or being hired with tenure. At the same time, the percentage of female assistant professors in biological science departments has been declining, which will continue to affect overall tenure rates in the future.

Results from the climate surveys indicate that at UW-Madison, the majority of faculty members (approximately 75%) are satisfied with the tenure process. Women however, continue to indicate that they are less satisfied than men. Both the survey and the interview data suggest that they have different access to information and mentoring, their achievements are not valued equally, and that family circumstances, such as child birth or adoption, can impact women's chances for tenure. In both 2002 and 2006, the lengthiest discussions with the female faculty interviewees centered on how the process of achieving tenure continues to privilege males when there are children involved.

The tenure clock extension policy was one of many UW-Madison supports that WISELI studied to see if it has indeed, helped women achieve tenure. Unfortunately, our findings suggest using the tenure clock extension policy, which was designed to mitigate some of the challenges of family responsibilities, does not necessarily increase satisfaction with the tenure process for those who use it. Interestingly, we found that those most dissatisfied with the tenure process were women who used tenure clock extensions—not all female faculty. We concluded that the reason for using the extension, such as the birth of twins or the death of a parent, might explain women's dissatisfaction with the process overall. This particular study also suggests that the University appears to be doing a better job at educating faculty, providing them with mentoring, and giving them reduced responsibilities; however, the policy is not fulfilling its promise to alleviate stressors among those who need it most. Finally, although some faculty members decide to forgo using the tenure clock extension policy for fear (real or perceived) of negative repercussions, the fear of using it is not widespread at UW-Madison. Very few eligible faculty members indicated that they did not take an extension, even if they wanted to; and no significant gender differences were uncovered.

WISELI staff also studied tenure-track conversion cases to understand if UW administration could increase the number of female faculty in many departments simply by converting academic staff members, who have credentials equivalent to faculty, into tenure-track positions. Two case studies were conducted, one of a successful conversion and one that was unsuccessful. From this research, fifteen strategies were identified to as ways to enable a women to move into a faculty position: *Consideration* stage strategies encourage the staff member to consider a tenure-track placement early in their career, address isolation, 'act' like a faculty member, prioritize time and energy, secure and maintain funding and learn what other colleagues are doing. *Action* strategies guide academic staff to transfer national recognition to local respect, align champions from within and outside the department, identify mentors, and seek out administrative support and guidance. Finally, in the *Attempt* stage, individuals are advised to maintain the highest professional standards, be vocal about accomplishments and goals, be persistent, be politic, and assemble a stellar tenure package. Our findings suggest that it is extremely difficult to make these conversions and an individual will not be successful without the support of the institution, at both the department and the divisional levels. Campus administrators will need to find innovative ways to address the perceived two-tiered system between faculty and academic staff, and change practices within the tenure and promotion system before embracing tenure conversions as the panacea for the lack of women in science and engineering departments.

CHAPTER VIII: WORK-LIFE BALANCE

For the second round of interviews in 2006, we were specifically interested in whether maintaining the tenuous balance between career and home was improving for the women in this study. Although there were some exceptions, most interviewees did not indicate that work-life balance had improved to any great degree, and some indicated that it had become more difficult. Many argued that the balance was simply different based on changing factors in their career or home. None of the interviewees pointed to any specific institutional factors that had helped relieve or reduce their work-life tensions. Importantly, both junior and senior women were equally prone to describe work-life balance as remaining the same or increasingly difficult to attain. For the junior women, young families and stress about tenure were major factors. For senior and tenured women, women with and without children described increasingly work responsibilities and expectations as contributing to work-life tensions. In some cases, they described work as all consuming. At least one senior woman reported that *not* having young children at home meant that she was less able to set limits around her work. Below we elaborate briefly on the comments of both groups of respondents, and then discuss how work-life tensions overall appeared to affect the careers of respondents in this study.

Female Faculty- On Work-life Balance
Junior women, nearly all of who were mothers, mainly described work-life tensions as either escalating or remaining at the same level, although in different ways. For those who mentioned increased tension, the birth of new children was cited as one factor, increasing work expectations were another. Many women explained that things had not radically changed or improved or degraded, but their children had aged or their specific responsibilities had shifted. Overall, they described themselves as "super-busy," and as never feeling quite "good enough" in either the parent or academic faculty role.

> I: Would you say your work-life balance issues kind of improved or stayed the same, or have become worse?
>
> R: *Depends on the week. I don't know. I think life is just going to keep getting more and more busy. Some things go by the wayside; I used to run a lot now I don't run as much anymore. Just more busy not better or worse. More complicated.*
>
> <div align="center">*****</div>
>
> *Well, because I do a lot less clinical patient time, things have gotten better because, because like I said that time is inflexible…And so having more time freed up has been great. And I've spent much more time attending to my personal life. The problem is that's my research time that I'm now taking away to catch up on my personal life. So balance remains an issue and the biggest, for me personally the biggest issues are early mornings and late nights because there are constantly meetings and I am constantly missing them and it's constantly stressful for me.*
> .

Interestingly, several tenured faculty whom we interviewed indicated a particularly high and often increasing level of difficulty maintaining in maintaining work-life balance. For these

women, the volume of their work had not decreased since achieving tenure, but in some ways had increased. Alison describes this below:

> R: *…You know I look back at the things I had time to do as an assistant professor and I think, where did I find that time? Maybe it's because you get more oversight requests or letters or I'm not exactly sure what exactly happens, but…*

> I: Your responsibilities seem to increase…

> R: *Yeah they do. I don't know exactly how, but they just, they just do. So now instead of helping team teach a course, you've got to organize the darn thing! I mean you do a lot more organizing than you used to. You know [before tenure] you could just be the passive, 'you tell me what to do and I'll go along with it' before. And now it's like everyone's going well 'why don't you set this initiative up?' 'Why don't you find people to work on this?' 'Why don't you organize this?' I mean it's those kind of things.*

Alison notes that now that her kids were older, she has a more difficult time setting boundaries around her work:

> *When my kids were little, I left here promptly. Now it's anywhere - four or five whenever. When they went to bed I went to my desk at home. Now I don't have to rush home, so I get home late and I'm exhausted …but it's really calmed down and because I don't have to be constantly with them [kids] and watching them so in that regard I'm freed up. But then here at work, there are more jobs everyday and probably more responsibilities here and I'm asked to be on more committees and that is fine because that is something I like to do.*

Finally, both junior and senior women described how having children and negotiating family and work balance had affected their careers. For the most part, these descriptions and concerns echoed those from the 2002 interviews and reports. Women reported that having children slowed down their career advancement and affected retention. For some women, the career effects or consequences of having children were more visible in 2006 than in the 2002 interviews. For example, as described above, some of the junior women with children had failed to meet their tenure requirements to date, and one had switched from a tenure-track career path to a clinical track career path. At least one interviewee reported that she was considering leaving academia altogether. As in the 2002 interviews, both junior and senior women described forgoing career advancement opportunities, such as leadership roles and travel, so that they could spend more time with their children.

Coping Strategies

Interviewees reported drawing upon a number of personal coping mechanisms to help them manage their home and work commitments. By and large, the coping mechanisms described were similar to those described in the 2002 interviews, so they will not be elaborated upon in great detail here. The coping mechanisms described included making children and work the main priorities; relying upon support at home from a spouse, partner, parent, or a paid provider; setting

limits on work time and work responsibilities; and sacrificing personal and social time for oneself. Renee's comments below echo those of women in the 2002 interviews, and represent one of the coping mechanisms utilized by female faculty:

> *I don't have a lot of friends. I wish I had more friends. I don't because I don't have time to have friends. I work and I play with my kids. And that's all I do. My husband is my sole friend, and if anything ever happened to him I don't know what I would do—I really have no social network. My social network is the woman who lives next door who works full time and has three children and we sit down about twice a year and say we have no time for anything…Oh yeah, mental health and physical health. I don't exercise. I mean I lecture all my patients on physical fitness and I, you know - Sunday mornings I send the family to church and I work out once a week you know. And it's terrible.*

Flexibility in schedules was an unofficial "benefit" used by many faculty members to balance their work-life priorities. As reported in greater detail in the 2002 report, many women described structuring their work day to help accommodate parenting responsibilities, or partner or child care schedules. For the most part, women described being able to work flexible hours as a benefit they enjoyed or utilized to make life more manageable. In only one case did an interviewee's situation or opinion about flexible hours change since the 2002 interview. Here, the interviewee was extremely grateful to be working under a new chair, where she was no longer required to work "nine to five" hours or "viewed as not being committed to the University and to my job because I went home to care for sick children." In her current situation, Elaine now had the flexibility to arrange her schedule, which has brought her satisfaction:

> *I actually have taken a more active parenting role in that I no longer have baby sitters; there is no more day care. So, I partition my days up much more effectively. So, instead of having sitters fill in for me in the afternoons, I end my days at 3:00 and I'm home with the kids. I'm not embarrassed to say that. That is a priority for me. If somebody is going to chastise me for making that a priority, then let them. It is no longer a part of my concern. Whereas [under previous chair]…I certainly I couldn't do that at all.*

In summary, the 2006 interview data show that female academics remain tremendously challenged by work-life balance issues. These challenges may be most salient for women with children, and are not necessarily relieved by the achievement of tenure. The interviewees reported that work-life tensions remain across the life cycle, although the source of tensions and areas of flexibility change. What did not seem to change was the tendency of women to rely heavily on personal and household coping mechanisms, and to forgo personal time and personal health. Furthermore, women with families continued to have careers that advanced more slowly. These patterns was strongly evident in both the 2002 and the 2006 interviews. In some cases, the women in this study described drawing upon institutional resources such as tenure clock extension, maternity leave, and workplace flexibility to help them manage. These resources were useful, but were limited and were not always executed in a way that alleviated the substantive work-life tensions felt by female faculty. For example, there still seemed to be concern about the stigma associated with tenure clock extension, and some women felt the extension policy was not comprehensive enough to meet their needs. There was little evidence to suggest that these resources had changed much since the 2002 interviews, although anecdotal evidence suggests

that the stigma associated with tenure-clock extension may be on the decline in some departments and for some women.

WISELI Research: Work-life Balance Results from Surveys, 2003 and 2006

Balancing Professional and Personal Lives
Very little change in individual perceptions about work/life balance was observed between 2003 and 2006. Female faculty and non-mainstream faculty still indicate the most dissatisfaction with their work/life balance compared to men and mainstream faculty. The only large difference between 2003 and 2006 occurred for those who received Life Cycle Research Grants or a Vilas Life Cycle Professorship; these few faculty significantly increased their agreement to the item "Personal responsibilities and commitments have slowed down my career progression" (Table VIII-1).

Table VIII-1: Science faculty's perceptions of challenges to balancing personal and professional life. ‡

	N	Forgo Professional Activities	Career progression Slowed		Long Hours Sign of Commitment**	
All Faculty in the Biological & Physical Sciences	648	41.9%	38.7%		61.1%	
Women	154	42.7%	48.4%	*	70.2%	*
Men	494	41.7%	35.7%		58.2%	
Faculty of Color	51	45.7%	40.8%		59.2%	
Majority Faculty	597	41.7%	38.5%		61.3%	
Department Chair	43	39.5%	18.6%	*	62.8%	
Not Chair	605	42.1%	40.1%		61.0%	
Non-Mainstream	229	46.4%	44.1%	*	62.6%	
Mainstream	403	40.2%	35.3%		60.3%	
Attended Hiring Workshop	59	51.7%	37.9%		53.5%	
No Attendance	584	41.3%	38.8%		62.1%	
Any WISELI Participation	121	47.1%	45.8%		59.7%	
No WISELI Participation	522	41.2%	37.0%		61.7%	
Life Cycle Recipient	13	61.5%	92.3%	*	61.5%	
Life Cycle Applicant	17	58.8%	82.4%	*	58.8%	
No Life Cycle	631	41.5%	37.5%		61.2%	
Departmental participation in:						
Climate Workshops	245	42.1%	40.1%		64.3%	
No Participation	403	41.8%	37.8%		59.2%	
Hiring Workshops	431	42.6%	39.8%		63.3%	

No Participation	217	40.7%	36.6%	56.7%
Celebrating Grants	151	44.7%	39.1%	65.1%
No Participation	497	41.1%	38.6%	59.9%

‡ **Responses to questions 43c-43e of the 2006** *Faculty Worklife* **survey; reported as fraction of respondents** *agreeing strongly* **or** *somewhat* **as compared to** *disagree strongly* **or** *somewhat*.
* **T-test between groups significant at** *p*<0.05.
** **Item not included on 2003 survey; longitudinal comparison not available.**

In contrast to the lack of change at the individual level, some faculty members appear to be sensing a great deal of change in how their departments support their family obligations. Fewer faculty report difficulty adjusting their work schedules to care for children; significantly fewer faculty report that department meetings occur early or late in the day; significantly more faculty report that their department is supportive of family leaves; and significantly fewer faculty report that faculty who have children are considered to be less committed to their careers. Significant differences between men and women faculty on some of these items continue to exist, and women especially have not *significantly* altered their views on how their departments support family; nevertheless, the overwhelming trends for both women and men faculty are in a positive direction for the UW-Madison becoming a "family-friendly" campus.

Table VIII-2: Science faculty's perceptions of their departments' support of family obligations. ‡

	N	Supportive Colleagues	Early or Late Meetings	Supports Family Leave		Kids = Less Committed	
All Faculty in the Biological & Physical Sciences	631	80.7%	39.3%	85.5%		14.1%	
Women	148	76.1%	37.2%	77.4%	*	27.3%	*
Men	483	82.2%	40.0%	88.0%		10.3%	
Faculty of Color	48	83.3%	41.7%	78.1%		9.1%	
Majority Faculty	583	80.5%	39.1%	86.1%		14.6%	
Department Chair	43	97.6%	*	30.2%	94.7%	*	9.5%	
Not Chair	588	79.5%	40.0%	84.5%		14.5%	
Non-Mainstream	223	73.9%	*	42.2%	79.7%	*	22.6%	*
Mainstream	396	84.3%	38.1%	89.2%		9.2%	
Attended Hiring Workshop	57	80.7%	36.8%	89.2%		17.7%	
No Attendance	569	80.6%	39.7%	85.0%		13.9%	
Any WISELI Participation	118	80.7%	38.1%	85.7%		19.4%	
No WISELI Participation	508	80.6%	39.8%	85.4%		13.0%	
Life Cycle Recipient	13	75.0%	46.2%	75.0%		38.5%	

	N	%	%		%		%
Life Cycle Applicant	17	75.0%	47.1%		72.7%		31.3%
No Life Cycle	614	80.9%	39.1%		85.9%		13.7%
Departmental participation in:							
Climate Workshops	240	80.0%	45.4%	*	85.0%		15.6%
No Participation	391	81.1%	35.6%		85.8%		13.3%
Hiring Workshops	418	77.6% *	41.2%		82.7%	*	14.4%
No Participation	213	86.7%	35.7%		91.0%		13.7%
Celebrating Grants	145	85.6%	31.0%	*	87.8%		10.5%
No Participation	486	79.2%	41.8%		84.8%		15.3%
Life Cycle Recipient	174	81.8%	37.9%		87.9%		14.7%
Life Cycle Applicant	258	78.9%	34.9%		84.3%		15.1%
No Life Cycle Applicant	373	81.9%	42.4%		86.2%		13.5%

‡ Responses to questions 44a, 44c, and 44e-43f of the 2006 *Faculty Worklife* survey; reported as fraction of respondents *agreeing strongly* or *somewhat* as compared to *disagree strongly* or *somewhat*.
* T-test between groups significant at *p*<0.05; no adjustments made for multiple comparisons. Highlighting indicates significant longitudinal change where green and turquoise indicate increase is significant at *p*<0.05 and *p*<0.10 and where yellow and pink indicate decrease is significant at *p*<0.05 and *p*<0.10, respectively.

Health Concerns
Very little has changed between 2003 and 2006 in the self-reported health of biological and physical science faculty. Life Cycle recipients (and applicants) self-report "fair" or "poor" health less often than others, not surprisingly. There is some evidence that male faculty may be exercising less than they did in 2003, as there is a tendency for some groups to agree they are not physically-fit. Women faculty tend to report worse health on most of the individual emotional states (fatigued, stressed, nervous, etc.) than their male peers, and this is similar to the situation in 2003. Life Cycle Grant recipients and applicants say they are more fatigued and short-tempered in 2006 than they were in 2003. Finally, we asked faculty a new item about burnout in 2006. Surprisingly, a large percentage of faculty (24.6%) indicate at least a moderate level of burnout, with women significantly more often reporting a moderate level of burnout (32.2%) compared to men. Fortunately, relatively few faculty members (around six percent) report the highest levels of burnout.

WISLEI Initiative: Life Cycle Research Grants

One of WISELI's initiatives, the Life Cycle Research Grant, was designed to provide funding to faculty who were experiencing acute crises in their personal life during critical junctures in their professional careers. In the first round of funding, four recipients received grants. This particular project met with such success that it has since been institutionalized and funded through an endowment from the Vilas Trust. The original name of the grant has consequently been changed from the Life Cycle Research Grant to the Vilas Life Cycle Professorship and is currently available to all UW campus faculty in need.

<u>Initial Life Cycle Research Grant Program</u>
In the original proposal,[30] the following describes the purpose of the Life Cycle Research Grant (LCRG) program:

> Research grants will be available to women faculty at critical junctures in their professional careers (e.g. between grants, a new baby, parent care responsibilities). These grants are meant to be flexible and women may apply for varying amounts and academic purposes.

The following describes the program and identifies who is eligible:

> In collaboration with the Graduate School, WISELI (the Women in Science & Engineering Leadership Institute) is pleased to announce the Life Cycle Research Grant Program. These funds will be available to faculty and permanent PIs at the University of Wisconsin-Madison who are at critical junctures in their professional careers when research productivity is directly affected by personal life events (e.g. a new baby, parent care responsibilities, a life-partner's illness, one's own illness). These grants are meant to be flexible and faculty may apply for varying amounts and academic purposes.

> Eligibility: These funds will be available to faculty and permanent PIs at the University of Wisconsin-Madison who are members of the biological or physical sciences division, or who can demonstrate that their research is in the biological or physical sciences.

A small evaluation study was conducted with the first round of grantees.[31] Five themes emerged from the data to reflect how the grant impacted the recipients both professionally and personally. Participants acknowledged that this was *the only grant of its kind* and how it uniquely worked to balance out their personal and professional lives. Several of the recipients described how the grant *came at a critical juncture in their personal and professional lives* and significantly helped them stay focused on their research. Many shared that the *grant provided psychological support* and made them feel valued by the university. The faculty also discussed how the grant not only helped to support them*, but impacted on other's lives, as well*. This may have indirectly included their own families, but directly encompassed the staff and students assigned to their projects or laboratories. Finally, faculty reflected on how the impact of the grant not only aided them during a particularly difficult time, but over the long-term, helped to maintain and promote endeavors of the university. Therefore, it was believed that the grant provided *an investment in the grantees' futures and the university's*.

When the recipients were asked about specific publications, presentations, and grant proposals that they could directly attribute to the grant, they provided a wealth of information. Specifically, the following table documents how the grant's investment "paid off" in the lives of faculty members' productivity:

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[30] WISELI Grant Proposal (2001), p. 14.
[31] Pribbenow, C.M. (2004). *WISELI's Life cycle research grant program: Formative and summative evaluation.* Madison, WI: WISELI Evaluation Report.

Grantee	Number of Publications	Number of Presentations	Number of Grant Proposals	Amount Requested in Grant Proposal(s)
1	4	2	1	$75,000
2	7	0	1	$1,807,375
3	1	2	1	$50,000
4	1	1	3	$1,675,000 (total)
TOTALS	13	5	6	$3,607,375

After the initial funding of 8 recipients under the LCRG program, its funding was supported by the Vilas trust and expanded to include all faculty members at UW-Madison.

Current Vilas Life Cycle Research Professorship Program
The Vilas Life Cycle Professorship (VLCP) program is administered by the WISELI, as authorized by the Office of the Provost. The Vilas Trustees generously awarded $310,000 for the program in 2006, as they did in 2005. All faculty and permanent principal investigators, regardless of divisional affiliation, are eligible for these funds. Per the stipulations of the Estate, no Vilas funds are to be used for the recipient's salary and individual awards are not to exceed $30,000. In addition, all awardees are vetted with the Office of the Provost prior to establishing an award in order to ensure that each recipient is in good standing with the University.

Using the most recent VLCP report,[32] three rounds of grant funding have occurred:
- **Round 1.** Deadline May 26, 2006. Applications received: 6. Total amount requested: $179,284. Applications funded: 4 (with one deferred to Round 2). Total amount awarded: $106,459 ($17,290 of this sum was spent in the 2007/08 academic year should the Estate fund another year of awards).
- **Round 2.** Deadline September 29, 2006. Applications received: 6. Total amount requested: $142,819. Applications funded: 6 (including one from Round 1; one application was deferred to Round 3). Total amount awarded: $125,799 ($58,779 of this sum will be spent in the 2007/08 academic year should the Estate fund another year of awards).
- **Round 3.** Deadline December 29, 2006. Applications received: 9. Total amount requested: $256,936. Applications funded: 8 (including one from Round 2.) Total amount awarded: $138,653 ($96,717 of this sum will be spent in the 2007/08 academic year should the Estate fund another year of awards).

SUMMARY, 2006/07: Applications received: 21. Total amount requested: $579,039. Applications funded: 18. Total amount awarded: $370,911 ($172,786 of this sum will be spent in the 2007/08 academic year should the Estate fund another year of awards).

