



W I S E L I

*Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison*

**Women in Science & Engineering Leadership Institute
Annual Report
2007**

Principal Investigators, *University of Wisconsin-Madison*:

Prof. Molly Carnes, Department of Medicine

Prof. Jo Handelsman, Department of Plant Pathology & Bacteriology

Prof. Amy Wendt, Department of Electrical & Computer Engineering

Dr. Jennifer Sheridan, WISELI

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Overview



An Overview of WISELI

The Women In Science & Engineering Leadership Institute (WISELI) is a centralized, visible administrative structure with a mission to promote the participation and advancement of women in academic science and engineering. The center structure of WISELI allows the institute to bring the issues of women scientists and engineers from obscurity to visibility. It provides an effective and legitimate means of networking women faculty across departments, decreasing isolation, advocating for and mentoring women faculty, and linking women postdoctoral fellows in predominantly male environments with a variety of women faculty.

The major initiatives that WISELI has implemented include:

- *Searching for Excellence & Diversity* workshops for search committee chairs and members
- *Enhancing Department Climate: A Chair's Role* workshops for department chairs
- Celebrating Women in Science and Engineering Grant Program
- Vilas Life Cycle Professorship Program
- Denise D. Denton Distinguished Lecture Series
- WISELI Listserv
- WISELI Website
- Documentary Videos
- *Running a Great Lab*: Workshops for New Principal Investigators
- Exit interviews for all UW-Madison faculty departures
- *Study of Faculty Worklife at UW-Madison* faculty climate surveys

Organizational Chart



W I S E L I

Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison

Directors

Co-Director: Molly Carnes

Co-Director: Jo Handelsman

Co-Director: Amy Wendt

Research & Executive Director: Jennifer Sheridan

Evaluation Director: Christine Maidl Pribbenow

Staff

Researcher: Eve Fine

Research Specialist & Webmaster: Deveny Benting

University Grants & Contracts Specialist: Carol Sobek

Project Assistant: Jessica Winchell

Administrative Partners

Chancellor John Wiley

Provost Pat Farrell

Dean Martin Cadwallader,
Graduate School

Dean Daryl Buss, Veterinary
Medicine

Dean Robert Golden,
School of Medicine &
Public Health

Dean Molly Jahn, College of
Agricultural & Life Sciences

Dean Jeanette Roberts,
Pharmacy

Frances Westley, Director,
Gaylord Nelson Institute for
Environmental Studies

Assoc Dean Donna Paulnock,
Graduate School

Assoc Dean Terry Millar,
Graduate School

Dean Robin Douthitt,
School of Human Ecology

Dean Katharyn May, School of
Nursing

Assoc. Dean Mariamne
Whatley, School of Education

Don Schutt, Human
Resources

Director Luis Pinero, Equity &
Diversity Resource Center

Campus Affiliates

Women in Science and Engineering and other supporters, through
WISELI Listserv

Papers and Presentations

WISELI Publications and Presentations

Papers Published:

Ford, Cecilia E. *Women Speaking Up: Getting and Using Turns in Workplace Meetings*. New York: Palgrave Macmillan. In Press.

Ford, Cecilia. "Questioning in Meetings: Participation and Positioning." In *Why Do You Ask? The Function of Questions in Institutional Discourse* (Susan Erlich and Alice Freed, Eds.) Oxford University Press. In press.

Fine, Eve. "Response to Lawrence Summers' Remarks on Women in Science." In *The Blair Reader: Exploring Contemporary Issues*, 6th edition. Edited by Laurie G. Kirsznner and Stephen R. Mandel. Prentice Hall. Originally published January 2005 on WISELI's website: (http://wiseli.engr.wisc.edu/news/LawrenceSummers_Response.pdf) In press.

Handelsman, Jo and Robert Birgeneau. September 25, 2007. "Women Advancing Science: A Few Significant Changes in the Academic System Could Stem the Loss of Talented Women, Thereby Fortifying our Scientific Leadership." *Technology Review*. <http://www.technologyreview.com/blog/guest/21855/> .

Marchant, Angela; Abhik Bhattacharya; and Molly Carnes. 2007. "Can the Language of Tenure Criteria Influence Women's Academic Advancement?" *Journal of Women's Health*. 16(7): 998-1003.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. 2007. "Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?" American Society for Engineering Education (ASEE) 2007 Conference Proceedings. <http://www.asee.org/acPapers/AC%202007Full992.pdf> . June 2007.