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[32] Pribbenow, C.M., & Sheridan, J., (2007). *Evaluation of the Vilas Life Cycle Professorships program*. Madison, WI: WISELI Evaluation Report.

Demographically, Vilas Life Cycle Professorship applicants and recipients are very diverse:

	Applicants	Recipients
Gender		
Female	15	14
Male	6	4
Race/Ethnicity[33]		
Faculty of Color	4	3
Majority Faculty	17	15
Title		
Assistant Professor	12	12
Associate Professor	3	1
Professor	4	4
Permanent PI/Academic Staff	2	1
Division		
Biological Sciences	8	6
Physical Sciences	1	1
Social Studies	8	7
Arts & Humanities	4	4

The life events that led to the recipients' applications reflect many of the challenges experienced in our complex and ever-changing world—their own life-threatening illnesses and recuperation, serious illnesses and disabilities of family members, the struggles of raising children with special needs, and taking care of elderly parents, often from afar. Faced with these challenges, the recipients were at a critical juncture and wondered if they would actually "make it" in their careers and at the University. The evaluation of this program identified many positive effects on the lives and careers of the recipients, other students and staff, and on the University, itself.

The VLCP Enables Continued Success
Professional success was by far the most important outcome for the recipients of this grant. Many recognized that their careers were at a standstill, or actually regressing, due to the life events they faced. Some described how their research and labs were about to be discontinued before the VLCP was awarded. Susan explains:

> *I was considering closing down my lab…The grant made all the difference, both financially and psychologically. I was able to keep my laboratory going and maintain a colony of animals that would have been extremely difficult to replace… and now I have a 3- year NSF grant.*

Lily had a similar experience:

> *My two NIH grants were up for renewal and I had few resources to support the salary of my research specialists, who had been working with me for many years. Thus, it was*

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[33] Faculty of Color are those whose "heritage code" is listed as Black, Asian, Native American, or Hispanic in University records. Majority Faculty are listed as "Other."

greatly helpful to receive the Vilas Life Cycle Professorships to continue my research…The fund was so critical that I cannot imagine the situation without this fund. I would have probably lost one research specialist and might have started thinking about closing my lab.

Mary's career progression was at risk when she received the VLCP:

I think my tenure application was at risk because the pace of my scholarship had slowed down. The combination of this grant and an extension of my tenure clock has made a tremendous difference in my scholarship quantity and quality. I go up for tenure soon. I won't really know how much of a difference they've made until I get tenure (or not). However, I am feeling much better about my prospects.[34]

Janet, who faced a life-threatening illness and recuperation, notes:

The VLCP allowed me to be released from teaching during the fall 2006 semester so that I could pursue my research. It also gave me time to begin writing parts of my new research, some of which has been published in a leading journal in the field. In addition, with the publication of my book and journal articles, I have been invited to give numerous lectures in the United States and abroad…This is not to say that I would not have completed the book and started the research, but it would have taken me much, much longer. The grant was that extra help up that made the last two years so productive.

For these four recipients, as well as the others, the award came at a crucial point in their career and provided a "bridge" between funds or during a critical point in their scholarship. Without it, their research and professional lives would have been significantly and negatively impacted.

It Decreases Attrition in the Faculty
Because of the crises in their lives, a majority of the faculty members considered a career change or early retirement. A few were concerned that they would not achieve tenure and thought about leaving the institution altogether. Others recognized the toll on themselves psychologically and emotionally. For each of the recipients, the awards came at a critical decision-making point in their lives. David explains:

I was contemplating retiring early. I no longer plan to take that route. I believe that the Vilas grant helped me make this decision.

Elizabeth faced a similar life-altering decision:

The life event that I experienced put me at risk of leaving my tenure track position. The stress induced by many responsibilities and the legalities associated with the event caused lingering health issues. As it is, I was granted an extension on my tenure clock to help overcome some of these problems. The funds provided by the VLCP were a minimal contribution to the targeted project—a small morale booster—and a substantial amount of funding from other sources was utilized to complete the second stage of the project.

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[34] She did indeed achieve tenure and was promoted to an Associate Professor.

Susan notes:

> *There are times when it seems very difficult to balance family and research and to try to excel at both. In academics it can be very difficult to catch up once you have slipped behind. The long term stress of this can become debilitating and I was getting close to that point. The grant made a big difference in this direction and was greatly appreciated.*

Providing a boost in morale was experienced by others, as well. Janet explains:

> *The grant gave me the space to continue my work and it also gave me the confidence to get back to my writing after my recuperation. Thus it was important to me both financially (funding research, etc.) and emotionally.*

Without the award, many of these faculty would have fallen into a "downward spiral" described in previous evaluation reports and perhaps, become one of the numbers of faculty who leave the institution in any given year.

Its Effects Extend Beyond the Recipients

Faculty members are dependent on the support and expertise of staff and students who work with them on a daily basis. The careers of research staff are also at risk when a faculty faces an illness or a life-changing event that requires attention. Recognizing this, the recipients were extremely grateful for the award, as it enabled technicians, postdoctoral researchers and graduate students to remain with the faculty and extend their research. According to Lily and Kim, respectively:

> *The grant supported one of my graduate students. This enabled me to focus on grant applications and manuscripts without worrying about the funding of the student. I was able to complete and publish two major research papers. Accomplishing this would have been much more difficult without the help of the Vilas award.*
>
> <div align="center">*****</div>
>
> *The technician who was paid on the life-cycle award started a project that was not part of the grant. This project is not yet complete but I am hoping it will serve as the beginning of a new facet of our research.*

The grant also helped further the professional careers of the staff or students, themselves. David provides an example of this:

> *If I had not received the Vilas grant, one of my students, who is an especially gifted student, would have gone with out funding, and might have been forced to leave graduate school. As it is now, I have enough funding to support her until August 2007 at which time she plans to graduate with her Ph.D. This is a very happy ending.*

Carole, Connie, and Julia also acknowledged the positive effects of the award on others:

This award enabled me to keep a research specialist and post doc, who would have been let go otherwise. The postdoctoral researcher also obtained independent funding for herself in 2007. Hence, two women in science directly benefited from the VLCP.

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A terrific outcome was that it resulted in funding a graduate student who otherwise would have been a TA. This gave him wonderful research experience that he will use in his research and it also gave me access to some technical skills (website design) that I would not have had otherwise.

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Moreover, [the award] was very helpful to the graduate student who worked as my PA, as it supported him during a crucial year in his doctoral work.

It is an Example of the University, at Its Best
The recipients were unable to identify any negative outcomes associated with receiving these grants. In fact, they have encouraged many of their colleagues, both men and women, to apply for them. Their recommendations and the following comments suggest the highest respect for the University, due to the generosity of the Vilas Estate.

I consider the program an example of the University of Wisconsin at its most humane best, where the university provides resources to faculty going through a difficult period, to enable them to maintain the kind of research productivity that strengthens their careers, and strengthens the university as a whole.

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I think the Vilas grants can be a lifesaver for those who receive them. A short investment like this can get someone through a difficulty period where they then go on to years of productive work. This is a fantastic program.

The recipients described the VLCP as an investment program in an individual and their career. In Kim's words:

Your efforts are a valuable investment for our university. Relatively small amounts of money can make huge differences at critical times. Funding in the biological sciences is so very competitive at present (~10% of grants are funded at NIH) that many research programs are ending. After funding has ended for a significant period and productivity drops, it is very difficult to regain NIH funding. Funding that allows labs to remain active over such periods makes it possible to regain funding.

Mary identifies particular faculty who would particularly benefit:

I think [the VLCP] is extremely valuable. I also think it is important in the retention of women, faculty of color and faculty who come from low income backgrounds who may be more likely to have family responsibilities and distractions that keep them from tenure.

Other recipients comment on the value of the VLCP:

- *I think the Vilas program is one of a kind and totally unique. It's at the very top of my list because of the huge long term impact it can have over the entire career of a faculty member.*
- *It fills a niche not filled by any other funding mechanism.*
- *The University should expand this program.*
- *It is as important as any other program for faculty on campus.*
- *[The VLCP] is of the highest priority.*
- *The funds did re-confirm my confidence in the University's commitment to scholars and to scholarship.*

WISELI Research: Life Cycle Grant's Use and Value results from Surveys, 2003 and 2006

The visibility of the Vilas Life Cycle Professorship program among biological and physical science faculty seems to have increased a great deal since 2003. Significant decreases in the numbers of faculty who have never heard of the program, coupled with significant increases in the numbers who find the program not only valuable, but "Very Valuable," are gratifying to see. Significant increases in the numbers who say they have "used" the program are also observed. Women faculty, department chairs, and faculty with any WISELI participation are significantly more likely to have heard of the program and to value it; life cycle grant recipients and applicants are similarly more likely to know about and value the program. Interestingly, value of the Life Cycle program is significantly higher in departments where at least one faculty member has applied for or received a grant. This may indicate that there is little stigma associated with receiving these awards, as all the colleagues of the affected Life Cycle applicant/recipient value it, not just the person who applied.

Table VIII-5: Science faculty's awareness, perception, and use of Vilas Life Cycle Professorships. [‡]

	N	Never Heard of Program		Program is Very, Quite, or Somewhat Valuable**		Ever Used Program	
All Faculty in the Biological & Physical Sciences	606	42.7%		54.8%		3.7%	
Women	149	34.9%	*	63.8%	*	8.3%	*
Men	457	45.3%		51.9%		2.3%	
Faculty of Color	46	37.0%		58.7%		7.7%	
Majority Faculty	560	43.2%		54.5%		3.4%	
Department Chair	41	17.1%	*	70.7%	*	8.6%	
Not Chair	565	44.6%		53.6%		3.4%	
Non-Mainstream	216	44.4%		53.2%		3.3%	
Mainstream	376	41.5%		55.9%		4.1%	
Attended Hiring Workshop	55	36.4%		61.8%		0.0%	

No Attendance	547	43.1%		54.3%		4.2%	
Any WISELI Participation	115	27.8%	*	69.6%	*	11.1%	*
No WISELI Participation	487	46.0%		51.5%		2.0%	
Life Cycle Recipient	13	0.0%	*	100.0%	*	75.0%	*
Life Cycle Applicant	16	6.3%	*	93.8%	*	71.4%	*
No Life Cycle	590	43.7%		53.7%		1.8%	
Departmental participation in:							
Climate Workshops	230	40.4%		58.3%		3.6%	
No Participation	376	44.2%		52.7%		3.9%	
Hiring Workshops	402	42.0%		56.2%		3.6%	
No Participation	204	44.1%		52.0%		4.1%	
Celebrating Grants	141	41.8%		55.3%		3.3%	
No Participation	465	43.0%		54.6%		3.9%	
Life Cycle Recipient	162	38.3%		59.3%		10.4%	*
Life Cycle Applicant	242	36.4%	*	61.6%	*	7.0%	*
No Life Cycle Applicant	364	47.0%		50.3%		1.6%	

‡ **Responses to questions 35o and 36o of the 2006 *Worklife* survey.**
* T-test between groups significant at *p*<0.05; no adjustments made for multiple comparisons. Highlighting indicates significant longitudinal change where green indicates increase is significant at *p*<0.05 and where yellow indicates decrease is significant at *p*<0.05.
** Compared to *Not at all Valuable* or *Never Heard of Program*.

WISELI Evaluation: Campus Childcare

While not all women in science and engineering need child care, acknowledging the importance of good child care and working to make it accessible are markers for a good climate for women. In June, 2000, the University Child Care Committee completed a comprehensive white paper on the status of childcare at the UW-Madison. The Committee and the Office of Campus Child Care are currently working on a number of specific initiatives, among them 1) continuing exploration of the relationship between employment conditions for child-care workers, University and/or union-based support for campus childcare, and parent tuition payments; 2) expanding care for low-income parents; and 3) expansion of infant, conference and extended hours care.

Having children as a faculty member requires a balance between responsibilities at home and the demands of one's professional life (i.e., the work-life balance). Faculty members make complex personal and professional decisions to raise children. According to the 2003 Study of Faculty Worklife Survey and the interviews with 26 faculty women conducted in 2002, faculty members had varying degrees of success at the work-life balance.

In the 2003 Study of Faculty Worklife survey, we asked whether faculty agreed or disagreed with the following statement: *I am usually satisfied with the way in which I balance my professional and personal life*. Overall, 60.2% of faculty agreed that they were balancing the two roles satisfactorily. Women faculty, however, were significantly less likely than men faculty to

agree with that statement (49.4% vs. 65.3% of men). We also asked, *whether personal responsibilities and commitments have slowed down [your] career progression*. Almost half—42.5%—agreed that this was true (over half of women agreed—51% of women compared to 38.8% of men). These data, along with the in-depth interviews of female faculty in 2002, were used to identify common themes and concerns with child care, and to identify recommendations for the UW administration.

Need for Childcare
Interviews with the female faculty in 2002 noted that a critical factor in their ability to balance work and family lives was to have support at home, particularly from a spouse or partner.

>R: *Unless my husband had said that he wanted to keep our son out until he was a year old, we would've had to seek in-home care of something, you know it just would've been very difficult.*

>I: So does your husband do a lot of the childcare?

>R: *Yes he does. Starting next week, we decided to keep all of our children at home during the summer so my husband will do that. So I stayed home most of last fall, and my husband's been staying home most of the spring, and he'll stay home this summer.*

Another interviewee voices how this support affected her decision to have children:

>I: So is it important for you that you have a spouse at home who takes care of things?

>R: *Yeah, that is probably the most important thing in my life.*

>I: How would your career be different, I'm just asking you because not everybody has that—

>R: *Oh I know. I think first of all I wouldn't have had children. I wouldn't have ever had a child unless one of us stayed home.*

Others chose not to use childcare based on their own philosophy of childrearing:

>*I don't think providing 50 hours a week of daycare for children is the right answer for women or men who choose to be really involved in their family, for balancing family and career. I think what you want is to allow for parents, but women in particular, to have the time that they need with their children, and have enough uninterrupted time for their work that they can still make significant headway.*

Finding Childcare
Some interviewees seemed confused about their options for campus childcare:

The (chuckling) childcare has been the worst part of my job move. . . When I came here to interview, because [there is] only [one other] female in the section and she has no children, there was no one who could tell me anything about childcare, because I met only [my colleagues] and all their wives take care of their childcare. And when I did call the places that I was able to get recommendations, you know they were full for the next year or whatever. All the good places are full way, way, way in advance.

<center>*****</center>

I wish that I had gotten into the childcare on campus. I was hired in May and started in August, so everything was filled up, so I ended up having to go down to [a suburb]. So that's not working so well. I mean it's great childcare, but the commute. . .

Survey respondents showed a strong preference for on-campus care, and valued the high quality of care we do have on campus. Parents of preschool-aged children (under age 6) using UW-Madison childcare centers were more likely to say they are "Very Satisfied" with their current childcare arrangements than parents not using these centers (78.8% vs. 49.5%). By far the biggest priority for faculty with school-aged children was after-school and summer care—71.7% of survey respondents (81.8% of women, and 65.5% of men) indicated after-school care is a "High" or "Quite" a priority. The biggest priority for faculty with preschool-aged children was more infant care (68.9% rated it "high" or "quite" a priority). Childcare for when one's child is sick was "high" or "quite" a priority for 54.1% of faculty with school-aged children, and 59.4% of faculty with preschool-aged children. Back-up or drop-in care when one's usual childcare arrangements do not work is a priority for 51.6% of faculty with school-aged children and 63.2% of faculty with preschool-aged children.

Costs of Childcare
Faculty of color and single parents with children aged 6-17 placed a higher priority on cost assistance with childcare than did their counterparts. Over half of female faculty with children under age 6, as well as untenured faculty rated cost assistance with childcare a high priority. Over 60% of underrepresented minority faculty with young children reported that cost assistance with childcare was a high priority, although this is not statistically different from majority faculty due to the small numbers of faculty of color with small children.

Recommendations
To increase the satisfaction level of childcare arrangements for faculty with children under age 18, UW-Madison might consider the following:

- Continue to work on improving departmental climate for faculty parents, especially mothers. One relatively simple way to do this is to highlight the flexibility of work time for faculty; perhaps enhancing existing campus policy in this regard. WISELI climate workshops for chairs are a recommended avenue for this effort.
- Make after-school and/or summer care available to parents on campus, or work in cooperation with community programs to provide such care.
- Increase availability of infant/toddler care on campus. Consider developing a campus-wide plan for "reserving" several slots so that new faculty who arrive in August have access to slots that are normally filled by that time.

- Provide a clear pathway to information about campus childcare; reach out to people who don't envision campus childcare as an option for their family; and partner with areas on campus that deal with childcare- and childbirth-related policies (e.g., the Tenure Clock Extension Policy, the Parental Leave Policy, etc.).
- Continue trying to make campus childcare affordable for everyone, but especially for women, single parents, and underrepresented minorities. We usually think of faculty as being in a position to afford good childcare; however, our results show that this is not uniformly the case.
- Finally, our estimates show that faculty in the Biological Sciences departments, in particular, show high rates of child production relative to other departments. Any campus initiatives that begin to address issues of tenure clock extensions and parental leave may want to make sure to have representatives from that division on the planning committees.

Summary: Work-Life Balance

For the second round of interviews in 2006, we were specifically interested in whether maintaining the tenuous balance between career and home was improving for the women in this study. Although there were some exceptions, most interviewees did not indicate that work-life balance had improved to any great degree, and some indicated that it had become more difficult. Many argued that the balance was simply different based on changing factors in their career or home. None of the interviewees pointed to any specific institutional factors that had helped relieve or reduce their work-life tensions. Importantly, both junior and senior women were equally prone to describe work-life balance as remaining the same or increasingly difficult to attain. For the junior women, young families and stress about tenure were major factors. For senior and tenured women, women both with and without children described increasing work responsibilities and expectations as contributing to work-life tensions. In some cases, they described work as all consuming. At least one senior woman reported that *not* having young children at home meant that she was less able to set limits around her work.

Both junior and senior women described how having children and negotiating family and work balance had affected their careers. For the most part, these descriptions and concerns echoed those from the 2002 interviews and reports. Women reported that having children slowed down their career advancement and affected retention. For some women, the career effects or consequences of having children were more visible in 2006 than in the 2002 interviews. For example, some of the junior women with children had failed to meet their tenure requirements to date, and one had switched from a tenure-track career path to a clinical track career path. At least one interviewee reported that she was considering leaving academia altogether. As in the 2002 interviews, both junior and senior women described forgoing career advancement opportunities, such as leadership roles and travel, so that they could spend more time with their children.

The results from campus climate surveys are a contrast to the lack of change perceived at the individual level. At the campus level we see that some faculty members appear to be sensing a great deal of change in how their departments support their family obligations. Fewer faculty report difficulty adjusting their work schedules to care for children; significantly fewer faculty report that department meetings occur early or late in the day; significantly more faculty report that their department is supportive of family leaves; and significantly fewer faculty report that

faculty who have children are considered to be less committed to their careers. Significant differences between men and women faculty on some of these items continue to exist, and women especially have not *significantly* altered their views on how their departments support family; nevertheless, the overwhelming trends for both women and men faculty are in a positive direction for the UW-Madison becoming a "family-friendly" campus.

In sum, the both the survey results and the interview data show that female academics remain tremendously challenged by work-life balance issues. These challenges may be most salient for women with children, and are not necessarily relieved by the achievement of tenure. The interviewees reported that work-life tensions remain across the life cycle, although the source of tensions and areas of flexibility change. What did not seem to change was the tendency of women to rely heavily on personal and household coping mechanisms, and to forgo personal time and personal health. Furthermore, women with families continued to have careers that advanced more slowly. These patterns were strongly evident in both the 2002 and the 2006 interviews. In some cases, the women in this study described drawing upon institutional resources such as tenure clock extension, family leave, and workplace flexibility to help them manage. These resources were useful, but were limited and were not always executed in a way that alleviated the substantive work-life tensions felt by female faculty. For example, there still seemed to be concern about the stigma associated with taking tenure clock extensions, and some women felt the extension policy was not comprehensive enough to meet their needs. There was little evidence to suggest that these resources had changed much since the 2002 interviews, although anecdotal evidence suggests that the stigma associated with tenure-clock extension may be on the decline in some departments and for some women.

One of WISELI's initiatives, the Life Cycle Research Grant, was designed to provide funding to faculty who were experiencing acute crises in their personal life during critical junctures in their professional careers. These funds are currently available to faculty and permanent PIs at the University of Wisconsin-Madison who are at critical junctures in their professional careers when research productivity is directly affected by personal life events, such as a new baby, parent care responsibilities, a life-partner's illness, or one's own illness. Annual evaluations of this particular program show its enormous success and impact for faculty and staff who have received the grants.

Throughout the many iterations of evaluation, participants acknowledged that this was *the only grant of its kind* and how it uniquely worked to balance out their personal and professional lives. Several of the recipients described how the grant *came at a critical juncture in their personal and professional lives* and significantly helped them stay focused on their research. Many shared that the *grant provided psychological support* and made them feel valued by the university. The faculty also discussed how the grant not only helped to support them*, but impacted other people's lives, as well*. This may have directly included their own families, but also indirectly encompassed the staff and students assigned to their projects or laboratories. Finally, faculty reflected on how the impact of the grant not only aided them during a particularly difficult time, but over the long-term, helped to maintain and promote the mission of the university. Therefore, it was believed that the grant provided *an investment in the grantees' futures and the university's*.

Due to these results and the success of this program, it has since been institutionalized and funded through an endowment from the Vilas Trust. The original name of the grant has consequently been changed from the Life Cycle Research Grant to the Vilas Life Cycle Professorship and is available to all UW campus faculty members.

CHAPTER IX: INSTITUTIONAL RESOURCES AND OTHER GENDER ISSUES

WISELI Research: Examination of Institutional Resource Distribution by Gender

In the original grant application, the following was proposed:

> Vice Chancellor John Torphy has agreed to assist in collecting information on start-up packages, assigned space, access to administrative support, assignment of teaching assistants, type of class (e.g. undergraduate vs. graduate), number of graduate students and postdocs, and location of office and laboratory. Data not available in existing records will be gathered in interviews with departmental administrators, faculty, and on-site inspection by the Executive Administrator, PIs, and Leadership Team. Taking into account the complex factors involved in assignment of institutional resources, we will look for patterns that might disadvantage or advantage women faculty.[35]

Office and Laboratory Space

In their important 1999 report on the status of women in the School of Science at the Massachusetts Institute of Technology (MIT),[36] Nancy Hopkins and her colleagues reported among other things that women faculty at MIT were allocated less lab space than their male colleagues. As a result of this finding, gender equity in lab space became an important indicator that was required as part of the "NSF 12." In addition, and also modeled after the seminal MIT study, a study of lab and office space was included in the original WISELI proposal. Specifically, WISELI co-PIs said that the ADVANCE effort at the UW-Madison would examine "assigned space… and location of office and laboratory." The ultimate space analysis we performed included office and lab square footage, but not office or lab location.

Data were gathered at the school/college level. Requests were made to the deans of the six schools/colleges WISELI works with[37] for lists of faculty office and lab space square footage. Not all schools/colleges provided data in the same format, and some did not provide data at all. L&S provided only total space data (office and lab combined); CALS provided only office space data, and the Med School provided no data that was analyzable by gender. Engineering and VetMed provided excellent data. Significant resources would have had to be expended to gather data from the Med School, CALS and L&S regarding space; thus, we analyzed the data we were provided to the extent that we were able to generate a dataset that was comparable across schools/colleges.

In 2003, the required tables were produced for the annual report and for the site visit. For all departments reporting office space, we find little difference in square footage between men and women; however, we do find a significant difference in the lab space allotted to men and women, such that women in the physical sciences have only about 50% of the lab space men have, and

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[35] WISELI Grant proposal (2001), p. 12.

[36] MIT Committee on Women Faculty. *A Study on the Status of Women Faculty in Science at MIT*. Boston, MA: Massachusetts Institute of Technology, 1999. http://web.mit.edu/fnl/women/women.html

[37] College of Engineering (Engr), College of Agricultural and Life Sciences (CALS), School of Veterinary Medicine (VetMed), School of Medicine and Public Health (Med), School of Pharmacy (Pharm), and College of Letters & Science (L&S).

women in the biological sciences have about 75% of the lab space of men. In physical science departments, the gender difference in total space is very small, but in biological science departments, women have only about 80% of the total space that men have.

Women's Space (Sq.Ft.) as % of Men's
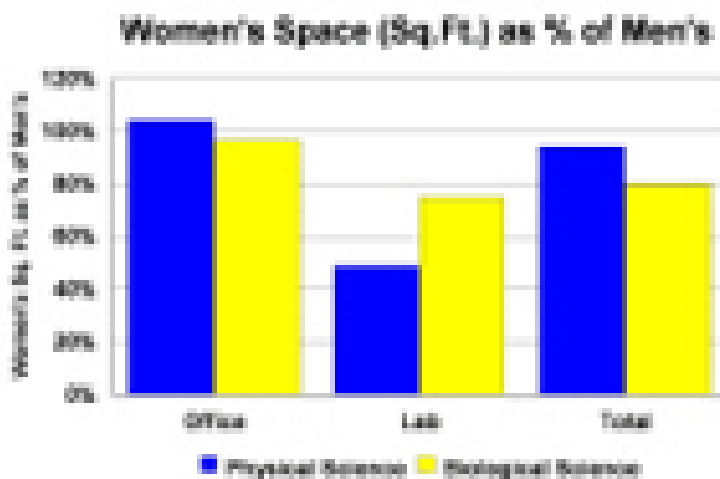
Because the largest gender differences occur in the allotment of lab space, and because biological and physical science disciplines vary greatly in their needs for lab space, we wanted to control for the "need" for lab space in order to understand if the gender difference we are observing is a result of discriminatory practices, or merely the result of a correlation between the types of disciplines in which men and women are concentrated and the lab space needed to conduct that research. We reasoned that the need for large labs is correlated with grant funding; larger grants would be awarded in those disciplines where faculty need more equipment and more personnel, and therefore more lab space. Grant funding is a publicly-available variable at UW-Madison, and we created a database for individual faculty members that included their total grant dollars, their number of current grants, and a constructed variable that divides their total grant dollars by the duration of grants to obtain a "grant dollars per year" variable. We performed a multiple regression analysis, regressing lab square footage on gender and grant funding, measured in the three ways described above.

We found that controlling for grant funding (in any form of measurement) effectively removed the significant gender effect; that is, once grant funding was controlled, there was no longer a significant difference between men's and women's lab square footage. That is not to say that there was not still a difference. Controlling for grant funding, women faculty still had about 250 square feet of lab space less than men in the three colleges we studied, which is about the amount of space in an average faculty office.

Because office space, and total combined office/lab space, appears to be distributed fairly equitably by gender across those colleges studied, and because the significant gender differences in lab space disappeared once grant funding was controlled, we did not pursue any further action with regards to gender equity in lab space at the UW-Madison. We did not have enough evidence to pursue changes in policy or increased pressure on those colleges which did not provide specific lab square footage data for each faculty member.

In summary, poor data did not allow for a complete gender analysis of lab space across all colleges. For those colleges who did provide the proper data, we found that any significant gender differences in laboratory space disappeared once grant funding was controlled. In the future, office and laboratory space data should be analyzed by gender and race/ethnicity at least every 5 years. Confounding variables such as grant funding, discipline, and tenure status should be included in any analysis of space.
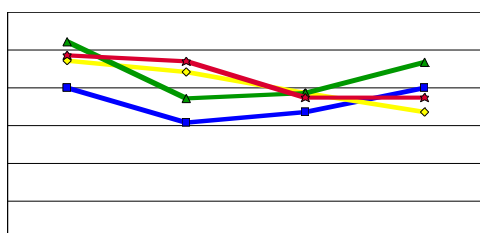
Startup Packages and Starting Salary

In *Women Don't Ask: Negotiation and the Gender Divide,*[38] economists Linda Babcock and Sara Laschever report that women tend to not negotiate higher salaries and better startup packages than they are offered at the time of hire compared to their male peers. Starting out even slightly lower in salary or resources can build up over time to create large discrepancies later in the career. Monitoring starting salaries and startup packages for incoming faculty is thus vitally important.

It took some time to arrange collection of the starting salary and startup data, as WISELI had to make arrangements with each of the six schools/colleges to obtain it; these data were not available centrally. In 2003, we collected the data for the first time, asking for the data back to 2000. As we began collecting these data, the Chancellor's and Provost's offices also became interested in startup and initial salary data for new hires, because the UW-Madison has been losing ground in recruiting excellent faculty due to budget cuts. The Chancellor and Provost asked OBPA to collect essentially the same data from all of the schools and colleges, and in 2005 WISELI was able to obtain these data from OBPA rather than collecting it ourselves. We add each year's data to our database, and report a 3-year rolling average in our indicators each year.
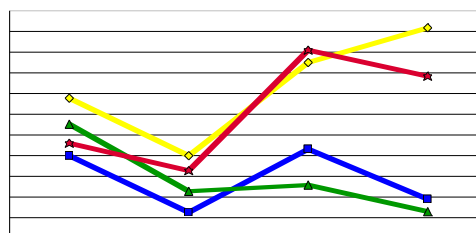
We looked at median starting salaries offered for men and women. Again, we considered the medians for all offers, and also for those who accepted offers; it may be that one group (e.g., women) are being offered lower starting salaries and thus are not accepting offers from UW-Madison. We looked at offers for junior and senior faculty separately:


For junior offers, it seems clear that when the offers are more equitable to male offers, there is a higher acceptance rate of women. The "offers accepted" lines are above the "offers made" lines

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

in both the PS and BS departments. In BS departments, there appears to be a slight downward trend for junior faculty, such that men's initial salary is slightly higher than women's in the offers being made, but the offers accepted the ratio is almost at parity. The story is different for senior women, however. In the PS departments, it is clear that female faculty members are not getting initial salary offers in line with those of their male peers; both the offers made and offers accepted lines tend to be under 100% over the periods studied. The same is true in the BS departments at several points in time; however, at almost all points, the offers made and accepted by women senior candidates in BS departments were at least similar to men's, if not much higher.

We also analyzed total startup packages in the same way we analyzed starting salaries—comparing the median for women to the median for men, by division and tenure status, in a rolling 3-year average.

**Women's Median Total Startup as % of Men's
Untenured Faculty Only**
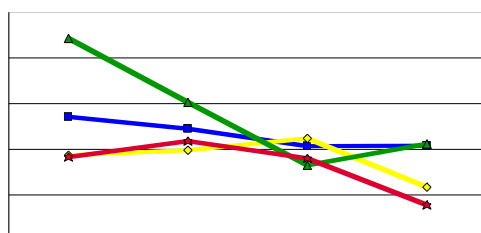
- PS-Offers Made
- PS-Offers Accepted
- BS-Offers Made
- BS-Offers Accepted

**Women's Median Total Startup as % of Men's
Tenured Faculty Only**
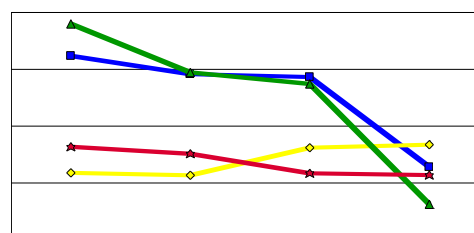
- PS-Offers Made
- PS-Offers Accepted
- BS-Offers Made
- BS-Offers Accepted

For junior faculty, there were clearly some women with very high startup packages and who accepted offers at UW-Madison; over time, the influence of those extraordinary cases was removed, and total startup for junior faculty in the PS departments remained mostly equitable. In the BS departments, the trend has been towards equity for most years except the most recent one, where suddenly men were receiving much higher startup packages than women. An analysis of why the sudden drop would have to include a detailed look at the discipline; it could be that the BS faculty women were hired into less resource-intensive departments. For senior faculty, especially in the PS departments, there is a very wide variation in the equity of total startup packages. Earlier in the measurement period, women faculty in PS were receiving total startup packages approximately 50 % higher than men's. Only in the last period has this trend completely reversed so that men are receiving packages 50% higher than women's. Again, a more detailed look by discipline would be appropriate. Especially in the PS departments, there is a wide range of startup needs—from a Mathematics professor who only needs a computer and some books, to a professor of biomedical engineering who needs major equipment, students, renovated space, etc. Startup packages for senior faculty in BS are consistently higher for men than for women hires over this period. Women's packages are about 25% lower than those for men. This might be an area where there is an equity problem for women.

In summary, offers made, starting salary, and total startup appear to be equitable between men and women in UW-Madison PS and BS departments, although there are some notable exceptions

that bear further analysis, particularly at the senior level. In the PS departments, senior women's starting salaries and total startup are falling below parity in recent years, and in BS departments, senior women's total startup is consistently lower than men's. Further analysis could reveal whether this is an effect of working in disciplines with varying needs for startup and salary, or whether this effect is truly based on gender.

Salary
Women earn less than men in every industry, including academia. Nationally, the AAUP reports that women faculty earn 81% of the amount earned by men.[39] At UW-Madison, salary gender equity exercises are completed every five or ten years, the last exercise being completed in 2000/01. In 2002/03 a new policy was implemented to monitor equity on a more regular basis for individuals, at the time of their reviews.[40] Given that adjustments to some women's salaries were made in 2000/01, and that a new policy was implemented in 2002/03 to continually monitor for salary inequities, it will be interesting to see whether salaries of men and women faculty are diverging over time.
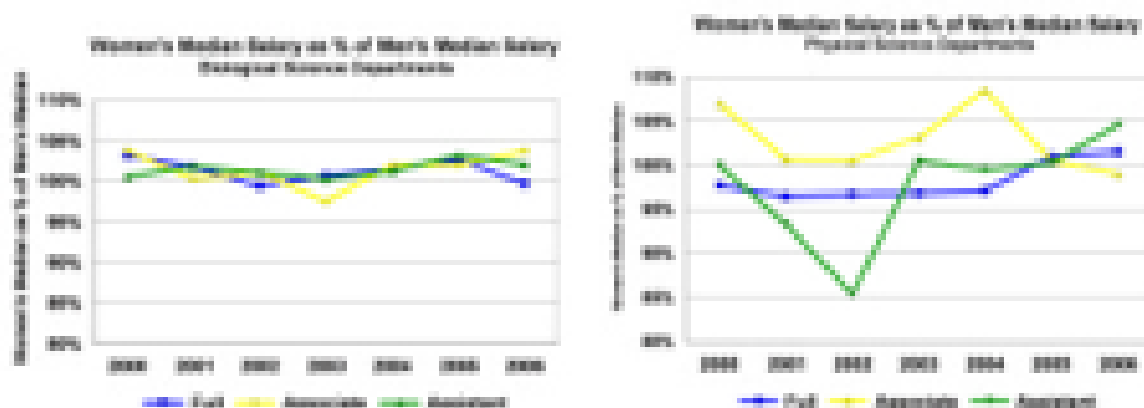
The first thing to note is that there is a great deal more variation in the PS departments than in the BS departments. The year 2002 was particularly bad for female assistant professors in the PS departments, but then a correction seemed to occur immediately, and in the PS departments the women's median salary and the men's were practically identical. In the PS departments, women full professors' salaries were below men's for most of the period studied, but then reached equity in around 2005. In the BS departments, all ranks of faculty have median salaries that are approximately equal. Women's median salary, in fact, appears to be slightly greater than men's, and so a correction seemed to take place in 2006 bringing men's and women's medians back to even.

Except for some outliers (e.g., 2002 in the PS departments), men's and women's median salaries appear to be equitable when rank is controlled. When the ratios of men's and women's salaries begin to deviate too far from 100%, a self-correction seems to appear within one or two years. Using only the simple control of faculty rank, and measuring only the median salary, we find little evidence of salary inequity by gender. In the future, it is recommended that we continue

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[39] West, M.S., & Curtis, J.W. (2006). *Organizing Around Gender Equity*. AAUP Gender Equity Indicators 2006. http://www.aaup.org/AAUP/pubsres/research/geneq2006toc.htm
[40] Faculty Salary Equity Review policy: http://www.provost.wisc.edu/salaryequitypolicy.html

tracking women's median salary as a percentage of men's, but do not replace the periodic individual-level reviews done by the OBPA. The median salary indicator is only a rough guide to salary inequity, and use of the median can be masking large inequities at the individual level. In addition, only rank and a very broad measure of discipline is controlled using this measure; much more detailed analysis must be done to assure equity. Finally, as with all other measures, similar tracking should be done for faculty in racial/ethnic minority groups.

WISELI Evaluation: Gender Pay Equity Study and Equity of Faculty Salaries Policy

As mentioned previously, in the early 1990's the University of Wisconsin-Madison undertook an investigation of gender faculty compensation that culminated in the publication of the report, *Gender Equity Study of Faculty Pay: University of Wisconsin-Madison* (1992). This inquiry took place against the backdrop of increased academic and policy interest in the issue of gender equity in higher education that had begun two decades earlier.

In line with accepted methodologies and similar exercises at other universities, the study utilized multivariate statistical regression techniques to investigate whether faculty pay was systematically linked to gender. The report found evidence of statistically significant differences in the pay received by women and men faculty remained after controlling for a variety of "compensable" factors and suggested various remedies to redress this inequity.

The UW-Madison Faculty Senate responded to the study's findings by adjusting the salaries of women faculty and establishing a precedent for regular reviews of faculty gender pay equity. A follow-up study that analyzed payroll data from November 1997 utilized similar methods as the 1992 exercise and found no evidence of aggregate gender inequity including rank as a 'compensable' factor. The final report suggested, however, that routine reviews of faculty salaries should be continued and might focus on identifying outliers.

A policy for the regular review of faculty salaries was established in 2000-2001. This policy turned away from the multivariate statistical approach and adopted the individual-level matching approach suggested in the 1998 report. The policy called for department chairs to identify female faculty with outlying salaries and conduct a detailed review. The review involved selecting comparable male faculty and analyzing whether pay discrepancies were attributable to compensable factors or gender inequities.

A 2000-2001 study, herein referred to as the 2000 Gender Pay Equity Study, used this alternate methodology in a follow-up exercise. In this study, some women were found to lag behind peer male faculty and were provided with additional compensation. The methodologies used in this exercise have been codified in the Equity in Faculty Salaries Policy, which instructs that an individual gender equity review be conducted for women faculty at crucial intervals in their careers.

Besides using the quantitative data collected and reported previously, we relied on the female faculty interviews and the results from the Faculty Worklife Survey (2003) to understand faculty *perceptions of* and *experiences with* the gender pay equity policy.

Findings

The evidence presented in the report supports the general conclusion that faculty at the UW-Madison hold a positive perception of both the Gender Pay Equity study and the Equity in Faculty Salaries policy. Likewise, it also points to a significant minority of faculty who are unaware of these programs. Even among the target population, a small but notable proportion of women faculty are ill-informed about the availability of these institutional supports.

The evaluations provided by faculty who had used the programs in the past provide some insight into their value. Among all groups considered, individuals who had availed themselves of the programs rated them most highly. This tends to suggest that the programs are effective at redressing perceived inequities when utilized.

Taken together, these findings lead us to conclude that future efforts should be aimed at raising faculty awareness of the UW-Madison gender equity programs. Special attention might be devoted to informing junior faculty, who were less likely to be informed than senior faculty, and women faculty, whom the programs target. Furthermore, concerned administrators might consider undertaking efforts to raise faculty awareness of how and why these programs have been implemented on campus. As the critical comments about the Gender Pay Equity study suggest, such efforts may help to improve faculty perceptions of the programs.

Similar to other policies and programs that support women, assuring equity in pay requires continual attention. The policy itself is only as worthwhile as its use and implementation— perhaps the greatest need is to make faculty aware of its potential. Faculty should be made aware of and empowered to use the programs, particularly at key points in their careers.

WISELI Evaluation: Sexual Harassment Information Sessions

UW-Madison has embarked on a comprehensive effort to make sexual harassment a university community concern. This effort, backed by vigorous public endorsement by the administration, has involved refining and renewing an array of campus resources, designing and publishing informational materials, and offering informational sessions to all employees. Sexual harassment contact persons have been identified and trained in every school, college, and division. A cross-campus team of facilitators has presented informational sessions to deans, administrative teams, academic departments, and support units. These sessions use an inclusive, non-confrontational tone and, to personalize the experience, a case study approach. A website and brochures (*Sexual Harassment: A Community Concern* and *Sexual Harassment: How to Respond When Someone Confides in You*) present key principles, policies, and resources.

The University of Wisconsin-Madison's Office for Equity and Diversity has included information about resolving sexual harassment concerns in educational sessions for employing units and graduate assistants for many years. In 1997, the Committee on Women in the University proposed the development of new information sessions for faculty, in response to community concerns that faculty, many of whom supervise staff or student employees, were unaware of and unprepared to respond to sexual harassment issues on campus. Initially, the committee proposed that the Faculty Senate require all federally-funded principal investigators to attend mandatory Sexual Harassment Information Sessions (November 1997). The Faculty Senate resolved to offer voluntary sessions to all campus employees (February 1998). Since

1999, a team of facilitators coordinated by the Office for Equity and Diversity and the Office of the Provost has presented information sessions for more than 2,000 faculty, staff, and student employees.

Session Development
Sexual Harassment Information Session content and format was developed collaboratively by a working group including representatives of the Committee on Women in the University, the Equity & Diversity Resource Center and the offices of the Provost, Administrative Legal Services, Human Resource Development, with additional input from the entire Committee on Women in the University, the University Committee, the Faculty Senate, the Academic Staff Executive Committee, and members of the Graduate School and University Police.

The session incorporates presentations on sexual harassment laws and university policies, principles for responding to sexual harassment allegations, and campus resources. A second component of the session is a group discussion of case-study examples. This discussion allows participants to work through possible sexual harassment and consensual relationship situations. All together, the session is intended to raise awareness of sexual harassment and consensual relationship concerns and to equip participants with the tools to seek advice and respond to these concerns in their respective departments or units.

Session Participation
The EDRC and Office of the Provost have worked in partnership with deans, directors, chairs, and other campus leaders to encourage voluntary participation in Sexual Harassment Information Sessions. In some instances, leaders have opted to mandate attendance. The dean of the College of Agricultural & Life Sciences (CALS) has required all employees, including faculty, to attend. Since fall 2005, the chancellor has required all limited appointees to attend. Complete participant data is not available for the Sexual Harassment Information Sessions. Attendance was not recorded at voluntary sessions, though evaluation surveys returned to the EDRC and records of Information Sessions held suggest some general participation patterns. A total of 2,026 evaluation surveys were completed by Session participants and returned to the EDRC between January 2000 and May 2006.