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. 2007. "Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?" Women in Engineering Programs & Advocates Network (WEPAN) 2007 Conference Proceedings (on CD-ROM). http://dpubs.libraries.psu.edu/DPubS?service=Repository&version=1.0&verb=Disseminate&handle=psu.wepan/1200322686&view=body&content-type=pdf_1# . June 2007.

Pribbenow, Christine Maidl; Jennifer Sheridan; Molly Carnes; Eve Fine; and Jo Handelsman. "Departmental Climate: Differing Perceptions by Faculty Members and Chairs." *The Journal of Women and Minorities in Science and Engineering*. [2006 draft accepted and under revision.]

Carnes, Molly and JudyAnn Bigby. 2007. "Jennifer Fever in Academic Medicine." *Journal of Women's Health*. 16(3):299-301.

Carnes, Molly and Carole Bland. 2007. "A Challenge to Academic Centers and the NIH to Prevent Unintended Gender Bias in Selection of CTSA Leaders." *Academic Medicine*. 82(2):202-206.

Committee on Maximizing the Potential of Women in Academic Science and Engineering. 2006. "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering." The National Academies Press: Washington, DC. <http://www.nap.edu/catalog/11741.html> .

Carnes, Molly. 2006. "Gender: Macho Language and Other Deterrents." Letter to the Editor. *Nature*. 442:868.

Sheridan, Jennifer; Patricia Flately Brennan; Molly Carnes; and Jo Handelsman. 2006. "Discovering Directions for Change in Higher Education Through the Experiences of Senior Women Faculty." *Journal of Technology Transfer*. 31(3): 387-396.

Carnes, Molly; Stacie Geller; Evelyn Fine; Jennifer Sheridan; and Jo Handelsman. 2005. "NIH Director's Pioneer Awards: Could the Selection Process be Biased Against Women?" *Journal of Women's Health*. 14(8):684-691.

Carnes, Molly; Jo Handelsman; and Jennifer Sheridan. 2005. "Diversity in Academic Medicine: The Stages of Change Model." *Journal of Women's Health*. 14(6):471-475.

Handelsman, Jo; Nancy Cantor; Molly Carnes; Denice Denton; Eve Fine; Barbara Grosz; Virginia Hinshaw; Cora Marrett; Sue Rosser; Donna Shalala; and Jennifer Sheridan. 2005. "More Women in Science." *Science*. 309(5738):1190-1191.

Gunter, Ramona and Amy Stambach. 2005. "Differences in Men and Women Scientists' Perceptions of Workplace Climate." *Journal of Women in Minorities in Science & Engineering*. 11(1):97-116.

Gunter, Ramona and Amy Stambach. 2003. "As Balancing Act and As Game: How Women and Men Science Faculty Experience the Promotion Process." *Gender Issues*. 21(1):24-42.

Sheridan, Jennifer; Molly Carnes; and Jo Handelsman. 2003. "The University of Wisconsin-Madison ADVANCE Program: Progress to Date." Women in Engineering Programs & Advocates Network (WEPAN) 2003 Conference Proceedings (on CD-ROM). <http://www.wepan.org/storelistitem.cfm?itemnumber=14> , Paper #1040. June 2003. Available online: http://dpubs.libraries.psu.edu/DPubS?service=Repository&version=1.0&verb=Disseminate&view=body&content-type=pdf_1&handle=psu.wepan/1181071718# .

Bakken, Lori L.; Jennifer Sheridan; and Molly Carnes. 2003. "Gender Differences Among Physician-Scientists in Self-Assessed Abilities to Perform Clinical Research." *Academic Medicine*. 78(12):1281-6.

Working Papers:

Sheridan, Jennifer; Jo Handelsman; Amy Wendt; and Molly Carnes. 2007. "ADVANCE at the University of Wisconsin-Madison: Progress Towards Transforming the College of Engineering." Working paper.

Crone, Wendy. *Survive and Thrive: A Self-Assessment Guide for Untenured Faculty*. 2007 draft under review/tentative publication agreement. Cambridge University Press.

Pribbenow, Christine Maidl; Jennifer Sheridan; and Deveny Benting. 2007. "Extending the Tenure Clock: The Experiences of Faculty at One University."

Frehill, Lisa; Cecily Jeser-Cannavale; Priscilla Kehoe; Ellen Meader; Jennifer Sheridan; Abby Stewart; and Helena Svinglin. January 2005. "Toolkit for Reporting Progress Toward NSF ADVANCE: Institutional Transformation Goals."
<http://www.advance.nmsu.edu/Documents/PDF/toolkit1.pdf> .