Conclusions
Sexual harassment is a persistent issue on the UW-Madison campus. Despite some gains in training faculty about the problem, some groups of faculty continue to report personal experiences of sexual harassment with alarming frequency. That nearly one-quarter of gay and lesbian faculty and women faculty in the humanities reported being sexually harassed between 1998 and 2003 should be cause for concern. This evaluation has not even considered the scope of sexual harassment directed towards students and staff. We might speculate that the incidence of sexual harassment is greater among these groups than for faculty, who generally occupy positions of greater power and prestige.

The evaluation data presented suggests that the Sexual Harassment Information Sessions are generally well received by participants and are at least partially effective in reaching their training goals. In aggregate, respondents to the post-Session evaluation survey reported knowledge gains in all issue areas addressed with the most gains observed in responding to

sexual harassment. Comparisons of responses to the faculty worklife surveys revealed that faculty who reported attending the Session were significantly more confident that they knew how to respond to a sexual harassment allegation than their non-participant counterparts. Furthermore, participant faculty were less likely to choose a "don't know" response when asked about their perception of sexual harassment issues on campus.

Some evidence suggested that the Sexual Harassment Information Sessions may have a different impact on different faculty. The post-Session evaluation survey responses revealed that participants from the College of Agricultural & Life Sciences, for whom participation was mandatory, were less enthusiastic about their experience than all other participants. Data from the worklife surveys furthermore suggests that the Session may be most effective at informing those faculty who were initially least informed about sexual harassment issues.

Taken together, the persistence of sexual harassment directed towards faculty, faculty members' limited participation in the Sexual Harassment Information Sessions, and faculty's own reports of their uncertainty about sexual harassment issues on the UW-Madison campus suggest more effort should be directed towards educating faculty on this topic. Given that the evaluation presented has concluded that the Sessions can successfully achieve their training goals, we can reasonably conclude that increased efforts should be directed towards encouraging faculty to participate in the session.

Summary: Institutional Resources and Other Gender Issues
Real progress in WISELI's mission—to increase the participation and advancement of women in academic science and engineering—has been made in many areas. Compared to 2000, there are more female faculty, and women are a higher percentage of the faculty in both biological and physical science departments in 2006. In 2006, we have many more female department chairs in BS and PS departments than we did in 2000. Tenure rates for men and women have equalized in the past five years (i.e., women are no longer differentially leaving prior to a tenure decision), and men's and women's salaries are approximately the same once rank and division are controlled. Still, as noted throughout this summary and the full report, there are areas needing improvement. Women still leave the UW-Madison at higher rates than men; they may have less lab space than their male peers, and no change or negative change was observed in the numbers of women directing major centers and institutes in the BS and PS departments. Tracking the gains and uncovering the remaining problem areas are crucial to the efforts of WISELI and the UW-Madison administration to achieve gender equity. Continued collection, reporting, and analyses of these gender equity indicators are imperative to achieve this goal.

CHAPTER X: SATISFACTION AND THE DECISION TO STAY OR LEAVE

In the following section, we describe the personal accounts of interviewees in regard to their career satisfaction, support and recognition provided for their work, and their decisions to either stay at University of Wisconsin-Madison or explore other opportunities. Since these issues were not discussed by all of the interviewees in 2002, it is impossible to directly compare whether attitudes or experiences have substantially changed. Among the interviewees who discussed their decisions to stay however, similar themes are evident in both the 2002 and 2006 interviews. Where possible and appropriate, we elaborate on these similar themes below, as they help highlight some seemingly pervasive issues for female faculty at UW-Madison.

An impressive number of participants (around 80%) stated that, for the most part, they were quite satisfied with their career and the way it had evolved at UW-Madison. A smaller majority of interviewees were also inclined to stay at the University of Wisconsin-Madison.[41] Some had already considered leaving or had received offers from other universities, but had chosen to remain here. In two cases, participants had been able to change the departments in which they worked, thus facilitating their desire to remain at the UW-Madison. In only one or two cases were the participants considering leaving academia altogether.

Many interviewees provided specific career reasons for remaining here and referred to their overall job satisfaction. A few mentioned certain career opportunities that would entice them elsewhere, such as opportunity to have budgetary authority or a research fellowship. Several interviewees also mentioned family as an important factor in both why they were satisfied and/or why they would probably stay at UW-Madison—a repeated theme from the 2002 interviews. In the same vein, among the interviewees that were actively considering leaving or somewhat dissatisfied, family was often described as a motivating factor—for example, if a spouse did not get tenure or an opportunity arose to work part-time and spend more time with their children. Finally, one interviewee specifically mentioned WISELI, its networks for women, and its efforts to make positive campus change as a motivating factor to remain at the UW-Madison.

Below, we describe in more detail the common reasons why interviewees reported that they were satisfied with their careers and/or would like to stay at the University of Wisconsin-Madison. These reasons include a positive working climate, good colleagues, flexibility and autonomy in their work, as well as a need to stay for family or spousal reasons or a fondness for the city of Madison. We then discuss areas of dissatisfaction and factors that were influencing interviewees' consideration to leave. These included lack of salary and/or limited resources, poor departmental climate, the desire to meet family and work-life balance needs, or uncertainty about achievement of tenure. Although most interviewees did not explicitly raise gender issues as a reason for leaving or career dissatisfaction, some described differential gender treatment in relation to poor departmental climate, family and work-balance needs, and uncertainty about tenure.

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[41] It is not possible to compare this response with how many interviewees felt this way in 2002 for two reasons. First, not all faculty participants were asked this question in 2002; second, only 19 of the original 26 women were interviewed in 2006. We do know that 22 of the original 26 interviewees were still faculty on campus at the time of the 2006 interviews, although not all consented to the second interview.

Over several years, WISELI sought to both understand and positively affect the career experiences and trajectories of women faculty at the University of Wisconsin-Madison. These careers can be understood by faculty members' personal accounts of career successes, supports and satisfaction, as well as the barriers they encountered and areas of dissatisfaction they reported. To attain these accounts, we asked interviewees two direct questions: *Do you feel your work has been recognized and supported at UW-Madison?* and *How happy or satisfied are you with the way that your career has evolved at UW-Madison?* We also asked participants whether they had ever considered leaving UW-Madison. This final question allowed for further elaboration and in some cases, qualification or contradiction, of the above two questions. It also provided another indicator of participants' feelings about and satisfaction with the environment at UW-Madison, and their own career and family satisfaction. For the most part, the interviewees conveyed a strong sense of satisfaction with their careers, and a desire to remain at UW-Madison. There were, however, a number of comments about barriers, difficulties, and some compelling reasons for considering leaving the University—including the failure of the University or community to meet the career or family needs of the interviewees.

Areas of Satisfaction

Support and Recognition for Work

When asked whether they felt their work had been supported and recognized at the University of Wisconsin, more than half of the participants responded affirmatively. The remaining interviewees felt either that they had not been supported or had received somewhat limited recognition. Most of the interviewees indicated that support and recognition was important to them, but only a small number suggested that it influenced their decision to stay or leave the UW.

The interviewees referred to a number of different forms that support and recognition took for them, including salary, departmental or University awards or nominations, increased responsibilities, appreciation from colleagues and students, and external awards and grants. In at least three cases, interviewees described "unsolicited" salary increases that they received. They interpreted these as or were told that these increases were preventative retention awards. Renee talks about her experience:

> *My chair, I guess he got money to retain faculty, got a chunk of money, and so he gave a huge raise, like a 10% raise—it was a chunk of money that was supposed to be used to retain people. And I had never asked for a retention package or gone elsewhere or anything, and he just said, 'I'm picking you to give you this money because I want you to stay here in Madison.' So that was huge!*

Among those that did not feel substantively recognized or supported, several women indicated that they did not directly seek out recognition or "ask for much." Furthermore, they had not conducted "self-promotion," compared to other colleagues, which may have yielded more recognition. Some women also described their work and their accomplishments as somewhat average, compared to other "research stars." When asked if her work had been supported or recognized, Jane responds:

Not really in any particularly overt way. No, and I think it's such a large pool. There are so many good people. I don't feel dismissed. I don't feel trivialized or dismissed, but I certainly see research stars and I am not one of them and I recognize that. And so in that sense that's reality and I've accepted it, you know.

Several women also pointed out that when recognition did come from within the University, it was either slow to come or came only after they had received external recognition, such as major national awards.

Nationally I've certainly been recognized. I've gotten lots of awards. So my colleagues nationally have gone out of their way to nominate me and I've gotten a lot of national recognition. But on the other hand, the department, while it did recognize me by putting me for one of these mid-career awards which I got, but that was done by some of my close colleagues in the department…So I don't think my research has been appreciated in the department.

In summary, a few of the female faculty interviewed for this study felt that their work had definitely been supported and recognized. They had even received unsolicited recognition. The opinions of others ranged from a complete lack of support and recognition to moderate or qualified recognition from within the University. One theme that was quite common among the interviewees and is supported by research was that female faculty often do not actively seek out recognition or reward, perhaps to their own detriment. Another theme that crossed the interviews was that the female faculty in this study considered support and recognition to come in a variety of forms. For example, while formal awards and conference invitations were considered forms of recognition and support, so too were appreciation of colleagues. Finally, as elaborated upon in the section below, while they appreciated recognition, most interviewees did not describe recognition for their work as a primary motivation in their reason to stay or leave the UW.

Colleagues

Several interviewees mentioned competent and affable colleagues as an important reason they were satisfied with their career and would likely remain at the University. Some interviewees specifically described interdisciplinary relationships with colleagues outside of their own department as essential to their ability to perform and enjoy their work. In one of these cases, an interviewee mentioned that she would have left because she was very unhappy with her department, but a cluster of intellectual, interdisciplinary colleagues kept her at UW-Madison. Jaclyn describes the affability of her campus colleagues:

I have excellent collaborators. You know the scientists here are really good and they're very nice people. They're not stuck up, they're not—they don't have egos that can't fit in the room, you know, so they are actually really nice and really good.

University 'Climate' or Environment

Using a number of different terms but generally referring to a similar concept, many interviewees reported that they were comfortable with the working environment or climate at the University of Wisconsin-Madison. Referring to the University, one participant said she would

stay because "I love the culture here." Another stated that she feels like she has a "very rich research environment" that allows her to flourish as a professor and researcher. Others echoed this idea in various ways, some referring to the collegiality issue described above:

> *I am happy to be here. I feel lucky to be here. I value my colleagues. I think if I have had any success, it's due in part to my colleagues and my interactions with them… just by being here in this atmosphere and stuff.*
> <div align="center">*****</div>

> *I think I really appreciate what I have here. I think it's unique, I really do. And not just within my department—I think the campus is—it's very high-quality research, but it doesn't have this cut-throat environment to it. I think it has a very humane pace to it.*

> <div align="center">*****</div>
> *UW-Madison has been a wonderful place to be. There's been a lot of flexibility. There are no huge impediments put up against working in an interdisciplinary atmosphere which is one of the things that I value and also just having the flexibility to do the editorship. The university and the department have let me do that. And the time—I tend to like to work on kind of odd hours. So there isn't this requirement or expectation that you be in your office from 8-5 everyday. So I have an office at home, I can work at home. I like working at home. And putting in odd hours. Being available at odd hours, it is not prohibited to do that. So just having the kind of flexibility.*

The Community of Madison and the State of Wisconsin

In addition to enjoying the University climate, some interviewees mentioned the city of Madison and the State of Wisconsin as desirable places to live. One woman commented that there was a relaxed work pace in the Midwest; others mentioned that Madison had many cultural opportunities. Commenting on why she would likely stay at UW-Madison, Ingrid mentions:

> *I quickly came to the conclusion that Wisconsin was a very good place for me to be. Both in terms of the university, the facilities, and the department, and also the state. I like the state very, very much. We quickly found Door County and became really enamored of our vacations in Door County. [Spouse] and I are opera and theater fans. So we had access to very good opera and theater in Madison, also Milwaukee, Chicago…So that's what's also kept us here.*

Good Quality Graduate Students

At least three interviewees suggested that high-quality graduate students were important in their career satisfaction and progress. One interviewee said, "we get excellent graduate students," and another asserted that, "the students in my lab are the best in the country."

Family Needs

The needs of other family members or family relationships were clearly important factors in interviewees' career satisfaction and inclination to stay at the University of Wisconsin-Madison. One woman mentioned that her extended family was moving to Madison soon, so she would then not consider leaving Madison, even though she had previously contemplated it. In the

context of discussing their career satisfaction and decisions to stay, several women alluded to or directly talked about the importance of their spouses' careers and/or career satisfaction. When Brenda was asked if she had ever considered leaving, she responds:

> *Um, no. Mostly because of my family. My husband's had his career here and everything. I'd probably, if I did not have a family, I definitely would probably consider it because I have had some other opportunities*

Another interviewee reported that she had stayed mainly for her children:

> *And I think if my children hadn't been my anchor than I would have left. Clearly I would have left at the time…but my children were the anchors and I couldn't without a retracted court battle and I was already in court over custody.*

Areas of Dissatisfaction

Resources and Salary

A few faculty interviewees described unhappiness with their own salaries and/or other resources and salaries on campus. These factors led at least some faculty to consider a departure from UW-Madison:

> W*e're not getting - we're not getting salaries, we're not getting the graduate support that we need for the graduate students. Our fellowship program is gone…*

> *******
>
> *I've watched some colleagues go. Just recently or think about going, and I personally don't think I will go, but I can start to see some of the attractions and a lot of it has to do with resources. I mean if you get an offer at some place and they're going to hand you a technician you know, and a grad student stipend along with something else then come on, you know…*

Hostile Departments

In a small number of cases, interviewees remained quite dissatisfied with their home department and described hostile and/or biased treatment. These interviewees reported some satisfaction with their actual work and relationships with colleagues on campus, but were considering departing the University due to their experience within their department.

Uncertainty about Tenure

At least two interviewees remained uncertain about their tenure prospects. In other cases, their spouses were not tenured yet. In these cases, the interviewees did not prefer to leave, but were prepared to do so if they did not achieve tenure.

Family Needs

Two women interviewees expressed a strong desire to work less than full-time so they could spend time with their families. One interviewee, in particular, felt quite strongly that her career

happiness had been seriously impeded by her inability to work part-time and be with her infant child.

> *On one hand I like my work, but it's also hard for me to see other women who are home more with their kids. I live in a neighborhood where so many of the moms are home, but I also want to work - and so it would be nice if I could work more part time. You know might be like about eighty percent but there really aren't many faculty that are part-timers…*
>
> <div align="center">*****</div>
>
> *But I also need to be a mom and I need to be able to go part time and have the ability and not feel anxious about it, so if I can bring that all together I think you know I'm going to be able to do this and survive in academics.*

As mentioned above, several interviewees referred to their spouses' career as an important factor in whether they would stay or depart the University. In fact, approximately one-third of the women were in dual academic-career households, so spousal tenure was an important issue. One woman stated, "Well if my husband doesn't get tenure then I would have to [leave]." Another interviewee who was up for tenure said that whether she stayed depended in part upon her spouse's tenure case. She mentioned some of the difficulties:

> *It's hard because I'm much more marketable than he is, and that's always very difficult I think, at least for many men. For him it's very difficult. We came here because I got recruited here. And so we don't talk about it very explicitly because it's…you know he's said that if he didn't get tenure he wouldn't want to stay here. And if he didn't get tenure and I did then we would probably leave.*

It is impossible to measure whether career satisfaction and desire to stay at the University changed among these interviewees over the past four years. Despite these limitations, we can glean several lessons about what matters to female faculty and the environment at the University of Wisconsin based on the pervasive themes described above and in the first interviews. These themes include the ability to balance work and family needs, and the importance of collegial relationships and overall climate in shaping women's inclination to stay at the University of Wisconsin-Madison.

In summary, participants in the follow-up interviews seemed mainly satisfied with their careers and interested in remaining at the University of Wisconsin-Madison. However, there was no one single combination for success and satisfaction; each interviewee had a unique mix of personal and professional factors that shaped her feelings and decisions.

WISELI Research: Satisfaction and Attrition Results from Surveys, 2003 and 2006

Satisfaction

Overall job satisfaction has been very stable over time. There are very few group differences, and very few changes from 2003. Overall satisfaction with both job and career is fairly high among both men and women faculty—over 80%.

Table X-1: Science faculty's reported satisfaction with UW-Madison. [‡]

	N	Satisfied With Job		Satisfied with Career Progression	
All Faculty in the Biological & Physical Sciences	652	89.1%		85.4%	
Women	157	88.5%		81.5%	
Men	495	89.3%		86.6%	
Faculty of Color	52	90.4%		82.7%	
Majority Faculty	600	89.0%		85.6%	
Department Chair	43	93.0%		95.4%	*
Not Chair	609	88.8%		84.7%	
Non-Mainstream	230	83.0%	*	76.5%	*
Mainstream	405	92.1%		89.9%	
Attended Hiring Workshop	59	88.1%		88.1%	
No Attendance	588	89.3%		85.2%	
Any WISELI Participation	122	90.2%		87.7%	
No WISELI Participation	525	89.0%		84.9%	
Departmental participation in:					
Climate Workshops	247	87.9%		83.8%	
No Participation	405	89.9%		86.4%	
Hiring Workshops	433	89.6%		86.3%	
No Participation	219	88.1%		83.6%	
Celebrating Grants	153	90.9%		86.8%	
No Participation	499	88.6%		85.0%	

‡ Responses to questions 22 and 23 of the 2006 *Faculty Worklife* survey; reported as fraction of respondents reporting that they are *very* or *somewhat satisfied* as compared to *somewhat* or *very dissatisfied*.
* T-test between groups significant at *p*<0.05; no adjustments made for multiple comparisons. Turquoise highlighting indicates longitudinal increase is statistically significant at *p*<0.05.

The major factors contributing to and detracting from satisfaction at UW-Madison do not vary considerably by group. Overwhelmingly, faculty cite "colleagues/collaborators" as the top factor contributing to their satisfaction. "Students", "autonomy", "good research opportunities", and "collegiality" all are factors that are in the top 3 for many groups, but these are usually far behind "Colleagues/collaborators" as a positive factor. Slightly more variability is seen in the factors detracting from satisfaction. While one of these factors: "low salary", "poor resources", and "lack of support" make the top three list for each group, the top factor is often different. Most

noticeably for women, the top detractor from satisfaction is "colleagues," which was also the top positive factor for women; the quality of collegial relationships can make or break the satisfaction of women at UW-Madison, it seems. Work/life balance issues also enter in the top detractors for women, as they cite "high demands" as detracting from their job satisfaction; no other group cited this reason. Faculty of color cite "climate" as a detractor, and non-mainstream researchers cite "isolation" as a detractor, so climate factors rank highly as an area that detracts from the job satisfaction of these groups as well.

Table X-2: Factors that science faculty most frequently cited as *detracting most* from their satisfaction at UW-Madison. ‡

			Number of Mentions[42]
All Biological & Physical Science Faculty			
	1st	Poor resources (money/support)	87
	2nd	Low salary	61
	3rd	Lack of support from state/legislature	58
Women			
	1st	Colleagues	17
	2nd	Poor resources (money/support)	16
	2nd	High demands, "work load"	16
Faculty of Color			
	1st	Low salary	8
	2nd	Poor resources (money/support)	5
	3rd	Climate	4
Department Chair			
	1st	Lack of support from state/legislature	10
	2nd	Budgetary issues	7
	2nd	Administration	7
Non-Mainstream			
	1st	Poor resources (money/support)	25
	2nd	Low salary	22
	3rd	Isolation	19
Attended Hiring Workshop			
	1st	Poor resources (money/support)	13
	2nd	Lack of support from state/legislature	9
	3rd	Administration / Colleagues (tie)	6
Any WISELI Participation			
	1st	Poor resources (money/support)	22
	2nd	Lack of support from state/legislature	15
	3rd	Administration / Colleagues (tie)	12
Departmental Participation in Climate Workshops			

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[42] A respondent may mention more than one reason for any given question.

1st	Poor resources (money/support)	42
2nd	Low salary	25
3rd	Lack of support from state/legislature	22
Departmental Participation in Hiring Workshops		
1st	Poor resources (money/support)	61
2nd	Lack of support from state/legislature	40
3rd	Low salary	33
Departmental Participation in Celebrating Grants		
1st	Poor resources (money/support)	25
1st	Lack of support from state/legislature	25
3rd	Administration	12

‡ Responses to question 27 (open-ended item) of the 2006 *Faculty Worklife* survey.

Faculty Attrition

Women in the physical sciences have much higher rates of leaving the UW compared to men, even if the data are "smoothed" across all of the years tracked.

Percent Resigning from UW-Madison
Physical & Biological Science Faculty Only

PS-Women   PS-Men   BS-Women   BS-Men
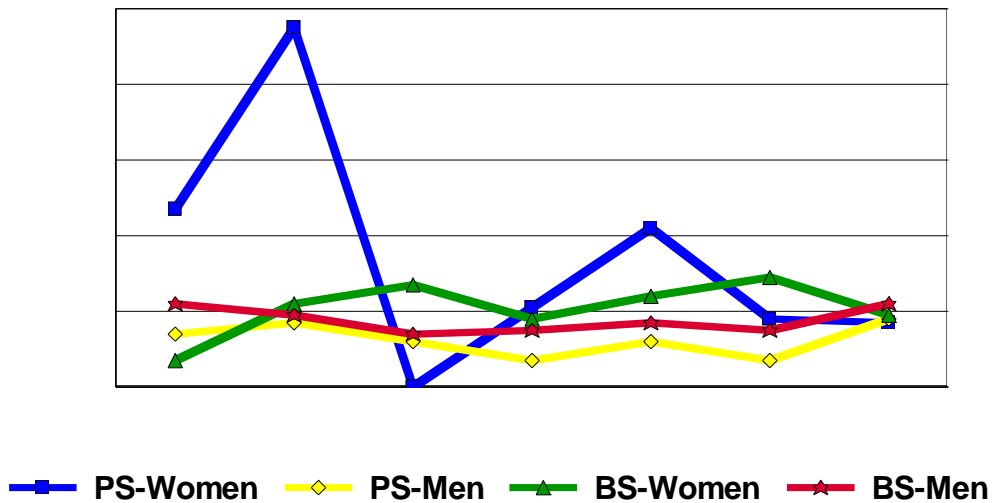
Women in BS also have higher rates of attrition than their male peers (see Table X-3). Interestingly, trends in the data show a decrease in attrition of female faculty since 2000.

Table X-3: Attrition of UW-Madison faculty by gender and division, 2005-2006.[‡]

		Headcounts (% of faculty)		
		Retired	**Resigned**	**Total**
Total		71 (3.2%)	61 (2.7%)	2219 (5.9%)
	Women	9 (1.5%)	20 (3.2%)	617 (4.7%)
	Men	62 (3.9%)	41 (2.6%)	1602 (6.4%)
Physical Sciences				
	Women	0 (0.0%)	1 (1.7%)	58 (1.7%)
	Men	14 (3.1%)	8 (1.8%)	446 (4.9%)
Biological Sciences				
	Women	4 (2.6%)	3 (1.9%)	156 (4.5%)
	Men	24 (4.4%)	12 (2.2%)	545 (6.6%)
Social Studies				
	Women	4 (1.8%)	11 (5.0%)	220 (6.8%)
	Men	11 (3.0%)	16 (4.3%)	370 (7.3%)
Humanities				
	Women	1 (0.5%)	5 (2.7%)	183 (3.3%)
	Men	13 (5.4%)	5 (2.1%)	241 (7.5%)

[‡]From the IADS appointment system, Feb. 2006. Table adapted from Margaret Harrigan.

Using the survey data, it appears as though there are significant declines in the percentages of faculty who say they have ever considered leaving, or have seriously considered leaving. It is very important to note that the wording of the questions changed from 2003-2006. In 2003, we asked whether the faculty member had "ever" considered leaving, while in 2006 we asked if they had considered leaving "in the last three years." This change in the question certainly explains

the large decrease in those who say they have considered leaving, so very little can be learned from this item.

Table X-4: Reported incidence and intensity of science faculty's consideration of leaving UW-Madison.[‡]

	N	Have Considered Leaving		Seriously Considered Leaving**	
All Faculty in the Biological & Physical Sciences	641	54.3%		23.4%	
Women	156	61.0%		23.1%	
Men	486	52.2%		23.5%	
Faculty of Color	52	55.8%		25.5%	
Majority Faculty	589	54.2%		23.2%	
Department Chair	42	52.4%		14.3%	
Not Chair	599	54.4%		24.0%	
Non-Mainstream	228	61.3%	*	28.1%	*
Mainstream	400	49.8%		20.7%	
Attended Hiring Workshop	59	65.5%		30.5%	
No Attendance	578	53.3%		22.8%	
Any WISELI Participation	121	66.7%	*	22.3%	
No WISELI Participation	516	51.6%		28.9%	
Departmental participation in:					
Climate Workshops	245	57.2%		24.9%	
No Participation	398	52.5%		22.4%	
Hiring Workshops	426	53.1%		21.8%	
No Participation	216	56.7%		26.4%	
Celebrating Grants	150	48.7%		22.0%	
No Participation	492	56.0%		23.8%	

[‡] Responses to questions 28 and 29 of the 2006 *Faculty Worklife* survey.
* T-test between groups significant at *p*<0.05. Highlighting indicates significant longitudinal decrease where yellow and pink indicate change is significant at *p*<0.05 and *p*<0.10, respectively.
** Fraction of faculty reporting they had *very* or *quite seriously* considered leaving vs. those reporting that they had *somewhat* or *not very seriously* considered leaving.

Faculty members who said they had considered leaving the UW-Madison at all in the past three years were asked why they wanted to leave, and why they stayed. "Family" and "colleagues/collaborators" were among the top reasons for staying among all the groups studied. Some variation in lower-ranked reasons for staying occurred, but with the low Ns, these might not be of great importance. The reasons for leaving UW-Madison seemed to universally be "low salary;" this was by far the top-ranked reason for each group. Women and non-mainstream researchers cited climate-related reasons as next most important ("don't feel appreciated," "climate"), and faculty of color cite the lack of resources ("poor resources," "facilities/equipment") as important reasons for wanting to leave UW-Madison (see Table X-5).

Table X-5: Factors that science faculty most frequently cited as *contributing* to their consideration to leave UW-Madison. ‡

			Number of Mentions[43]
All Biological & Physical Science Faculty			
	1st	Low salary	86
	2nd	Poor resources (money/support)	37
	3rd	Satisfaction/don't feel appreciated / Tenure and promotion (tie)	35
Women			
	1st	Low salary	14
	1st	Satisfaction/don't feel appreciated	14
	3rd	Climate	10
Faculty of Color			
	1st	Low salary	10
	2nd	Poor resources (money/support)	4
	2nd	Facilities/equipment	4
Department Chair			
	1st	Low salary	6
	2nd	Tenure and promotion	4
	2nd	Wanted change/new opportunities / Lack of support from state legislature (tie)	4
Non-Mainstream			
	1st	Low salary	23
	2nd	Satisfaction/don't feel appreciated	19
	3rd	Tenure and promotion	17
Attended Hiring Workshop			
	1st	Low salary	9
	2nd	Poor resources (money/support)	8
	3rd	Position offered elsewhere	5
Any WISELI Participation			
	1st	Low salary	13
	2nd	Poor resources (money/support)	10
	3rd	Position offered elsewhere	9

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[43] A respondent may mention more than one reason for any given question.

Departmental Participation in Climate Workshops		
1st	Low salary	38
2nd	Poor resources (money/support)	17
3rd	Position offered elsewhere	16
Departmental Participation in Hiring Workshops		
1st	Low salary	49
2nd	Position offered elsewhere	26
3rd	Poor resources (money/support)	25
Departmental Participation in Celebrating Grants		
1st	Low salary	20
2nd	Position offered elsewhere	11
2nd	Tenure and promotion	11

‡ **Responses to question 30 (open-ended item) of the 2006 *Worklife* survey.**

WISELI Issue Study #2: Why Women Leave

The second issue study identified by WISELI sought to examine the reasons why women faculty in the sciences and engineering leave UW-Madison. Based on the interview data collected from women who left the UW, WISELI hoped to discover ways to retain more women. The results from interviews with nine women faculty who left the university reveal two central themes: negative departmental climate and work-life balance issues. The women faculty consistently described specific negative incidents from their personal experience and how those incidents affected their decision to leave the UW. Further, competing and often conflicting demands between rigorous professional responsibilities and those of their families provided further justification for their decisions.

Findings

Of the nine women who were interviewed, seven continued in faculty positions at other universities, one took a position as a Lab Researcher in industry, and one took an academic staff position at a university. When asked, there were a number of reasons that women faculty in the science and engineering departments identified to describe why they left. Essentially, the information that emerged was clustered around the central themes of poor departmental climate and work-life balance issues.

Dual-Career Issues

Interestingly and unexpectedly, interviews with a few of the women revealed the situation that their husbands were having within their own departments, which ultimately prompted them to seek positions elsewhere. In these instances, the wife made the decision to leave the university, as well. Some of these experiences include poor communication, biased allocation of resources, inadequate mentoring, feelings of isolation, and arbitrary performance and promotion guidelines. Even more serious, a couple of women described legal and ethical issues such as not honoring contracts, intentional sabotaging of careers, violent departmental meetings, co-workers serving jail sentences for charges of fraud, and fraternization with students.

Susan describes her husband's difficult experience:

> *The main reason that we left was not because of my experience, but because of his experience and because his experience was just opposite of mine. And so it was a family decision, that even though mine was great, I wasn't going to stay and have him leave and take another position in a different state.*

She continues:

> *His very first faculty meeting, some of the professors in that meeting, for the lack of a better term, didn't know how to control their anger about a particular issue and began cursing and someone [became aggressive] …and after that, he didn't go to faculty meetings anymore, which was not a good thing politically of course… In the department, they did a lot of partying and drinking and there were some instances where some of the professors… would encourage their students to go to bars with them. And my husband was really uncomfortable with that. And there were just some other things where he wasn't very comfortable with his colleagues in terms of the things that they wanted to do and how they were conducting themselves, because he had one view of what a professor was supposed to be and it wasn't working.*

Susan's husband and others also dealt with unethical behavior, as described in the following two examples:

> *He had another professor who wanted to put him on a grant and worked with him to get his work on the grant, but then submitted the grant and never acknowledged him.*
>
> <p align="center">*****</p>
>
> *It's really a shame, because you have professors that are just terrible teachers, don't reach out, have no rapport with the students, but because they are bringing in great money, they're there… There was a significant amount of [fraternization] with male professors and [department] students and that's overlooked because they are bringing in money.*

Subsequently, the women faculty emphasized the importance for departments to create optimal climates for both members of a couple.

> *I think just if there is a spouse situation that things have to go right in the spouse's department too, because in a situation like that, well in a situation like ours, I feel like they lost two people…*
>
> <p align="center">*****</p>
>
> *And so we never went in thinking, 'okay well you know we're just going to do this part-time and we're not going to put in our full, our all in it.' I put my all in it. I guess the message is that the spousal support has to be there. If the spouse is also a faculty member that they have to have mentors also, even if they come from outside of the department,*

and there has to be some things that are in place for his success too. I think that would be the main thing, to just look at both sides because many times one side affects the other.

*****

I think that my department tried to support me more, which was very helpful, but he just wasn't getting anything on his side. And I think that again the final thing came down to… I think their communications just broke down—there weren't conversations. There were mutters, 'no you can't do this and you're not going to be renewed if you do things like that'. There were legal issues and I think at that time, I was upset for him and he just wanted to leave. And I was like, 'okay, should I sue them?' And that was one of the things that had come up, and it was just one of those things like, 'let's just get out of here.' So, there were just a lot of misunderstandings and things that just didn't go right and not enough support from other people who were willing to understand.

Climate for Self

Poor climate emerged at the departmental level and manifested itself in many consequential ways. The women we interviewed noted the apparent fragmentation within departments. This fragmentation was exacerbated by poor communication between and among faculty members, as well as between the department chair and the faculty. Perceptions of a poor departmental culture were characterized as colleagues berating other colleagues, an atmosphere of the "golden boys" versus "the others," and professionals not being treated with respect by their department chairs. Any attempts at change in these situations were seen as temporary fixes or patches instead of changing big-picture problems. The following women share sentiments about their departmental experiences.

… The fact that the department was really fragmented and the chair was actually not able to administer, administrate the department well, which was very demoralizing.

*****

I felt that I did not fit in my home department and at the time, the department was pursuing a culture of mediocrity that I, and a number of other faculty, found unacceptable.

Laura describes her feelings of helplessness in regard to her departmental home:

I used to come back from department head meetings, or department meetings, and I'd sit in my office and cry for a while, it was just awful. Because the climate was so chilly. I felt like there was no one in that room that was someone I could talk to about these very strange problems and figure out a solution. It was such a ludicrous situation, it was hard for me to go and talk to anyone.

A few women also described an overall lack of departmental support. This was frequently discussed in terms of wishing investment in the person existed "up front," so that not only would this benefit the person, but the department, as well.

I think upfront they should have thought about how they hired me. I think they hired me to hire a woman in the department. And they didn't think about how I was really going to be integrated in... I was going to have a research group that I worked with or are they just hiring this woman faculty member to hire a woman. I just don't think they gave much thought about it, they saw me as a potentially successful faculty member, but that was it. They were going to just let me go. I understand that you have to prove yourself and all of that, when you're an assistant professor. But I think there's some responsibility to integrate you in the department and I just didn't see that happening. And I think, again through that integration, there would have been this support structure that would have been built in and I think that would have been good.

<center>*****</center>

But when you bring people in and you make the effort to be on these committees to recruit the best you can and you have a person who's obviously applied and wants to be there, you have to do everything you can to keep them. Because that's the whole point. A lot of money was invested in me and it's gone and they'll never get that back. And they can't hire anybody else to take my place. So if you want to keep this person because you think they are obviously the best person for that position, then you need to try to— whoever, in that department or the head of the department of whomever is working with them, really every everyone in that department needs to make some kind of conscious effort to mentor that person to make sure that they make it. Because if all these other people are tenured, they've made it, and you know, whatever it takes to do it you have to instill in this little fledgling until you wean them and they're on their own. But you've got to do everything you can.

A number of the women faculty discussed their concern with the lack of formal and informal mentoring once they had arrived here on campus. Their lack of mentoring left them confused and uncertain about the amount and types of publications they should be producing, advice and procedures on the pursuit of prestigious grants, types of innovative research directions and the protocols for promotion and tenure. The issue of guidelines for the promotion and tenure process was one that was talked about frequently. Some women noted a lack of understanding about the promotion and tenure process, arbitrary departmental performance and promotion guidelines, and blatant lack of adherence to documented departmental performance and promotion guidelines. In one particular instance, a faculty member was recruited with the promise (and a contract letter) of promotion, which did not happen during her time here. She describes this experience and its impact on her decision to leave:

I left because my husband took a job in [city]. However, there were a few things that made it easier to leave. Those things included—when I first came [to UW-Madison] I had negotiated with the chair to be promoted to full professor and even the appointment letter said that I would be a professor, but then when I got there they said 'oh, we have to go to the committee and you have to be an associate professor.' That never should have happened. And then they even changed the letter and wanted me to initial it. And I said, 'no way, I'm not going to do that.' It was poorly handled by the chair.

In her opinion, the following needs to happen:

I think if you really want to recruit and retain, you have to have people in the department nurture them and really stay on them. Because basically what, pretty much every university is about bringing in money— publish or perish, and that's the bottom line. And if you have to write a book in African-American Studies or if you're in biochemistry or whatever, you have to be really mentored to make sure you publish in the right journals that are looked at. That if you need to get NSF or NIH or USDA funding, and you need to publish in such-and-such refereed journal, you really have to be mentored to make sure you are getting your 1 to 2 publications a year and you bring in some good money.

Stephanie agrees and shares how her lack of mentoring affected her faculty performance and promotion process:

I had a mentoring committee—the head of the department and three other faculty—an associate dean and then two in the department that were all tenured obviously. And I attended a few of the tenure meetings that they had for campus-wide, primarily women that are starting, and I had an outside mentor. What the problems is—the department did not follow faculty policies and procedures. And I really wasn't so cognizant of that, that none of my meetings were documented. So when this went before the executive committee, there was no documentation of anything. Not even minutes from my mentoring meetings. And I just think that for me personally, I should have probably been more cognizant of that because that was extremely important and that's a violation of FPP.

She continues:

And I believe the head of the department is aware of the [violation of FPP] because he has been called into the Provost's office specifically for that reason and subsequently letters have gone out to every head of the department on campus that this should never happen. That you do have to follow FPP and there has to be documentation of mentoring meetings.

Another climate issue was reflected in how departmental resources were allocated. Some faculty members felt that there was a clear bias in the way that resources were distributed. These resources included, but were not limited to, allocation of raises, support from staff and students, and laboratory space. In the following statement, Beth discusses how differing types of research were privileged and consequentially rewarded within the department:

I felt that the leadership in my department wasn't great. My research was more theoretical, at the theoretical end of [discipline], and my department valued more applied research and didn't particularly value interdisciplinary research. Those kind of biases just sort of showed themselves all the time when it came to giving resources, came to giving students, came to giving raises… anything.

Kelly describes her discomfort with the inconsistency in procedures when petitioning for needed additional space:

When it became clear that both the quality and quantity of space I was allocated were completely insufficient, given the size and level of activity of the program, I requested additional space. I was required to present a 'case' to the faculty that involved toting up lots of statistics in a very un-modest way. I found this quite humiliating, and a deviation from other space allocation decisions involving other faculty at about the same time. I was given one additional small room…this was still far insufficient. When it came to the need for more space, it seemed easier to leave.

In addition to the lack of departmental support, another sentiment that frequently emerged in the women's stories was the feeling of isolation. The faculty talked about being ignored within their own departments, feeling like outsiders, and feeling like they didn't fit. In some instances, women described their actual physical isolation based upon where their offices or laboratory spaces were located. Many expressed the desire for connection with others in their department, as well as with other women scientists across campus. Following are just a few of the sentiments of isolation:

And I was in the [NAME] science, which is one of the two areas that those two groups work in, and I was the only, I think there were only two other faculty members, none of which had an active research program that weren't in one of those two groups. And I tried to sort of work into those groups and I just wasn't welcome. There were just men in these two groups and I just wasn't welcome in either group. And so I felt really, really isolated and that's probably…the isolation combined with the harassment, were the two things that led me to just leave.

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I went straight to UW from graduate school. I would like to say that the department was supportive, but I am not sure that they were especially so. I worked very little with other current faculty…I was sort of ignored the first few years by most of the current faculty. I was always outside of the major department groupings.

Work-Life Balance Issues
The final issue that the women faculty identified was the difficulty in balancing the requirements of a rigorous research career and competing home-life demands. Some managed by attempting to be creative with their academic and research schedules, but many times they felt this was met with scorn from others within their departments. A few women discussed how they wrestled with professional and family demands.

I also, we have three children, all teenagers now and I was looking for a less stressful life than being a faculty member. I was working on quite a few committees and not just at the university but on review panels for NSF and NASA, so I was traveling for that. And, teaching and trying to head a research group by myself. I had two post-docs, and three graduate students and it was just kind of chaotic. And I felt like going back to just doing research, would be better for my family and [would be] fewer hats for me to wear. And in fact, it has worked out that way.

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> *So, first I was commuting to the [East coast] and then I was commuting to the [West coast] and after 3 years we decided to get married and also at that time he's doing pretty well at [other university]. It's pretty clear that he'll be tenured. So either I want my family or I want my career, and at that time, I decided that I want a family first.*

Some of the women faculty reported leaving for various other reasons. These included pursuing a career track in university administration, opportunities for greater collaboration and interaction, higher salary, and other institutional offers that provided more flexibility between teaching and research and priorities at home. These reasons were not the impetus for leaving. Typically, either their own stress or the climate in their spouses' departments contributed to their decisions, as well.

Interestingly, prior to their departure, most of these women were presented counter-offers to stay at the UW. By that time, many felt that it was a classic example of "too little too late." Furthermore, the overarching issues of climate still loomed.

> *I almost stayed, but in the end I left. I just felt like even though people really worked hard to make it attractive for me to stay—they offered to hire more people in my research area, they offered me a bigger salary, which I didn't necessarily care about although I think that if they hadn't I would have felt slighted. But they did, they came through, they offered me everything. But in the end, things would happen and I would realize that, if I stayed, two months later, I'd be back to square one.*

> *******
> *And even though UW offered me a huge, great retention package—the dean went way beyond his means to offer me all this stuff before I left. I knew that I would have to walk down the hallway and the climate was too chilly for me to be there, and so money just wasn't worth it in the end.*

The interviews to discover why female faculty leave the university demonstrate that the issue of negative climate seems to be interwoven with the experiences of dually-hired couples. It appears from the interviews that these hires are a very attractive means for recruiting professional couples to campus. According to the results of the dual-career study, the university is successful in attracting these couples. Once the couple is here however, both individuals are not necessarily happy. Surprisingly, approximately half of the interviews with women faculty who left revealed that their husbands were not having positive experiences within their departments, which ultimately prompted both to seek positions elsewhere. In these instances, the wife made the decision to leave the university, which is of particular concern since many of these women were successfully recruited into a science or engineering department.

In summary, there appears to be a discrepancy between recruiting couples to campus and actually retaining them. This disconnect influences the decision for either or possibly both members of the couple to leave the university. In these instances, if the husband was unhappy in his department, but the wife content in hers, she ultimately made the decision to leave the university with him. The positive experiences with dual-hire recruitments seem, for some, to have been overshadowed by the spouse having a negative departmental climate experience.

Summary: Satisfaction and the Decision to Stay or Leave

Results from both the in-depth interviews with female faculty and the climate surveys indicate that approximately 80% of the faculty are satisfied with their career and the way they have evolved at UW-Madison. At the same time, women in the physical sciences have much higher rates of leaving the UW compared to men, even if the data are "smoothed" across all of the years tracked. Women in the biological sciences also have higher rates of attrition than their male peers. Interestingly, trends in the data show a decrease in attrition of female faculty since 2000.

A majority of interviewees were inclined to stay at the UW-Madison. Some had already considered leaving or had received offers from other universities, but had chosen to remain here. In two cases, participants been able to change the departments in which they worked, thus facilitating their desire to and ability to remain at the UW-Madison. In only one or two cases were the participants considering leaving academia altogether.