Frehill, Lisa; Elena Batista; Sheila Edwards-Lange; Cecily Jeser-Cannavale; Jan Malley; Jennifer Sheridan; Kim Sullivan; and Helena Svinglin. May 2006. "Using Program Evaluation To Ensure the Success of Your ADVANCE Program."
<http://www.advance.nmsu.edu/Documents/PDF/toolkit2.pdf> .

Ford, Cecilia E. and Barbara A. Fox. 2005. "'Can I Make a Brief Comment on That': Reference and Social Organization In and Around an Extended Turn." In progress.

Dissertations:

Gunter, Ramona. 2007. "Laboratory Talk: Gendered Interactions and Research Progress in Graduate Science Education." Doctoral Dissertation: University of Wisconsin-Madison.

Presentations:

Carnes, Molly. November 29, 2007. ADVANCE Distinguished Lecture Series. "UW-Madison ADVANCE Program: Did we transform the institution in 5 years?" National Science Foundation. Washington, DC.

Carnes, Molly. November 27-28, 2007. Chair, NIH National Leadership Workshop on Mentoring Women in Biomedical Careers. National Institutes of Health. Washington, DC.

Handelsman, Jo. November 15-16, 2007. "Beyond Bias and Barriers: Strategies for an Equitable Hiring Process." University of Maryland-Baltimore County. Baltimore, MD.

Mathews, Nancy. November 13, 2007. Invited presentation, "Balancing Work and Life in the Academy in the 21st Century: A Changing Paradigm for Women?" 28th Annual meeting of the Society for Environmental Toxicology and Chemistry. Milwaukee, WI.

Carnes, Molly. November 4, 2007. Panelist, "Women's Academic Advancement: The Influence of Language." Association of American Medical Colleges Annual Meeting. Washington, DC.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. June, 2007. "Searching for Excellence & Diversity: Does

Training Faculty Search Committees Improve Hiring of Women?" American Society for Engineering Education (ASEE) Annual Meetings. Honolulu, HI.

Sheridan, Jennifer. June, 2007. Moderator, "Climate Surveys Panel." 6th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. June 2007. "Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?" Women in Engineering Programs & Advocates Network (WEPAN) 2007 Annual Meeting. Orlando, FL.

Carnes, Molly. May 23-25, 2007. "Women in Academic Medicine: Institutional Transformation Required" (Whittington Lecturer) and "Careers in Academic Medicine: Evaluation at Gatekeeping Junctions" (Medical Grand Rounds). University of Florida. Gainesville, FL.

Carnes, Molly. May 2-3, 2007. "NIH Director's Pioneer Award: Lesson in Scientific Review" and "Workshop: Lessons Learned in Shaping a Career" (Invited speaker). Brown University. Providence, RI.

Parker, Brenda. April 19, 2007. "NSF ADVANCE: Lessons for Geography Departments" (Panelist). American Association of Geographers Annual Meetings. San Francisco, CA.

Carnes, Molly and Jennifer Sheridan. April 11-12, 2007. "Overview of WISELI: Lessons Learned" and "Overview of WISELI: New Initiatives at UW-Madison" (Invited speakers). University of Minnesota. Minneapolis, MN.

Sheridan, Jennifer. March 27, 2007. "WISELI: Improve Departmental Climate for Women Faculty and Faculty of Color" (Poster). Showcase 2007. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. March 21-22, 2007. "Careers in Academic Medicine: Evaluation at Gatekeeping Junctions" (Medical Grand Rounds) and "Women Leaders in Academic Health Sciences: Institutional Transformation Required" (Invited speaker). University of Utah. Salt Lake City, UT.

Carnes, Molly. March 14, 2007. "Bias in Scientific Review: The Case of the NIH Directors Pioneer Award." Center for the Study of Cultural Diversity in Healthcare Training Seminar. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. February 22, 2007. "Words Matter: How Language Can Promote the Activation of Stereotypes" (Invited speaker). University of Illinois-Chicago. Chicago, IL.

Carnes, Molly. February 21, 2007. "Gender Bias in Scientific Review" (Invited speaker). Medical College of Wisconsin. Milwaukee, WI.

Sheridan, Jennifer. January 30, 2007. "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering." Center for Demography & Ecology Training Seminar. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer. January 17, 2007. "Beyond Bias and Barriers." Zonta International. Madison, WI.

Handelsman, Jo. November 10, 2006. "Best Practices and Gender Equity in the Academy." University of Lethbridge. Lethbridge, Alberta, Canada.

Handelsman, Jo. November 3, 2006. "Beyond Bias and Barriers: A Call to Arms about Women in Science" (Keynote). Cabinet 99 Symposium. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. October 29-30, 2006. "Diversity." Invited speaker, all-school assembly at Phillips Exeter Academy. Exeter, NH.