Many interviewees provided specific career reasons for remaining here and referred to their overall job satisfaction. A few mentioned certain career opportunities that would entice them elsewhere, such as opportunity to have budgetary authority or a research fellowship. Several interviewees also mentioned family as an important factor in both why they were satisfied and/or why they would probably stay at UW-Madison, a repeated theme from the 2002 interviews. In the same vein, among the interviewees that were actively considering leaving or somewhat dissatisfied, family was often described as a motivating factor—for example, if a spouse did not get tenure or an opportunity arose to work part-time and spend more time with their children. Finally, one interviewee specifically mentioned WISELI, its networks for women, and its efforts to make positive campus change as a motivating factor to remain at the UW-Madison.

Survey results show that major factors contributing to or detracting from satisfaction at UW-Madison do not vary considerably by gender. Overwhelmingly, faculty members cite "Colleagues/collaborators" as the top factor contributing to their satisfaction. "Students," "Autonomy," "Good research opportunities," and "Collegiality" all are factors that are in the top three for many groups, but these are usually far behind "Colleagues/collaborators" as a positive factor. Slightly more variability is seen in the factors that detract from satisfaction. While each of the following factors—"Low salary," "Poor resources," and "Lack of support"—make the top 3 list for each group, the top factor is often different. Most noticeably for women, the top detractor from satisfaction is "Colleagues" which was also the top positive factor for women. It seems that the quality of collegial relationships can make or break the satisfaction of women at UW-Madison. Also, work/life balance issues enter in the top detractors for women, as they cite "High demands" as detracting from their job satisfaction; no other group cited this reason.

Faculty members who said they had considered leaving the UW-Madison at all in the past three years were asked why they wanted to leave and why they stayed. "Family" and "Colleagues/collaborators" were among the top reasons for staying among all the groups who responded. The reasons for leaving UW-Madison seemed to universally be "Low salary;" this was by far the top-ranked reason for each group. Women and non-mainstream researchers cited climate-related reasons as next most important ("Don't feel appreciated" and "Climate").

To delve more fully into why female faculty in the sciences and engineering chose to leave the UW-Madison, interviews were conducted with nine women who left the university in the previous five years. Of the women who were interviewed, seven continued in faculty positions at other universities, one took a position as a Lab Researcher in industry, and one took an academic staff position at a university. The results identified two central themes—negative departmental climate and work-life balance issues. The women faculty consistently described specific negative incidents from their personal experience or their spouses and how those incidents affected their decision to leave the UW. Further, competing and often conflicting demands between rigorous professional responsibilities and those of their families provided further justification for their decisions.

CHAPTER XI: WISELI-FUNDED CAMPUS RESEARCH

In the original proposal, [44] two research studies were to be funded by WISELI and conducted by two faculty members and a graduate student at UW-Madison. These studies include:

> **Discourse Analysis of the "Ignoring-my-ideas" Phenomenon** - Professor Cecilia Ford, whose work is in discourse analysis, will examine whether and how the "ignoring-my-ideas" phenomenon described almost universally by women faculty can be documented in naturally occurring professional encounters. This work will involve observation, videotaping, transcription, and analysis. The analytic method involves rigorous structural and sequential mapping of the interactions and contributions of participants, with attention to verbal and non-verbal aspects of the encounters. Fundamental to such analysis is the fate of topics: the introduction, uptake, and development of ideas. In an effort to reduce bias, gender of participants will not be the initial focus of the analysis. However, if the participants themselves identify gender in their conversation, this will feed into the initial analysis. After mapping, the data will be inspected for the role of gender and the potential sources for what has been experienced and reported as marginalization in women's interactions in academic environments.

> **Ethnographic Study -** The ethnographic study will use interview and survey data from the baseline study to determine key indicators of climate in each of the 6 colleges/schools. It will then investigate these key indicators using qualitative methods and participant observation. The ethnographic study will provide the Leadership Team with descriptive data useful for building an aggregate measure for climate that will be entered into the statistical model, prioritizing future interventions, and designing interventions that are meaningful to women in science and engineering. The work will involve: 1) participant observation at several key junctures, e.g., faculty meetings, classes, thesis defenses, and other rites of passage; 2) participant observation in laboratories and working spaces, where everyday interactions often reflect and produce gendered inequalities; and 3) informal open-ended interviews with male and female faculty to augment baseline year 1 data and to gain greater understanding of competing views that emerge in sites observed. (Professor Amy Stambach and graduate researcher Ramona Gunther to conduct this study.)

The Ethnographic Study and the Issues Studies will be conducted in interaction. The Ethnographic Study will provide descriptions of two endpoints along a continuum, between which data gathered from the Issues Studies will be used to qualify contrasting scenarios. Procedurally, the Ethnographic Study will investigate a core set of issues holistically and "deeply." Building on existing research that demonstrates that despite discourses of gender neutrality in scientific settings women continue to experience gender-differentiating practices and interactions that are restricting the Ethnographic Study will examine the degree to which the organizational structures and divisions of labor within departments, in laboratories, in instructional settings, on grants, and in research collaborations and initiatives, contribute to the production and reproduction of career-impeding gender schemas and hierarchies. In order to help the Leadership Team understand how gender is objectified organizationally, the Ethnographic Study will examine women and men in interaction. In coordination with the

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[44] WISELI Grant Proposal (2001), pp. 8-9.

ethnographic study, an analysis of language in interaction will be implemented. Two departments will be included in this component study. We will look for both strategies of inclusion as well as interactional patterns, which may lead to problematic phenomena, or the perception of them. The findings of the discourse analysis will feed back into other levels of the ethnographic study, enriching the description of the social situation of women in science and engineering at UW-Madison, and suggesting directions for future investigation during subsequent years.

Whereas the linguistic component conducted by Ford will observe how people communicate through speech and gesture, the Ethnographic Study will observe how gender is structured into the use of physical space and the division of labor. It will examine women's and men's differential use of space and time, their resource use and allocations, and it will observe how people aggregate by gender and other identifying markers. In focusing on women's and men's gendered interactions, the Ethnographic Study will broaden the scope of "gender" beyond its reference to half the population and will directly inform the Leadership Team's efforts to create systemic and lasting interventions that help women *and* men develop techniques for increasing women's impact in the fields of science and engineering.

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Summaries[45]

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The WISELI Discourse Study: Women Talking in Workplace Meetings
Given WISELI's mission of support the advancement of women in science and engineering, the discourse analytic component of our research focused on women's participation in and contributions to meetings in science, engineering, and in other professional domains where women have been, and still are, underrepresented. The study was prompted in response to women's recurrent that their "ideas are ignored." The primary researcher, Cecilia Ford, began by analyzing the language of the proposition itself:

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"Women's ideas are ignored."

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From a semantic and syntactic perspective, this proposition formulates women not as actors or agents but as having ideas which others, the true all-important actors, ignore. To focus the research project on discovering how this "ignoring" process works would be to reinforce the stereotype that women are primarily acted upon. Our choice has been to contest such depictions and to instead draw attention to women as actors or agents affecting their worlds. While there is much research on biases against women's success, what we attend to in the WISELI discourse study is ways in which women actively participate in interactions in professional workplaces. We document ways that women speak up, claim the floor, expand their speaking turns, and successfully gain the uptake of colleagues. Therefore, the driving proposition has been:

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"Women gain and use the floor in workplace meetings."

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This proposition is taken up in the research question that has guided the project:

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"How do women gain and use the floor in professional workplace meetings."

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[45] The following summaries were provided by Drs. Ford, Stambach, and Gunther, respectively.

Through this question, we highlighted the fact that women are agents, and our fieldwork and analyses are able to uncover fundamental communicative practices that women already employ as they participate in professional workplaces traditionally and currently dominated by men. The concentration has thus been on what women do rather than what is done to women, although we have made no attempt to downplay any instances where women's contributions appear to be slighted.

The data collection concentrated on the academic workplace, and over a 3-year period, we videotaped meetings of faculty, administrators, graduate students, and staff in a variety of meeting settings at a major research university in the U. S. As we gained feedback in the process of sharing our on-going project and its initial findings, we became convinced that the research would have wider relevance were we to augment the data with meetings in non-academic settings. To that end, we videotaped meetings in three other workplaces, an engineering group at a public utility agency, a staff meeting at a church (headed by a woman, who also serves as the parish priest), and a meeting of the board of directors of a statewide non-profit agency. The entire collection includes 22 hours of meeting interaction in workplaces where women hold positions traditionally associated with men. In addition to the 22 hours of videotaped meetings, we interviewed women from each setting to gain a better sense of their concerns and experiences as they have moved into professions where men have historically and do currently predominate.

The project has involved four years of data collection: videotaped meetings and audiotaped interviews. It has also included consultations with leading feminist discourse analysts internationally. On-going fieldwork and analyses have contributed content to scholarly presentations by Cecilia Ford and her collaborators for the International Gender and Language Association, the International Association for Applied Linguistics and the International Conference on Conversation Analysis. The study has also informed presentations to the wider university community, including a Roundtable for Faculty and Staff, a WISELI Seminar (open to the entire UW community), a presentation for the Center for Women's Health (UW Madison).

In addition to disseminating findings in conferences and community presentations, Cecilia Ford has contributed a chapter to a forthcoming volume, *Why Do You Ask?: The Function of Questions in Institutional Discourse* (Oxford University Press). She is also completing a book from the research, contracted to be published by Palgrave-Macmillan and provisionally entitled, *Women Talking in Workplace Meetings: Getting and Using the Floor.*

Women Talking in Workplace Meetings begins by situating the study in relation to other scholarship in feminist-oriented linguistics, conversation analysis and the broad interdisciplinary field of applied linguistics. The second chapter details methodology and data. The three central analytic chapters document the structuring of the meetings and the major recurrent practices participants use to gain the floor to speak. Analyses include attention to non-verbal coordination and to the ways that alliances are enacted between meeting participants. The analytic chapters document ways in which women are able to open up speaking opportunities for themselves and others through questions, which regularly lead to elaboration by the questioner or by other participants. This finding contrasts with some previous studies that pointed to women's use of questioning as a powerless or weak strategy, one that gives power to the recipient of the

question. In the present data, we find women using questions to open participation and to project trajectories of further talk in which they emerge as major contributors. The book also offers a chapter presenting a fine-grained analysis of two women who succeed in presenting disaffiliative or disagreeing turns directed toward persons of higher institutional rank (persons who happen to be men). What is demonstrated in that chapter is that, while the two women frame their contributions in quite distinct fashions, each is able to gain the floor, to skillfully formulate her disaffiliative "idea," to manage the potential and real resistance of her interlocutors, and to complete the idea and see the idea taken up in subsequent discourse.

Once the scholarly book is published, our attention will return to less formal venues for sharing the insights from the study and its approach to understanding interaction. The intention is to write for and present to non-linguistic audiences in more accessible language than that in the book chapter and the linguistics presentations so far, accessibility and wider effect being part of the feminist commitment of the enterprise.

Scholarly Works
Women Talking in Workplace Meetings: Getting and Using the Floor. Contracted with Palgrave-Macmillan, expected publication date: November 2007.

Questioning in Meetings: Participation and Positioning. Invited contribution to *Why Do You Ask?": The Function of Questions in Institutional Discourse.* Susan Erlich and Alice Freed (Eds.) Oxford University Press. (In press.)

Scholarly Presentations from the Discourse Study
2006   "Studying Turn Taking in Workplace Meetings as 'Interdisciplinary/Applied' Conversation Analysis," International Conference on Conversation Analysis, Helsinki.
2005   "Women's agency and participation: Feminist research for institutional change," Symposium on Gender in public settings: Approaches to third wave feminist analysis. International Association for Applied Linguistics. Madison, Wisconsin. With Teddy Weathersbee.
2005   Invited plenary, "Reference and Repair as Grammatical Practices in an Extended Turn" Annual Meeting of the Society for Text and Discourse. Amsterdam, with Barbara A. Fox.
2004   Panel organizer, "CA as Applied Linguistics: Crossing Boundaries of Discipline and Practice." Paper contribution: "'Having our ideas ignored': CA and a Feminist Project" American Association for Applied Linguistics, Portland OR.
2003   "Gender and Language in/as/on Academic Science: Combining Research with a Commitment to Institutional Change" Presented at Perception and Realization in Language and Gender Research: A Conference of the International Gender and Language Association. Michigan State University, Linguistics Society of America Institute.

Presentations to the University Community from the Discourse Study
2006   "The extraordinary precision of ordinary talk: A linguist's perspective on social interaction," University Roundtable, UW-Madison.
2005   "Language and Heteronormativity," for a workshop on Global Perspectives on Sexual Diversity and Gender Relations in a Changing World, Multicultural Student Center & International Student Services, UW-Madison

2004   "Getting our Voices Heard: Studying Women's Participation in University Meetings."
        Seminar for Women in Science and Engineering Leadership Institute, UW-Madison.
2003   "Gender and Talk: Looking Back and Looking Forward," Women's Health Forum, Center
        for Women's Health and Women's Health Research, UW-Madison.

Ethnographic Studies
The ethnographic component of the project resulted in the publication of two peer-reviewed journal articles and an eighteen-month study of two contrasting laboratories. The first peer-reviewed article used interview and survey data from the baseline study to examine differences in men and women scientists' perceptions of workplace climate (Gunter and Stambach 2004, *Gender Issues* 21(1):24-42). This study provided the Leadership Team with descriptive data useful for prioritizing future interventions and for designing interventions that were meaningful to women in science and engineering. The second peer-reviewed article (Gunter and Stambach 2005, *Journal of Women and Minorities in Science and Engineering* 11 (1):97-116) used baseline interview and survey data to identify and study one key indicator of climate in the sciences and engineering: faculty members' perceptions of departmental communication. The study identified the need to design programs that facilitate communication between men and women. This finding contributed to the Leadership Teams' overall conception of how to create systemic and lasting interventions that help women *and* men develop techniques for increasing women's impact in the fields of science and engineering. Long-term participant observation in two contrasting laboratories provided the Leadership Team with in-depth description of how faculty members communicate with colleagues and students in gender-integrating and gender-differentiating ways. Analysis of resource allocation, use of space and time, and lab participants' interactions helped to inform the Leadership Team's consideration of how to prioritize programs that address institutional and organizational aspects of climate, particularly in areas of faculty mentoring and peer advising.

Laboratory Talk: Gendered Interactions and Research Progress in Graduate Science Education

Many studies of graduate science education find that women tend to report more "negative" and fewer "positive" interactions (e.g., unfriendly vs. friendly, non-collegial vs. collegial) with peers and faculty than do men; and many scholars argue that women's interactions with peers and faculty in science education programs lead to a "chilly" environment toward women and contribute to women's underrepresentation in the sciences. However, a large majority of graduate science education studies is based on interviews and/or surveys, and provide little detail regarding what students' interactions look like or the context in which they occur. This dissertation draws on participant observations over a 25-month period in two plant science laboratories, on interviews with lab members, and on semi-structured interviews with eight graduate students representing an additional four plant science laboratories, to examine the content and context of graduate students' interactions with peers and faculty and the ways in which interactions influence educational experiences.

This work describes interactions that support, encourage, instruct, and guide students, and it details interactions that hinder and discourage students. This research shows that gendered styles of participation shape communication in ways that afford more benefits to those who take on roles popularly viewed as "masculine" than it does for those who take on roles popularly viewed

as "feminine." Finally, this work considers how laboratory PIs can manage laboratories in ways that promote and support communication practices that lead to learning and research progress.

CHAPTER XII: WISELI CONTINUATION AND FUTURE PRIORITIES

A number of themes regarding WISELI's continuation emerged from both the interviews with female faculty in the sciences and engineering, as well as from campus-level administrators. The following themes are described in the chapter using various interviewees' voices, and are also complemented by the data and results presented in the previous sections:

- Institutionalize WISELI
- Broaden the Focus
- Develop New and Expand Existing Workshops
- Lead the Discussion about "Leadership"
- Continue to Function as a Center of Research
- Disseminate Successful Interventions

Institutionalize WISELI

When participants were queried as to whether WISELI should continue as a campus presence after 2006 (the expiration of the NSF-Advance grant), they were nearly unanimous with their affirmative responses. Only one interviewee felt that WISELI should not carry on its activities. While most interviewees did not provide a full explanation of why they felt WISELI should continue (in part because their opinions had been alluded to earlier in the interview), a few offered some elaborating comments. Primarily these comments referenced the need to maintain and expand the work of WISELI, and to ensure that there was an entity on campus that actively dealt with gender issues. In general, WISELI needed to continue its mission:

> *I would like to see [WISELI] continue—there's all this room for growth. You know—climate and working together and diversity and understanding gender biases.*

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> *Because, even where there is not obvious gender bias, you have hidden biases, and you need a voice to speak out about that.*
> *****
> *It has to [continue] ... I don't know what kind of void there would be if you pulled [WISELI] out of the mix... I mean if there was nowhere on campus that dealt with diversity and climate and gender issues, we're in big trouble.*

Campus administrators concurred that there have not been enough gains in the numbers of women in science and engineering and that gender bias may still play a part. In essence, they agreed with the female faculty interviewees, yet suggested a University-wide view of how WISELI should evolve. A staff member in the School of Medicine and Public Health notes:

> *Now that the main grant is coming to an end, I would love to see it institutionalized on our campus. I think financial support would be really important. I'd love to see support come more directly from our faculty senate of the work that WISELI's been doing...that would demonstrate, or at least in a more public way, it would demonstrate their support for this initiative. And to recognize the amazing things that have been done. It's money*

well-spent. I just, I'm kind of amazed at that… So at that level, I think should continue and/or be expanded by the campus. It's a, it is a concern campus-wide, so I would think, providing some resources, making sure WISELI's at the table, institutionalizing it in a way that shows it's significant and keeps the voice alive I think would be good… I believe that we should stabilize some of the funding lines at WISELI. I don't know who has that money, but I believe it's a better use than a lot of other things to change our campus.

To institutionalize it, two administrators suggested relying on a larger leadership group, as well as getting greater buy-in from the faulty:

Well, in terms of the leadership of WISELI, I would love to create a bigger leadership group because I think that a small group has been doing a whole lot of work. And in terms of the co-directors, they're really engaged in full-time careers at the same time…I think it's been a huge challenge perhaps to be doing both of those things at the same time. And I just think it's actually done remarkably well given what I believe both Molly and Jo do on a day-to-day basis. So if I thought of the leadership, I'd say, get an advisory committee or something like that, you know, rev it up. Have them help with getting the message out and becoming more publicly involved. Expand the leadership group would be what I think would help in the future.

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We've got to get some number of faculty to move from being sort of ambivalent about it to being pretty interested and wanting to do this, then we're going to ask them to spend their time, their energy learning more about for example how to be a better search committee. Instead of just saying, "Ah, I'm busy. Forget about it." I'm not sure you can do that all at once for an entire campus. You've got to you know start somewhere, learn somewhere. Say, okay this worked really well [in the sciences], that didn't work at all…Nonetheless; I think that's kind of the next piece as I see it.

Upper-level administrators were clearly convinced that maintaining WISELI was necessary. They did admit however, that they hoped its mission would evolve to include other areas of campus groups and disciplines besides female faculty in STEM. A member of the Provost's staff offers her opinion:

I want to put WISELI at the center of administration. I want to dump WISELI right into the Provost's office or wherever and say, you're purview is the entire campus. Do what you're doing well, but do it more broadly and in perhaps, more locally nuanced ways.

Another campus administrator concurs:

What I'm hoping is that the original mission can be adapted to somehow fit into the lower levels of NSF funding so that it doesn't get dropped. And I think it's also true, it's not just wishful thinking on my part that people plan to have UW-Madison as one of the dissemination sites, that [WISELI] tries to disseminate it everywhere on campus. I hope. So for example, things that have been done in academic departments, like search

trainings and Chair workshops, and for faculty, like the Life Cycle Grants, why shouldn't they work for Facilities and Planning Management and other non-academic parts of campus? …We have WISELI, we have numerous units on campus that pay attention to work-life—that's what a large piece of what climate means. And diversity is something which WISELI has really worked hard at. So, I can see that as both the administration of the University and WISELI change and adapt, there might be kind of merging of offices.

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For me, as a person in central administration, what is very important is to see that WISELI is taken up as a campus unit. That it stop being framed in women in science…I also think that there are all kinds of different ways that gender-bias happens, particular in areas of qualitative research in the social sciences.

At the same time, a few interviewees struggled with the name of WISELI. For example:

I don't entirely agree that it should still be called WISELI, Women in Science and Engineering Leadership Institute. It has name recognition, it has an astoundingly good track record. But if it's really going to be built in, I think it would have to lose the Women in Science and Engineering. It could still be a Leadership Institute, but I think it needs to be embedded in the structure, the infrastructure of the campus in a way which doesn't tie it to women in science. And it certainly has, WISELI has been very generous about going way beyond women in science, it's wonderful…I've mentioned, I think the institutional transformation piece of it is to wean ourselves from, from depending on being called Women in Science and Engineering. And start thinking about, 'Where does this fit into the University?'

The previous administrators' were consistent with comments gleaned from the interviews of female faculty about broadening the focus of WISELI, as is described next.

Broaden the Focus

At least three faculty members suggested that WISELI should specifically focus on women who were early in their career, such as graduate students, post-doctoral fellows, and junior faculty. Special reference was made to the difficulties faced by junior women in balancing families and work, and the need to ensure that they remained in the 'pipeline.' Pamela notes:

If we intend to have women continue to be in science, we've got to have women who are making it work so that young people can see how it can actually work. I think that young women need to see a positive example as they're coming up through undergrad, not these exhausted faculty saying 'I'd think about going into X, Y, or Z because your life is going to be really hard.' You know, we'll never have women doing science, and women being faculty members unless we make it accessible to women.