Handelsman, Jo. October 24, 2006. Briefing of NIH officials and the Women in Medicine committee on the "Beyond Bias" report. Bethesda, MD.

Sheridan, Jennifer. October 21, 2006. "Systemic and Institutional Barriers Women Face in Science and Engineering." "Encouraging Success in Science and Medicine" Symposium. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. September 26-27, 2006. Briefing of Senators Kennedy and Murray's aides on "Beyond Bias and Barriers" report from the National Academies Committee on Maximizing the Potential of Women in Academic Science and Engineering. Washington, DC.

Sheridan, Jennifer. August 13, 2006. "Why Does ADVANCE Need Sociologists?" Annual Meeting of the American Sociological Association. Montréal, Canada.

Carnes, Molly. August 3, 2006. "Activation of Gender-Based Stereotypes: Can This Undermine Women's Academic Advancement?" (Keynote Plenary Address). Annual Meeting of the Association for Education in Journalism and Mass Communication. San Francisco, CA.

Handelsman, Jo. June 2006. Workshop on Diversity. National Academies Summer Institute on Undergraduate Education in Biology. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. June 19, 2006. "Gender Bias in Scientific Review: A Case Study of the NIH Pioneer Award." Annual meeting of the Graduate Women in Science. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer. May 24, 2006. "Searching for Excellence & Diversity: An Evidence-Based Approach to Training Search Committees." Wisconsin Association for Equal Opportunity's 29th Annual Spring Conference. Milwaukee, WI.

Carnes, Molly. May 19, 2006. "Institutionalization—Cross Site Findings of Institutionalization Workgroup" (Discussant). 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Pribbenow, Christine. May 19, 2006. "Using Evaluation Data to Affect Institutional Change." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 19, 2006. "Collection and Use of Climate Survey Data at the UW-Madison." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. May 18, 2006. "Engaging Senior Female Faculty" Roundtable (Chair). 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 18, 2006. "Vilas Life Cycle Professorship Program." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Fine, Eve. May 18, 2006. "Climate Workshops for Department Chairs." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Fine, Eve and Jennifer Sheridan. May 17, 2006. "Searching for Excellence & Diversity—Training Workshops for Search Committees" (Poster). 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 17, 2006. "Lessons Learned from ADVANCE at the UW-Madison: What We Wish We Had Known...." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 17, 2006. "Data Collection and Reporting: The NSF Indicators." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Ford, Cecilia. May 15, 2006. "Methods and Challenges in the Study of Language in Interaction" (Invited speaker). Department of Linguistics. Stockholm University. Stockholm, Sweden.

Ford, Cecilia. May 11-14, 2006. "Studying Turn Taking in Workplace Meetings as 'Interdisciplinary/Applied' Conversation Analysis." International Conference on Conversation Analysis. Helsinki, Finland.

Carnes, Molly. April 22, 2006. "Gender Bias in Scientific Review: The Case of the NIH Pioneer Awards" (Keynote). Institute for Research and Education on Women and Gender, Graduate Student Conference. State University of New York-Buffalo. Buffalo, NY.

Sheridan, Jennifer. April 7, 2006. "Searching for Excellence & Diversity: An Evidence-Based Approach to Training Search Committees." 10th Annual Absence of Color Conference. Blackhawk Technical College. Janesville, WI.

Gunter, Ramona. April 3, 2006. "Men and Women Graduate Students' Experiences in Two Plant Science Laboratories." Fort Atkinson Branch of American Association of University Women Meeting. Fort Atkinson, WI.

Sheridan, Jennifer. March 17, 2006. "Climate and Institutional Change: ADVANCE Efforts to Improve Departmental Climate." Committee on Institutional Change-Women in Science and Engineering (CIC-WISE) Group Meeting. Chicago, IL.

Sheridan, Jennifer. March 14, 2006. "Searching for Excellence & Diversity: An Evidence-Based Approach to Training Search Committees." Wisconsin Technical College System Leadership Development Institute. Madison, WI.

Ford, Cecilia. March 8, 2006. "The Extraordinary Precision of Ordinary Talk: A Linguist's Perspective on Social Interaction." University Roundtable. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. February 23, 2006. "Understanding Our Biases and Assumptions: Male and Female" (Invited speaker). Stanford University. Stanford, CA.

Sheridan, Jennifer. February 20, 2006. "Methodological Challenges in Measuring Institutional Transformation, Part II: The Limits of Quantitative Indicators." 2006 American Association for the Advancement of Science Annual Meeting. St. Louis, MO.

Handelsman, Jo. February 9, 2006. "Boosts and Barriers to Women in Science." Barnard College. New York, NY.

Handelsman, Jo. January 11, 2006. "More Women in Science." Madison Chapter of TEMPO. Madison, WI.

Handelsman, Jo; Molly Carnes; Jennifer Sheridan; Eve Fine; and Christine Pribbenow. December 9, 2005. "NSF ADVANCE at the UW-Madison: Three Success Stories" (Poster). National Academies' "Convocation on Maximizing the Potential of Women in Academic Science and Engineering." National Academies of Science. Washington, DC.

Handelsman, Jo. November 29, 2005. Roundtable discussion with faculty and administrators on women in science. Colorado State University. Ft. Collins, CO.

Carnes, Molly. October 21, 2005. "Women and Leadership: When Working Hard is Not Enough." Wisconsin Women's Health Foundation Rural Women's Health. Madison, WI.

Carnes, Molly. October 17, 2005. "Women in Academic Leadership: Institutional Transformation Required" and "Advice From a Few Mistakes I've Made & Some Things I've Done Right (workshop)." 8th Annual Professional Development Conference Focus on Health & Leadership for Women. University of Pennsylvania School of Medicine. Philadelphia, PA.

Ford, Cecilia and Teddy Weathersbee. July 25, 2005. "Women's Agency and Participation: Feminist Research for Institutional Change." Symposium on Gender in Public Settings: Approaches to Third Wave Feminist Analysis at the 14th World Congress of Applied Linguistics Conference. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. July 11, 2005. "Diversity, Bias, and Change" (Invited speaker). Harvard Deans' Retreat. Harvard University. Cambridge, MA.

Ford, Cecilia and Barbara A. Fox. July 6-9, 2005. "Reference and Repair as Grammatical Practices in an Extended Turn" (Plenary address). 15th Annual Meeting of the Society for Text & Discourse. Amsterdam, Netherlands.

Ford, Cecilia. June 11-16, 2005. “Can I Make a Brief Comment on That’: Reference and Social Organization In and Around an Extended Turn” (Invited lecture). Symposium on Reference and Referential Form in Interactional Linguistics, organized by the Nordic Research Board. Helsinki, Finland.

Handelsman, Jo. June 9-10, 2005. “Sex and Science.” Howard Hughes Medical Institute New Investigator Training. Howard Hughes Medical Institute. Chevy Chase, MD.

Zweibel, Ellen. June 2, 2005. “Dual Career Initiatives at U. Wisconsin.” American Astronomical Society Annual Meeting. Minneapolis, MN.

Fine, Eve. May 20, 2005. “Working with Department Chairs: Enhancing Department Climate.” 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Handelsman, Jo. May 20, 2005. “Affecting Climate/Culture Change — Using Multiple Points of Entry in the Department of Kumquat Science.” 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. May 19, 2005. “Converting Academic Staff to the Tenure Track at the UW-Madison: A Viable Strategy?” 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. May 19, 2005. “Insights from Social Science Research on Achieving Academic Awards and Honors: A Local and a National Example.” 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 19, 2005. “Indicators and Dissemination: Question 2. What are the Outcomes of Institutional Processes of Recruitment and Advancement for Men and Women?” NSF ADVANCE P.I. Meeting, National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 19, 2005. “WISELI’s Life Cycle Research Grant Program.” 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. May 13, 2005. “Women in Academic Leadership: Has There Been Progress?” (Keynote). Women Against Lung Cancer Annual Meeting. Orlando, FL.

Carnes, Molly. May 9-10, 2005. “Incorporating Research on Biases and Assumptions into Search Committee Training;” “Women in the World of Academic Health Sciences: What’s Holding Us Back?” “Women in Academic Leadership: Has There Been Progress?” (Invited Speaker). University of Minnesota. Minneapolis, MN.

Ford, Cecilia. May 2005. “Language and Heteronormativity.” Workshop on Global Perspectives on Sexual Diversity and Gender Relations in a Changing World. Multicultural Student Center and International Student Services. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. April 26, 2005. “Women in Academic Leadership: Institutional Transformation Required” (Grand Rounds/Merritt Lecture). Indiana University School of Medicine. Indianapolis, IN.

Coppersmith, Sue. April 8, 2005. "NSF ADVANCE Institutional Transformation Award at UW-Madison." Mathematical and Physical Sciences (MPS) Advisory Committee Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. March 12, 2005. "Women Physicians and Leadership: The Issues, The Goals, The Process" (Keynote). Women's Physician Council of the American Medical Association. Washington, DC.