An administrator describes how she thinks WISELI should continue to address areas of work and life:

Where this pertains to faculty and staff is integrating the experience of people in their job and in their personal life to the extent of supporting them for things like family. You know, family leave and the life cycle, the things that WISELI is sensitive to and has worked on. I think that WISELI's in a position to address this integration of 'the job' that we all have and 'the life.' We say, 'I've got a life, you know.' Well, that should incorporate the job, and vice versa. And I think that WISELI starts out by acknowledging that that's true for faculty and staff...I think that [WISELI] has brought us closer to paying attention to that.

Implicit is the idea of supporting men at the University as well as women. One woman mentioned the need to endorse men who wanted to be involved with their families; the other noted that WISELI should emphasize improvement of the University climate for men as well as women.

And you know in terms of climate—I think also for people with children—the climate has to be one that doesn't look down on the guy for cutting back. My husband felt that on his staff and other men have said the same thing. That the assumption is 'well isn't [your wife] going to take care of all this?' And so the climate has to be much more supportive of the men to make it work for the women.

Focusing on tenure and gender inequity in related areas was another common suggestion by both campus-level administrators and the female faculty interviewees. Adele notes:

I really think divisional committees need to be brought up in the front. There needs to be some more equality at the divisional level. That there is much more women representation on the divisional committees. And not just women, I mean minorities. I think that's huge. Because I don't see that in every divisional committee.

An administrator agrees and identifies other inequities of focus:

I guess that for me, I'm hoping that there will be work on the tenure process and on institutional recognition of this dip. That WISELI can do research comparable to the search bias—that people start to pay attention to these questions in the merit process and in other ways. For example, who do you decide who to put up for an endowed chair? What are the stats on men and women in endowed chairs on this campus?

In sum, the overarching theme was stated as such: "WISELI's programs need to be expanded outside of STEM; programming and research needs to be in the arts and social sciences too."

Continue to Develop and Expand Workshops

Most participants had opinions about which activities WISELI should continue and prioritize in the future. In approximately one-third of the cases, participants noted their satisfaction with existing programs and activities and suggested that these be continued or expanded. In particular, participants felt that climate training and search workshops were specific strengths of WISELI. This opinion was shared by both the female faculty and the administrators and staff:

I think of the training mission as one of WISELI's strengths—the search chair, the department chair, helping faculty to develop a toolkit of how to improve things, how to problem-solve. I like the idea that they train faculty to become problem-solvers and I don't know how much we've actually gone into this, but how to get women in the pipeline in leadership roles—that is all very critical so that we can continue to provide role models…So to jumpstart the pipeline leadership training program for women who want to become campus leaders, I think is an area that needs to be continued and strengthened. But the climate stuff is all excellent, the training is so helpful.

*****

It sounds like this workshop for search committees would be an important thing because that's a productive way of improving the diversity of hiring. Again you've got to get people to take them, but I think that's an important program.

*****

In our college and I think across the rest of campus as well, there's going to be a very large number of retirements. A very large cohort of new faculty hired. And that's an opportunity for a lot of change in attitudes, the opportunity to hire more women, but also the opportunity to have a different group of men coming in who are more used to seeing women in the work place. It seems to me that this is a crucial time to have these discussions because of the large cohort of turnover that's coming in. And that really gives us an opportunity for change. So I think this is a good time.

*****

Keep the search process workshops. There is a lot that people on campus need to learn. I hope that's something that continues. Assessing climate and working on units and departments too.

One "critical" workshop series, as indicated by the interviewees, should be designed for PIs about how to manage a laboratory. The development of this workshop series was originally identified in the grant proposal and was entitled <u>Workshops on Laboratory Management</u>:

A workshop series on laboratory management will be developed for principal investigators. The focus will be on issues that affect women disproportionately, but will be advertised on the basis of improving the overall functioning of their laboratories. Topics will include learning how to motivate members of a team by positive approaches, resolve conflict, provide a supportive, respectful, and safe environment, and build cohesive, collegial teams. Development of the workshops will be led by the Office of Human Resources and Development and presenters will be faculty who run research laboratories and who are known to be supportive of women, deans, experts in conflict resolution and respect in the workplace, and graduate students. The workshops will be offered on campus every semester. We will work with deans and department chairs to encourage attendance by all faculty.[46]

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[46] WISELI Grant Proposal (2000), p. 13.

A staff member notes the need for workshops for PIs and the people who work with graduate students:

> *Because of WISELI's success and credibility, this seems to be the direction where WISELI should go. Labs tend to be so independent—not connected to the UW, so they don't feel they have to answer to anyone here. The most difficult stories come from those environments. People fear retaliation and it gets ignored. Climate for grads and post docs is critical. Lab environments are not focused on 'excellence and nurturing' as Wiley and the Provost suggest.*

Another staff member notes:

> *I think PI training is critical, it's urgently needed… it's been talked about in our Human Resources group and our leadership group, and the Committee on Women and you name it. Everybody, everybody who deals with graduate students and post-docs knows that you need PI training.*

Once again, it was suggested that these workshops become part of the core of the University:

> *It really could be a core of how we train. I was just thinking about this the other day in terms of orientation. And, with new faculty, and how the search committee workshop could actually be integrated into our new faculty orientation in a way that says that it's part of how we're starting to think about how we do things here. I think we don't do a good job of laying the ground work for how UW wants to be when we bring in new faculty and new staff. And if we could be more thoughtful about the messages we give people and the expectations…it's like in your first year here as a faculty, maybe there are six core workshops that you need to participate in. And they're not optional. You know, the expectation is that you will do those…But we could do an academy of some kind where we cover the basic ideas that we have about how we want to be. And the more we could do that institutionally, across the university, the more we'd have a chance I think to build a different way of thinking.*

She continues:

> *And training is this big net and there are so many holes in it. And most faculty, just like staff, come in and their basic training happens in the unit where they work. So if we want to change how we think about things, we have to invest in those opportunities to really bring people in and dialogue about the way we want it to be. And we don't, we just catch like 10% of people or something. That's just a guess but it's kind of like a swipe across the top or through the middle or whatever. And so much of our campus isn't touched by it. So if we could find a way to do, to take what WISELI's learned and really institutionalize it at an orientation level as well as at a leadership level, pretty soon you'd have like a merger. It is about leadership, but it's also about educating people in general.*

Lead the Discussion about "Leadership"

"Leadership" came up during the interviews when discussing ways in which WISELI could have been more successful, and also when discussing the future priorities of WISELI. Comments in which the interviewees expressed "disappointment" or talked about ways in which WISELI did not develop leaders include:

> *In the past five years, I've seen some change in numbers of senior leadership but not enough.*
>
> <center>*****</center>
>
> *I'm disappointed that WISELI has not had more of an impact on hiring, both faculty and in higher level, or leadership positions. It's going to take some time to have an impact though.*
>
> <center>*****</center>
>
> *There were things that we weren't able to do in developing leaders. I think we should have explored leadership that isn't just in the faculty—it's in academic staff too. The proportion of women in staff roles is high. They don't see themselves as leadership potential or playing a role in that. What are we missing out on? There are lots of ways to be leaders without being faculty. I think we missed the "LI" part of WISELI.*
>
> <center>*****</center>
>
> *I would liked to have seen more diversity in leadership approaches. More models of leadership and more discussion about leadership approaches. The leadership team didn't have a chance to talk about their leadership styles. We don't even know people's leadership styles. It was different than what I thought would happen there.*

At the same time, many had suggestions for ways in which the discussions about leadership could be initiated by WISELI:

> *We need to move toward "doing"—round tables or panels about leadership—doing things that don't need a lot of money. With lower dollars, we need to be more reactive. Have other people come up with the ideas. Provide an infrastructure that allows people to step forward with their ideas. I hope that WISELI does that.*
>
> <center>*****</center>
>
> *Conferences, workshops to bring people together and share ideas is needed. Hopefully there is a plan to provide opportunities to bring ADVANCE sites together. Focus of ideal workshops should be on leadership, gender issues in STEM, faculty worklife and climate—What is the ideal work environment to allow men and women to be most productive? This shouldn't be confined to faculty—academic staff issues, climate and worklife are important too.*
>
> <center>*****</center>
>
> *Maybe bring in women who are successful scientists/clinicians who really made it and made it in leadership positions. I'll give you an example. I used to be post doc with a woman who is now the president of [University]…She went from post doc research administration to president of [University] Bring somebody like her to talk…Something really more relevant to [my department] than just science in general.*

Continue to Function as a Center of Research

As mentioned in previous chapters, WISELI's focus on using data and research to inform program development and to evaluate outcomes was critical. When asked if the research-driven approach was successful and if it should be continued, the interviewees replied with an overwhelming "yes." One campus administrator explains:

> *People want to copy the programs, so the only way that I know to measure climate change that's convincing is the way that WISELI has done it. The evidence-base is, is you ask people how they feel about the climate over a period of time and compare answers from one time to the next. And I have only seen the results on the survey of faculty for faculty of color. I haven't seen the results for women faculty, so I can't answer that. But I think it's an admirable thing to have done—the surveys, that is.*

A member of the Provost's staff concurs:

> *In my understanding, I think of WISELI as the model, as the prototype. When I am at peer institutions, I either hear the Wisconsin research get referred to, or I hear research that's less-good than what is coming out of here. Um, less developed, still raw and with no move towards applying, so I think that it could get extended. With what resources, I have no idea.*

Brenda, a faculty member in the sciences, also notes:

> *Well [WISELI] has a lot of research they need to do, all of the data collection and research that has been so helpful really needs to go on.*

They, along with many of the other interviewees, cited a number of activities that should be maintained:

- The campus climate surveys:

Doing the climate survey periodically, every 5 years, seems worthwhile. It gives us a sense of change, improvement, and problems that still need to be addressed.

- The department climate surveys:

The number of chairs, for example, that go ahead and have done their evaluation, the climate evaluations in their departments. And almost all of the ones I've talked to after they've done that, there were one to many surprises. Most, I would say, had many surprises. And to me that's a good illustration, where these were typically well-meaning people who probably had a sense that they, they themselves were working hard to create a positive climate for their faculty and were then surprised to find that that's not what particularly their women faculty and minority faculty too, that's not the experience that these faculty in their own departments were having. So I think that was an eye-opening experience for a lot of chairs.

- Research on bias and inequities:

WISELI needs to address the issue of biases that people don't even recognize they have—that would be very helpful…how people write letters of recommendation, the whole language thing. We need research to bring these to our attention. It's very fascinating—people don't admit to it, they think they are unbiased and treat everyone equally.

- Collect indicator data:

Having the data available has been a huge thing because even if your perception is bad or your perception could be good, it is due to ignorance, so having that as a normalizing activity has been great.

From the collection of these data, we know:

That real progress in WISELI's mission—to increase the participation and advancement of women in academic science and engineering—has been made. Compared to 2000, there are more women faculty, and women are a higher percentage of the faculty, in BS and PS departments in 2006. In 2006, we have many more women department chairs in BS and PS departments than we did in 2000. Tenure rates for men and women have equalized in the past five years (i.e., women are no longer differentially leaving prior to a tenure decision), and men's and women's salaries are approximately the same once rank and division are controlled. Still, there are areas needing improvement. Women still leave the UW-Madison at higher rates than men; they may have less lab space than their male peers, and no change or negative change was observed in the numbers of women directing major centers and institutes in the BS and PS departments. Tracking the gains and uncovering the remaining problem areas are crucial to the efforts of WISELI and the UW-Madison administration to achieve gender equity. Continued collection, reporting, and analyses of these gender equity indicators are imperative to achieve this goal.

Regarding the collection of UW-focused data, the following data should be collected annually:
- Numbers and percentages of women faculty (FTE), by department and rank;
- Tenure promotion outcomes by gender;
- Attrition rates by gender;
- Numbers and percentages of women new hires, by department and tenure status;
- Numbers and percentages of women faculty in department chair, dean, center director, and central administration positions;
- Numbers and percentages of women faculty receiving endowed/named professorships;
- Numbers and percentages of women faculty receiving Vilas Associate, Hilldale, Romnes, and WARF Kellet awards;
- Numbers and percentages of women faculty serving on key campus committees, especially Faculty Senate, Divisional Committees, and Graduate School Executive and Research Committees;
- Median salary of women and men faculty, by rank and department; and

- Startup packages, starting salaries, and offers made to men and women faculty, by department and tenure status.

Some additional recommendations for future directions of WISELI research:
- Data that is parallel to that outlined above should be collected to ascertain the status of faculty of color at the UW-Madison;
- Investigate the slight decline in percentage of women assistant professors in BS departments from 2000-2006;
- Use exit interviews to more fully explore the differential attrition rates between men and women faculty in the PS and BS departments;
- Investigate the lack of women recipients of the following: Wisconsin Distinguished Professorships, Steenbock Professorships, and BS awards of Hilldale, Romnes, and Kellet awards;
- Encourage the Graduate School to provide annual data on the gender and racial makeup of both applicant pools and awards for the major campus awards they control;
- Ensure that the campus engages in a gender pay equity study (and perhaps a faculty of color pay equity study) every five to seven years;
- Perform a new space analysis study, and explore ways to analyze office/lab *location* as an enhancement of this study.

Much of these data collection activities are underway. One example is the Provost's Office request to WISELI to conduct exit interviews with both female and male faculty who have left the UW-Madison, both pre- and post-tenure. This study will begin in 2007 and will be conducted annually.

Disseminate Successful Interventions
With the awarding of the PAID grant, WISELI staff are in a position to disseminate various strategies across campus, and to also disseminate successful interventions to other universities. One of UW-Madison's Deans notes:

> *There are other universities that can learn a lot from what WISELI has done. In terms of replicating across campus, in the social sciences and humanities is important. Other major research universities can learn from WISELI and of course, there things we can learn from them.*

These activities have already been in process, as early as 2005 when the staff conducted a "Train the Trainer" seminar about search training workshops for other institutions in the University of Wisconsin System. These seminars have also been conducted at other campuses—University of Washington in St. Louis, University of Minnesota, and UW-Stout for example.

At the same time, programs can be replicated, but people cannot. A Vice-Chancellor describes this:

> *I think WISELI should be replicated and extended, but can it be? I don't think that Jo and Molly and Jenn and Eve, Deveny, the people who've worked in WISELI over all these years are easy to replicate. I think it's just a terrific combination. So it would be difficult*

because you need – institutions depend so much on who the leadership is—and WISELI must be thinking about that. But I think it's very difficult. I'm not sure [people] can be replicated. But the programs, the program development can certainly be disseminated.

Overall Purpose of This Study

There were similar, but distinct goals for the baseline and follow-up study, both of which are summarized here. For the baseline interviews, the study was designed: 1) to serve as a baseline from which to measure changes in women's experiences on campus following the completion of the grant; 2) to inform the development of a survey that would be distributed to all faculty on the UW-Madison campus; and, 3) to help the WISELI leadership as it makes decisions regarding areas of further study. Interviews with the same participants occurred in the last year of the grant.

Similarly, there were several goals for conducting the follow-up study. The study was designed to; 1) assess women's perceptions of changes in their department and in the University; 2) to understand women's current experience as female faculty members and associated changes from the baseline interview; and 3) to learn how female faculty had interacted with and benefited from WISELI activities and/or the presence of WISELI on campus; and 4) to gain feedback about the continuation of WISELI and potential priorities.

Timeline for Data Collection and Analysis

The timeline for the collection, analysis, and reporting of the interview data appears in Table 1.

Table 1: Timeline of data collection, analysis, and reporting activities

Baseline Data Collection and Report	Time Period
Collection and synthesis of reports from other similar initiatives on climate for women	January – February 2002
Development of the interview protocol	March – April 2002
Selection of sample	April 2002
Invitations to sample	May 2002
Interviews conducted	May – July 2002
Tapes transcribed	June – August 2002
----- break in analysis for survey development ------	
Interviews coded in qualitative software program	October 2002-January 2003
Codebook finalized	January 2003
Report outlined, writing began	February 2003
----- break in writing for staff changes and pilot testing of WISELI initiatives -----	
Report draft	November-December 2003
Final draft completed	January 2004
Follow-Up Data Collection and Report	**Time Period**
Development of the interview protocol	January–February 2006
Invitation to Participants	February 2006
Interviews conducted	March-May 2006
Tapes transcribed	May-June 2006

Interviews coded and sub-coded in qualitative software program	May-October 2006
Draft summaries for summative report	October 2006- March 2007

Participant Selection and Follow-Up Participation

Of the original 26 participants who were selected for the study, 19 participated in the follow-up study. After reviewing the list of the original 26 participants, we found three participants who had moved to another University, retired, or relocated without providing further information. One of these three women was interviewed in 2004 as part of another WISELI study titled, "Why Women Leave." The remaining 23 women were sent letters of invitation to participate in the follow-up study. Of these, 19 agreed to a second interview. Two declined to participate due to busy schedules; the remaining two declined without providing further explanation. The following section discusses the initial study sampling process, and compares the original participant population to the follow-up population.

The original sample of interview participants was conducted primarily by Sheridan and Harrigan, with assistance by Carnes and Handelsman. The definition of the population was shaped by the focus of the National Science Foundation on science, math, and engineering fields. The population was defined as those faculty members who: 1) were not clinical faculty (and thus on the tenure track); 2) who claimed one of the biological and physical sciences divisions as their disciplinary home;[47] 3) who had larger than 0% appointments; and 4) who were female.

The sample was generated by first determining the number of women to be selected from each college, and then randomly selecting the women in each college. The numbers in the sample for each college were intended to be roughly proportional to those in the population. As seen in Table 2, there were proportionally more women in the sample for two colleges (CALS and L&S) and proportionally fewer in the sample for the remaining colleges.

Table 2: The distribution of population, sample and sample percentage of population by college

College or School	Population (2002)	Baseline Sample (2002)	Baseline Percentage (2002)	Follow-Up Sample (2006)	Follow-Up Percentage of 2002 Population[48]
College of Agriculture and Life Sciences (CALS)	39	7	18%	4	10%
College of Engineering	13	2	15%	1	8%
College of Letters and Sciences (L&S)	42	8	19%	6	14%
School of Medicine and Public Health	72	7	10%	5	7%
School of Pharmacy &	13	2			

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[47] All faculty members choose one of the four divisions on campus as their disciplinary home. The divisions that deal with promotion and tenure are: Biological Sciences, Physical Sciences, Social Studies, and Humanities. For those faculty who were hired very recently and had not yet chosen a division, a decision was made based on information found on the Internet about their research.

[48] Since the follow-up population draws exclusively from the baseline sample population and no new respondents were recruited between 2002-2006, the percentage of the 2002 population is reported rather than the percentage of the 2006 population.

			15%	2	15%
Total	**179**	**26**		**18**	

Within the numbers of each college, an effort was made to select women from different departments, titles (Assistant, Associate, Full, Distinguished), divisions, years at UW, and number of appointments. A random process was used to select participants; however, when two women from the same department were, by chance, selected, the second one was replaced.

Table 3 and Table 4 show the distribution of the baseline sample and follow-up participants by title and by years employed at the UW-Madison campus. The low number of junior faculty among the follow-up participants reflects to some extent the expected career progression of the original sample. Similarly, the increased average and median number of years of services reflects the career progression of the original sample

Table 3: Distribution of sample by faculty title

Faculty Title	**Baseline Participants**		**Follow-up Participants**[49]	
	Number	*% of Total*	*Number*	*% of Total*
Assistant Professor	10	39%	4	21%
Associate Professor	4	15%	6	32%
Professor	12	46%	9	47%
Total	26	100%	19	100%

Table 4: Distribution of sample by years employed at UW-Madison

Years	**Baseline Sample**	**Follow-Up Participants**
1-4 years	12	0
5-9 years	5	10
10-19 years	7	4
20-30 years	2	5
Total	26	19
Average number of years=8.2 Median=5.5		Average number of Years =12.2 Median=9

It should be noted that race/ethnicity could not be ascertained ahead of time. The race/ethnicity distribution of the final sample compared to the total population of women in that category is seen in Table 5.

Table 5: Distribution of population and sample, by race/ethnicity

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[49] Over the four-year period that elapsed between the baseline and follow-up interviews, many participants experienced a change in their professional status. For example, several faculty achieved tenure and several moved from Associate Professor to Full Professor.

Racial/Ethnic Group	Population	Baseline Sample	Follow-Up Sample
Black	1.6%	3.8%	0%
Asian	7.6%	3.8%	3.8%
Hispanic	1.6%	3.8%	0%
White	88.0%	88.5%	96.2%
Not Reported	1.1%	0.0%	

Overall Differences in the Baseline and Follow-up Population

On most measures, the baseline and follow up participants were quite demographically similar. However, there was less racial/ethnic diversity and there were fewer junior faculty in the follow-up population. While this study did not explicitly focus on issues related to participants' ethnic/racial identity, the decline in diversity in the follow-up sample was unexpected and suggests the need for caution in generalizing the study results and in comparing the baseline and sample population. The decline in junior faculty is expected, given that no new participants were added in 2006, and several of the original participants progressed to the ranks of Associate Professor.

Data Collection

An interview protocol for the follow-up study was developed and used as a guide to interviewing the women faculty. The protocol categories were based on baseline data collected, the personal experiences of women faculty on the Leadership Team and the Evaluation & Research Team, on the research literature on gender and the workplace, and on research collected by WISELI over the previous four years. Members of the Leadership Team and the Evaluation & Research Team reviewed the protocol.