Carnes, Molly. March 4, 2005. "Women in the World of Medicine: What's Holding Us Back?" *Leadership Skills and Equity in the Workplace: Lessons Learned* Conference. Virginia Commonwealth University. Richmond, VA.

Handelsman, Jo. March 2, 2005. Informal workshop on bias and prejudice in academic evaluation. Oregon State University. Corvallis, OR.

Peercy, Paul. December 13, 2004. "NSF ADVANCE Institutional Transformation Award at UW-Madison." NSF ADVANCE Engineering Workshop. National Science Foundation. Washington, DC.

Carnes, Molly; Jo Handelsman; Lillian Tong; and Amy Wendt. December 8, 2004. "WISELI Update—Status of Our Efforts to Promote the Advancement of Women in Science and Engineering." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. November 17, 2004. "The Impact of Unconscious Biases on Evaluation: Relevance to the NIH Director's Pioneer Awards" (Invited presenter). Office of Research on Women's Health Roundtable. National Institutes of Health. Bethesda, MD.

Brennan, Patricia; Molly Carnes; Bernice Durand; Jo Handelsman; and Jennifer Sheridan. November 10, 2004. "Discovering the Experiences of Senior Women in Academic Science & Engineering." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. October 20, 2004. "Women in Academic Leadership: The Issues, the Goals, the Process" (Invited Speaker); "NSF ADVANCE Program at UW-Madison" (Invited Speaker). University of Illinois-Chicago. Chicago, IL.

Sheridan, Jennifer. October 14, 2004. "WISELI's Life Cycle Research Grant Program." Society of Women Engineers 2004 National Conference. Milwaukee, WI.

Carnes, Molly. October 13, 2004. "Searching for Excellence, Equity & Diversity: Unconscious Assumptions and Lessons From Smoking Cessation" (Invited Speaker). Virginia Commonwealth University. Richmond, VA.

Sheridan, Jennifer; Jo Handelsman; and Molly Carnes. August 14, 2004. "Assessing 'Readiness to Embrace Diversity': An Application of the Trans-Theoretical Model of Behavioral Change." Annual Meeting of the American Sociological Association. San Francisco, CA.

Ford, Cecilia. May 3, 2004. "'Having our ideas ignored': CA and a Feminist Project." American Association for Applied Linguistics Annual Conference. Colloquium entitled

“CA as Applied Linguistics: Crossing Boundaries of Discipline and Practice.” Portland, OR.

Spear, Peter. April 21, 2004. “Sustainability of ADVANCE Programs” (Panelist). NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Sheridan, Jennifer. April 21, 2004. “WISELI’s Study of Faculty and Academic Staff Worklife Surveys.” NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Durand, Bernice. April 20, 2004. Session Coordinator, “Senior Women and Advancement—A Facilitated Discussion” panel. NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Carnes, Molly. April 20, 2004. “Women from Underrepresented Groups” (Panelist). NSF ADVANCE National Conference. Atlanta, GA.

Sheridan, Jennifer. April 20, 2004. “ADVANCE Institutional Data: Using Institutional Data to Create Institutional Change.” NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Sheridan, Jennifer. April 13, 2004. “Study of Academic Staff Work Life at UW-Madison: Preliminary Results.” Wisconsin Center for the Advancement of Postsecondary Education Academic Staff Institute 2004. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer and Eve Fine. April 5, 2004. “WISELI Leadership Workshops” (Poster). Showcase 2004. University of Wisconsin-Madison. Madison, WI.

Pribbenow, Christine Maidl. March 22, 2004. “The Climate for Women Faculty in the Sciences and Engineering: Blueprints for Failure and Success.” WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer. February 17, 2004. “Implementing a Campus Climate Survey: Logistical Notes and Preliminary Findings.” Center for Demography & Ecology Training Seminar. University of Wisconsin-Madison. Madison, WI.

Ford, Cecilia. February 16, 2004. “Getting our Voices Heard: Patterns of Participation in University Meetings.” WISELI Seminar. Madison, WI.

Carnes, Molly. February 13, 2004. “Status of STEM Female Faculty Recruitment, Retention and Advancement” (Discussant). “Systemic Transformations in the Role of Women in Science and Engineering” Symposium, 2004 American Association for the Advancement of Science Annual Meeting. Seattle, WA.

Sheridan, Jennifer. January 12, 2004. “Women in Science & Engineering Leadership Institute at UW-Madison” (Panelist). AdvanceVT Inaugural Workshop, “ADVANCEing Women in Academe: Voices of Experience.” Virginia Tech. Blacksburg, VA.

Sheridan, Jennifer. November 17, 2003. “Faculty Worklife at the University of Wisconsin-Madison: Preliminary Findings.” WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Gunter, Ramona. October 20, 2003. "Science Faculty Talk about Self, Home, and Career." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Ford, Cecilia. September 16, 2003. "Gender and Talk: Looking Back and Looking Forward." Women's Health Forum of the UW-Madison Center for Women's Health and Women's Health Research. University of Wisconsin-Madison. Madison, WI.

Wendt, Amy. September 2003. "NSF ADVANCE at UW-Madison: WISELI Activities." 25th Anniversary of the Women in Computer Science and Engineering Organization. University of California-Berkeley. Berkeley, CA.

Sheridan, Jennifer; Molly Carnes; and Jo Handelsman. June 2003. "The University of Wisconsin-Madison ADVANCE Program: Progress to Date." Women in Engineering Programs & Advocates Network (WEPAN) 2003 Annual Meeting. Chicago, IL.

Stambach, Amy and Ramona Gunter. May 2003. "As Balancing Act and As Game: How Women and Men Science Faculty Experience the Promotion Process." Gender, Science, and Technology International Conference. Trondheim, Norway.

Ford, Cecilia. July 2003. "Gender and Language in/as/on Academic Science: Combining Research with a Commitment to Institutional Change." Perception and Realization in Language and Gender Research Conference. Michigan State University. East Lansing, MI.

Murphy, Regina. November 2002. "The Women in Science & Engineering Leadership Institute at UW-Madison." American Institute of Chemical Engineers (AIChE) Annual Meeting. Indianapolis, IN.

Handelsman, Jo and Molly Carnes. December 2002. "University of Wisconsin-Madison Women in Science and Engineering Leadership Institute." Plant Pathology Research Seminar Series. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly and Jo Handelsman. October 2002. "The NSF ADVANCE Program at the University of Wisconsin-Madison: An Interdisciplinary Effort to Increase the Recruitment, Retention, and Advancement of Women in Academic Departments in the Biological and Physical Sciences." Retaining Women in Early Academic Science, Mathematics, Engineering, and Technology Careers Conference. Iowa State University. Ames, IA.

Sheridan, Jennifer; Molly Carnes; and Jo Handelsman. April 3, 2002. "WISELI" (Poster). Showcase 2002. University of Wisconsin-Madison. Madison, WI.

Campus Visits/Dissemination of Programming:

"Searching for Excellence & Diversity" workshop, and "Implementing Workshops for Search Committees" workshop. September 20-21, 2007. University of Wisconsin-Whitewater. Whitewater, WI.

Meet for information re: implementing *Searching for Excellence & Diversity* workshops. September 7, 2007. Deborah Love (Vice President for Institutional Equity) and Anne

McCall (Associate Professor of French and Associate Dean, School for Liberal Arts). Tulane University.

Meet for information re: ADVANCE. May 18, 2007. Catherine Duckett (Project Manager, Office for the Promotion of Women in Science, Engineering, and Mathematics). Rutgers University.

Meet for information re: ADVANCE institutionalization. May 29, 2007. Trish Kalbas-Schmidt (Program Leader, ADVANCE). Utah State University.

Meet for information re: ADVANCE. April 11-12, 2007. Molly Carnes and Jennifer Sheridan travel to Institute of Technology, hosted by Roberta Humphries (Professor of Astronomy and Associate Dean for Academic Affairs). University of Minnesota.

Participation in training for facilitators for *Enhancing Department Climate: A Chair's Role* workshop. April 19, July 19, and August 30, 2007. Linda Siebert Rapoport (Director, Women in Science & Engineering System Transformation). University of Illinois-Chicago.

"Implementing Workshops for Search Committees." A train-the-trainer workshop for campuses wanting to implement training for faculty search committee chairs. March 5-March 7, 2007. Medical School and Danforth Campus. Washington University in St. Louis.

"Searching for Excellence & Diversity" workshop, and "Implementing Workshops for Search Committees" workshop. February 28-March 1, 2007. University of Wisconsin-Stout.

Meet for information re: ADVANCE and viewing of a *Searching for Excellence & Diversity* workshop. December 20, 2006. Catherine Mavriplis (Research Scientist: Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) and NOAA National Severe Storms Laboratory) and Sheena Murphy (Professor of Physics). University of Oklahoma.