The follow-up protocol was designed to understand the participants' current experiences as female faculty, to assess changes in work experience and immediate environment, to measure their perceptions of changes that occurred in their department or on campus in the four years since the original interview, and to inquire about their experience with and satisfaction with WISELI programs and services on campus. Topics covered in the interviews included career satisfaction, departmental climate, campus climate, gender issues in their professional life, participation in leadership opportunities, work/life balance, engagement and satisfaction with WISELI, and suggestions for future priorities for WISELI, among others.

As described above, the women were emailed an invitation to participate (see Appendix B). In this letter, the women faculty were provided current information about the WISELI study, informed of the length of the interview, ensured of the protection of their participation as "human subjects," and were requested to provide times and places that worked best for them. Most of the 19 interviewees requested to meet in their office, but five chose to meet in the WISELI conference room

At the beginning of the interview, the researcher reminded the women faculty of their rights as participants in this study, and asked them to read an informed consent form. If the women faculty agreed to its terms, they were asked to sign two copies, keeping one copy for them and

giving one copy to the researcher. Following this, the participants were asked if the interview could be taped. All participants agreed to be taped, so appropriate recording equipment was used.

The interviews were semi-structured and open-ended. That is, the interviewer would guide the conversation using the interview protocol, and would ask open-ended questions as well as follow-up questions to clarify unclear points, and steer the conversation towards the key areas of the interview protocol. The interviewer made every effort to reduce bias by minimizing the use of "leading" questions (i.e., questions which encourage the participant to answer in ways the interviewer is intending). To encourage honesty in responses, participants were reminded that their answers would be completely anonymous, and informed that each study participant had very different levels of interaction, engagement, and likely satisfaction with WISELI programs and activities, so there was no "expected or correct response." Following the interview, the interviewee submitted the tapes to WISELI staff for transcription.

All of the interviews lasted between 50 and 90 minutes, with most averaging slightly over one hour. One researcher conducted all nineteen interviews.

Baseline Interview Protocol (2002)

FOR FACULTY:
We know: Title (Assistant, Associate, Full professor; Tenure-track or Tenured)
• How long working at UW-Madison in current position?
• Transferred from elsewhere? Went through tenure process elsewhere?
• Current position entails?
(__ % research, ___% teaching, __% service, __% administration)
• Educational background (degrees- Ph.D.? Working toward Ph.D.?)
• If switched from academic staff to faculty –find out when and how.
FOR ACADEMIC STAFF (RESEARCHERS, SCIENTISTS):
We know: Title (Researcher or Scientist --Assistant, Associate, Full)
• How long working at UW-Madison in current position?
• Transferred from elsewhere?
• Current position entails?
(___ % research, ___ % teaching, ___% service, ___% administration)
• Educational background (degrees- Ph.D.? Working toward Ph.D.?)
• If switched from faculty to academic staff – find out when, how, and why.
FOR INSTRUCTORS:
We know: Title (Lecturer, Associate Faculty; other)
• How long working at UW-Madison in current position?
• Transferred from elsewhere?
• Current position entails?
(___ % research, ___ % teaching, ___% service, ___% administration)
• Educational background (degrees- Ph.D.? Working toward Ph.D.?)

2. Tell me about your experience starting here. Start with when you first applied. Why here?
Tell me about process, negotiations, etc.
Get info about:

• What motivated you to apply at UW-Madison?
• The hiring process (i.e., the application, interview, contract negotiation process).

FACULTY: Start up space? Start up dollars? What did you negotiate? What did you get? Satisfied with start up package?
• What was good about the hiring process? What could have been improved?
• Did you receive mentoring during the negotiations of start-up package? By whom?
• Was "dual hiring" an issue? Describe.
• How did this position fit (or not fit) with your career aspirations?

3. Let's talk about your [department, unit, or lab].
A) Briefly describe your [department, unit, lab] for me. (How large? Geographical layout (e.g. in one location or several locations)? Diversity in terms of gender, race/ethnicity, age?)
B) What's it like to work/be in your [department, unit or lab]? We are interested "in general" and for you "personally." Interested in resources and social environment.

Examples of prompts:
What is "tone" of department? (friendly, supportive, competitive, hostile) unit/lab/departmental meetings-- how do you feel about your participation in meetings with colleagues? Other collegial interactions? how committee assignments are made
FACULTY/INSTRUCTOR: how teaching assignments are made
- o ☐ resources available in the department
- o ☐ support for advancement in your career
- o ☐ kind of chair/director you have
- o ☐ your colleagues and your relationships with them
C) Do you or have you had a role in leadership? Describe. Do you want or plan towards a role in leadership?
D) What are the best features of your work environment?
E) How does working in this [department, unit, or lab] compare to other [departments, units, labs] (here and at other jobs) with respect to:
      -resources?
      -social environment?
F) What are the issues that come up for you in your [department, unit or lab]? How do/did you handle these issues?

EXAMPLES INTERVIEWEES MAY RAISE – Some may be used as probes if interviewee doesn't discuss.
• Amount of work demanded
• Amount of resources – space, assistance
• Course and service assignments
• Sense of isolation or limited social interaction in workplace
• Leadership by chair/director and support in your career
• Colleagues to work/talk with; Respect from colleagues
• Availability of mentors or role models
• Having a voice in unit/department policy
• Balance between work and non-work life (including child care)
• Sexual harassment

• Discrimination
• Things that are done to make you feel valued or de-valued

G) Based on issues raised by interviewee, ask:
• Have you used campus resources/initiatives to address these issues? [mention all]
Examples: Mentoring Child care
Stopping the tenure clock Family leave
Extended tenure clock Academic Staff merit
Committee on Women Faculty Ombudsperson
Sexual Harassment Workshops/Brochures
Women Faculty Mentoring Program
Employee Assistance
• Are there initiatives that WISELI could undertake to address these concerns?
(e.g., Leadership training for chairs/deans; Professional development workshops for faculty/staff; Studies of key issues)

4. Let's talk about balancing life at work and life outside of work.
A) Tell me about your commitments/interests outside of work.
• Partner/spouse?
• Children? Other dependents?
• Dual career? Both in sciences or engineering? Primary & secondary earners?
• Other commitments?
• How are responsibilities shared?
B) How do these commitments/interests influence your work?
Examples:
• Expectations about balancing career and life outside of work
• Ability to attend late meetings, work nights and weekends, work in lab 24-7
• Time
• Interruptions
C) Does balancing work and home life/interests have an effect on your physical and mental health? If so, in what way? Would you consider this effect to be positive or negative?

5.Can I ask you to reflect on your career at UW-Madison and to think about your future?
A) Tell me about how your career has evolved at UW-Madison?
• Has it evolved as you expected? How happy or satisfied are you in your career? Tell me about success and your definition of success. What motivates you?
• What are your short-term and long-term career goals?
• What has been most influential?
• Have you ever wanted or tried to leave UW-Madison? If so, what prompted you to want to leave? And, what kept you here? Did you re-negotiate space, salary, etc.?
• Do you plan to stay at UW-Madison?
B) Do you feel that your work has been supported/recognized at UW-Madison?
• If so, how has it been supported?
(e.g., financial or other rewards; request for leadership roles; access to key committees; access to resources such as equipment and graduate students; research collaborators)
• Are there ways that you feel your work has NOT been supported/recognized at UW-Madison?

6. What role has gender played in your career and in your experience?

A) In your view, did gender effect your early career aspirations, experiences, or planning?
B) Does it affect your current work experience?
C) What's it like to be a woman working at UW in the [science, engineering]?
• Are there challenges or obstacles that women in [science, engineering] in general encounter?
• Are there challenges or obstacles that you encounter?
• Many women leave the [sciences, engineering] and leave academia. What keeps you in the [sciences, engineering]? Are there factors that keep you here?
D) How, if at all, do you think gender might play a role in your future professional career?
E) Have you observed differences between the career choices or paths of women and those of men in [science, engineering] in your [department, unit, or lab]? If so, what are they?

7. Let's talk about some of the gender issues people raise.
The literature on women in science and engineering describes possible differences experienced by men and women in academic science and engineering careers. Here is a list of possible differences. Can you let us know:
- o   Have you have experienced any of these differences? (describe, if you have)
- o   Have you observed any differences experienced by other women in [science or
- o   engineering]?
- o   In your view, are some of these more serious/critical than others?

- Allocation of teaching/service assignments (e.g., committees)
- Access to resources (lab or office space)
- Salary (although similar rank, title, experience, publications)
- Value/respect by colleagues
- Degree to which taken seriously as scholar/scientist/engineer
- Attitudes or consequences if one needs to meet family responsibilities, uses family leave, stop tenure clock, or attempts to job share
- Processes or standards for promotion
- Inclusion into professional collegial relationships
- Access to senior faculty
- Opportunities to show leadership
- Value given to informal service activities (e.g., community involvement)
- Negotiating salary when about to go elsewhere
- Involvement with colleagues in informal activities
- Interactional/conversational styles
- The experience of having your ideas ignored
- Feelings of professional or social isolation
- Feelings of being undervalued or ignored by colleagues
- Sexual harassment
- General happiness/mental health
- Physical health

8. If these are experienced by you, where do you go (would you go, or did you go) to get

assistance with these types of issues? What is available here? Where is more help needed?

9. What are your thoughts about the future for women in [sciences or engineering] at UW in particular? Why do you feel this way? How could WISELI fit with this future? Where should efforts be focused?

Follow-Up Interview Protocol (2006)

1. Let's talk a bit about your current position and any changes since our last interview

A) What is your current title and position? How long have you now been working in your current position?

B) Have there been any significant changes in your position or career since we last talked?
Please describe.
       -Shift in teaching, service, or research duties?
       -Achievement of tenure?
       -New title or administrative responsibilities?
       -Awards/Award Nominations or new grants?
       -Physical move of office or labs?
       -Other changes?

2. Let's turn now to discussing your department and departmental climate

A) Have there been any major changes in your department since we last talked?
       -New hires or changes in personnel; demographic shifts
       -New leadership
       -Physical move of department
       -Other

B) Let's talk about departmental "climate." Overall, would you say it has stayed the same, improved, or become worse in the past four years? Explain. To what would you attribute any changes?
       Prompts, if needed:
- "Tone" of department? (friendly, supportive, competitive, hostile)
- Unit/lab/departmental meetings-- how do you feel about your participation in meetings with colleagues? Other collegial interactions?
- How committee and teaching assignments are made
- Voice in your department
- Resources available in the department
- Support for advancement in your career and/or role models
- Kind of chair/director you have
- Your colleagues and your relationships with them
- Things that make you feel valued or devalued

C.) [If certain issues are not mentioned] In our last interview, you mentioned the following as important in relation to climate [insert from first transcript]. Have these issues changed or stayed the same? Please explain. To what would you attribute any changes?

D) In the past four years, have you taken on any leadership roles? Describe. What caused you to take on leadership roles? [or to change your mind about taking on leadership] Do you want or plan towards a role in leadership? Why or why not?

 3. Let's talk about the role that gender plays or has played in your work experience

A) How does gender affect your current work experience, or work experience in the previous four years?

B) What is it like to be a woman working at UW in the [science, engineering]?
- Are there challenges or obstacles that women in [science, engineering] <u>in general</u> encounter?
- Are there challenges or obstacles that <u>you</u> encounter?

C.) In your first interview, we discussed the following issues and inequalities related to gender [*insert issues from first interview*]. With each concern I mention, let us talk about whether these issues have worsened, stayed the same, or improved. To what do you attribute changes?

4. What, if anything, has helped you deal with these gender issues and differences? Where or how would you seek assistance if you wanted it?

5. Let's talk about the overall climate at UW. Would you say that it has improved, stayed the same, or become worse in the past 4 years? To what would you attribute changes? Explain.

6. Now I'd like to ask you some specific questions about your experience with and awareness of WISELI activities on campus

> *-If asked, how would you broadly describe the mission and activities of WISELI?*
> -Which (if any) WISELI resources (web, brochures, publications, workshops) have you accessed?
> **-**Have you participated in any WISELI workshops or seminars? Which ones?
> (e.g. departmental climate, hiring committee, seminars on special topics?).
> **-**Have your Department chair or colleagues participated in WISELI climate or hiring committee workshops? Which ones? Can you talk about any changes that have resulted in either climate or hiring processes?
> **-**Have you had personal interactions with WISELI principal investigators or staff? Please describe. Did these interactions assist you or your department? Explain.
> **-**Have you applied for, been nominated for, or received WISELI grants or awards? Please describe.
> **-**Are you aware of or have you participated in WISELI mentoring networks? Please explain.

7. Which, if any, of these benefits have you observed or received from participation in WISELI activities or the presence of WISELI on campus? Please cite examples where appropriate
-Specific resources or assistance for you?
-Specific assistance to colleagues or the department?
-Enhanced networks with other women and/or mentors on campus?
-Improved climate of your department?
-Improved campus climate for women?
-Enhanced personal understanding of gender related issues on campus?
-Enhanced awareness of where to go for assistance on gender issues?
-Improved awareness for colleagues and faculty on campus on gender issues?
-Other?

8. Let's talk about balancing life at work and life outside of work

A.) Have your work/life commitments or circumstances changed in the past four years? If so, tell us how it has affected your work and life? From where have you received support or resources when these changes arose? Please explain.
  [prompt as needed: partner spouse/children/dual career/balance issues etc, issues from first interview.]

 B.) [*if not covered in 8A*] Overall, would you say that your work/life balance issues have improved, stayed the same, or gotten worse? To what would you attribute any changes?

9. In closing, can I ask you to reflect on some questions about your career and your career satisfaction at UW-Madison

A.) How happy or satisfied are you with the way your career has evolved at UW-Madison and in the past four years? Please explain

B) How do you feel that your work has been supported and recognized (or not recognized) at UW-Madison? Please describe.

C.) Have you considered leaving UW-Madison? If so, why? What kept you here? Are you currently planning to stay at UW-Madison? Please explain.

Analysis and Interpretation
Tapes from the interviews were transcribed by UW-Madison undergraduate students hired by WISELI. An attempt was made to have the transcriptions reflect the exact statement of the interviewee and interviewer, including indications of pauses, repetition of phrases, the use of linguistic fillers (e.g.,"um" and "uh"), and the use of emphasis. This process resulted in interview transcripts ranging from 20 to 60 pages. The transcripts were inserted into ATLAS.ti©, a software program for qualitative data analysis.

After extensively reading and reviewing the transcripts, the author of this report devised several thematic categories and coded them in ATLAS.ti©. The coding process involved identifying sections of text that revealed more detailed ideas in each of the categories. The process was

iterative, in that the codes were expanded upon, condensed, and modified as the researchers coded additional transcripts.

APPENDIX B: SURVEY METHODOLOGY

Background

The *Study of Faculty Worklife at UW-Madison* was undertaken as part of WISELI's broader effort to support the advancement of women in academic science, medicine, and engineering. Envisioned as a means of quantitatively measuring the workplace experiences of faculty in the biological and physical sciences, the survey was administered to all tenure-track faculty[50] at the University of Wisconsin – Madison during the spring 2003 semester[51]. The inclusion of social sciences and humanities faculty in the survey group was requested and made possible by the Office of the Provost.

A total of 2,254 surveys were mailed to faculty in February 2003. Among this group, thirty-three were determined to be non-sample cases (e.g., faculty away for the duration of the survey). Thus, the initial survey population included 2,221 UW-Madison faculty. Approximately 60% of all faculty returned a survey.

The 2003 survey population was approximately evenly split between science and non-science faculty. A total of 1,251 surveys were distributed to faculty in the biological and physical sciences, fifteen of which were determined to be non-sample cases. The biological and physical sciences survey population thus included 1,236 faculty, of which approximately 60% returned a completed survey.

In 2006, WISELI again surveyed all tenure-track faculty[50] on the UW-Madison campus. This second survey was intended to provide longitudinal data that might reveal whether and how faculty's workplace experiences had changed between 2003 and 2006, the period during which WISELI initiated various initiatives and programs at UW-Madison. The survey instrument included many of the same questions as the 2003 survey, though some new items were added and expired ones removed.

The follow-up survey was mailed to 2,218 faculty in February 2006. Among this group, nine were determined to be non-sample cases leaving a total survey population of 2,209. Approximately 55% of this survey population returned a completed survey.

As in 2003, the survey population was split between science and non-science faculty. Overall, a total of 1,236 biological and physical sciences faculty were included in the follow-up survey population. Approximately 59% of these science faculty returned a completed survey.

Response Rates

The approximately 60% response rate to both the 2003 and 2006 *Worklife* surveys suggests that a large segment of faculty at UW-Madison are represented in survey responses. However, response rates varied across different groups of faculty. Despite these variations, the pool of respondents is reasonably representative of the UW-Madison faculty.

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[50] Clinical faculty in the School of Veterinary Medicine were also included in the survey group.
[51] Survey instrument available at: http://wiseli.engr.wisc.edu/Products/facultyversion.pdf

Women were more likely than men to respond to both the 2003 and 2006 surveys. In 2003, 68.3% of female faculty in the survey population returned a valid response, whereas only 57.4% of male faculty did so. Both men and women faculty responded to the 2006 survey at lower rates than in 2003, though the relative proportion of male and female responses remained constant.

Minimal variation in response rates was observed across different divisions – biological, physical, and social sciences and the humanities – in each wave of the survey. In 2003 divisional response rates ranged from 57.3% for the biological sciences to 62.3% for the social sciences. Similarly, responses to the 2006 survey ranged from 51.5% for the physical sciences to 57.3% for the social sciences.

Comparing across UW-Madison schools and colleges, more notable variation in response rates can be seen. Faculty in the School of Nursing were most likely to respond to the initial survey, while those in the School of Veterinary Medicine were most likely to respond to the follow-up survey. Business School faculty were least likely to respond to both surveys. These discrepancies may be partially explained by different gender compositions across schools and colleges.

Neither the tenure status nor rank of faculty appears to be related to propensity to respond to the surveys. In both 2003 and 2006, approximately equal proportions of assistant, associate, and full professors returned a valid response. Likewise, both tenured and untenured faculty were about equally likely to respond to the surveys.

Faculty of color (non-white faculty) were less likely than their white or unidentified peers to respond to either waves of the survey. In 2003, about 55% of non-white faculty returned a valid response as compared to the approximately 61% of white or unidentified faculty who did so. This discrepancy in response rates was somewhat larger for the 2006 survey, with 43.3% of non-white faculty and 57.2% of white or unidentified faculty responding. Persistently low rates of response from Asian faculty (49.7% in 2003 and 36.5% in 2006) may partially explain these differences.

Finally, faculty status as a department chair also appears to be related to propensity to respond to the *Worklife* survey. In each wave of the survey, department chairs were more likely than other faculty to respond to our survey. Interestingly, this relationship held despite the relative overrepresentation of males among department chairs. The gap between non-chair and chair responses widened between 2003 and 2006 (from 66.4% vs. 59.9% to 71.8% vs. 54.2%). This trend might be accounted for by the increasing representation of women among department chairs between the survey periods.

Overall, despite these variations in faculty's likelihood to respond to the survey, we can be relatively confident that the group of respondents is reasonably representative of the faculty population on the UW-Madison campus. Women faculty, who's propensity to respond to the survey stands in most striking contrast to their peer group, are over-represented among the group of respondents by no more than 5-6%. This suggests that the impact of women's higher response rates likely has a limited substantive impact on the survey results as a whole. The impact of other over- or under-represented respondent groups is far less than that of women faculty. Overall, this

suggests that the *Worklife* survey data provides a reasonable picture of the attitudes of UW-Madison faculty.

Analysis Methods
The data collected in the two waves of the *Worklife* survey has been analyzed in an effort to identify differences in faculty experiences of department climate, workplace interactions, and satisfaction. Comparing across demographic characteristics, the survey data allowed WISELI researchers to identify systematic trends in faculty experiences. This information was in turn used to inform the development of various programs and interventions.

The longitudinal component of the survey allowed WISELI researchers to examine whether and how faculty experiences had changed between 2003 and 2006. This provides a means to gauge the impacts of the programs and initiatives that had been implemented in the interim. Information gleaned from longitudinal analyses will be used to evaluate the overall impacts of WISELI in this report. This will in turn be used to guide and refine future program implementation and dissemination.

APPENDIX C: SUMMATIVE EVALUATION INTERVIEWS

Purpose: Gather information from key individuals (Vice/Associate Vice-Chancellors, Provost's staff, Deans, Department Chairs, Faculty, Staff, PIs) about WISELI's implementation, impact, and future directions. Resulting data will inform the writing of the Summative Evaluation Report for the WISELI staff and NSF.

1. How has the climate changed, if at all, for women in science and engineering in the past five years?
2. To what do you attribute these changes? How has WISELI played a role, if at all?
3. What are some of the climate-related factors (attitudes, policies, obstacles) that continue to affect the experience of women in science and engineering on this campus?
4. To what extent has any of WISELI programs successfully addressed these factors?
5. Is there a specific initiative or program that you have found to be the most beneficial?
6. In what ways has WISELI been unsuccessful in making changes within the UW?
7. What could the leadership of WISELI have done to make it more successful?
8. In what other ways could WISELI have been supported by the UW?
9. As WISELI moves forward with significantly lower levels of NSF funding, how do you see the mission of WISELI changing or adapting?
10. What unfinished business might WISELI attend to as it enters the next phase of its "institutional transformation" work? What still needs to be done that WISELI is in a position to address?
11. To what extent can or should WISELI be replicated and extended to other campuses?
12. Anything you'd like to share that I didn't ask you about?