Meet for information re: ADVANCE and viewing of a *Searching for Excellence & Diversity* workshop. September 27, 2006. Nancy Tarbell (Director: Pediatric Radiation Oncology and Center for Faculty Development) and Rebecca Starr (Administrative Director: Center for Faculty Development, Office for Women's Careers, and Office for Research Career Development). Massachusetts General Hospital.

"Implementing Workshops for Search Committees." A train-the-trainer workshop for campuses wanting to implement training for faculty search committee chairs. January 26, 2006. Wisconsin Technical College System. Technical college campuses represented: Blackhawk, Chippewa Valley, Fox Valley, Gateway, Lakeshore, Madison Area, Mid-State, Milwaukee Area, Moraine Park, North Central, Northeast, Southwest, Waukesha County, Western Wisconsin, Wisconsin Indianhead.

"Implementing Workshops for Search Committees." A train-the-trainer workshop for campuses wanting to implement training for faculty search committee chairs. June 14, 2005. University of Wisconsin (UW) System. UW campuses represented: Eau Claire,

Extension, Green Bay, La Crosse, Madison, Milwaukee, Oshkosh, Parkside, River Falls, Stevens Point, Stout, Whitewater.

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<http://www.the-scientist.com/news/home/53655/> .

“Looking Through the Glass Ceiling of Science: Women in Science and Engineering Continue to Struggle for Equality.” *The McGill Daily*. March 13, 2006.
<http://www.mcgilldaily.com/view.php?aid=4983> .

“WISELI Survey to Analyze Quality of Worklife for UW-Madison Faculty.” *Wisconsin Week*. January 17, 2006. <http://www.news.wisc.edu/12040.html>.

“The Gender Gap in Science is Shrinking at Universities.” *St. Louis Post-Dispatch*. October 23, 2005.

“Women in Science: Climbing the Career Ladder.” Talk of the Nation, *National Public Radio*. August 26, 2005.
<http://www.npr.org/templates/story/story.php?storyId=4817270>.

“Women Still Face Bias in Science.” *Financial Times*. August 19, 2005.

“A Woman’s Place in the Lab: Harvard Studies Efforts to Boost Female Faculty at U-Wisconsin.” *The Boston Globe*. May 1, 2005.
http://www.boston.com/news/local/articles/2005/05/01/campus_strives_to_boost_female_faculty/ .

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<http://select.nytimes.com/gst/abstract.html?res=FA0912FE3A5A0C768DDDAD0894DD404482> .

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<http://www.madison.com/archives/read.php?ref=/wsj/2005/03/27/0503260393.php> .

“Women in Medicine Said to Face Widespread Bias.” *Richmond Times Dispatch*. March 6, 2005.

“Working for Women.” *Wisconsin State Journal*. May 23, 2004.
<http://www.madison.com/archives/read.php?ref=/wsj/2004/05/23/0405190389.php> .

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<http://www.engr.wisc.edu/alumni/perspective/30.3/PerspectiveSpr2004.pdf> .

“Documentary Depicts Women in Science.” *Wisconsin Week*. February 24, 2004.
<http://www.news.wisc.edu/9465.html> .

“Valian Speaks Out About Gender Inequality.” *The Daily Cardinal*. October 6, 2003.

“Institute Plans Effort to Boost Women in Science.” *Wisconsin Week*. March 26, 2002.
<http://www.news.wisc.edu/7231.html> .

“Women in Science Get a Major Boost From NSF, UW-Madison.” *Wisconsin Week*.
October 19, 2001. <http://www.news.wisc.edu/6687.html> .

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Products Available to the Public:

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http://wiseli.engr.wisc.edu/Products/Sex_and_Science.pdf .

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http://wiseli.engr.wisc.edu/Products/top_10_tips.pdf .

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http://wiseli.engr.wisc.edu/initiatives/climate/Benefits_Challenges.pdf .

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<http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

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<http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

“WISELI: Advancing Institutional Transformation.” Documentary Video, first in series of three. Available online through *The Research Channel*:
<http://www.researchchannel.com/program/displayevent.asp?rid=2217> .

“Advancing Your Career through Awards and Recognitions: A Guide for Women Faculty in the Sciences & Engineering.” Brochure available in large quantities for 25¢/brochure plus mailing costs at <https://wisccharge.wisc.edu/wiseli/items.asp> .

“Reviewing Applicants: Research on Bias and Assumptions.” 2nd Edition. Brochure available online at:

http://wiseli.engr.wisc.edu/initiatives/hiring/BiasBrochure_2ndEd.pdf , and also available in large quantities for 254/brochure plus mailing costs by contacting at <https://wisccharge.wisc.edu/wiseli/items.asp> .

“Searching for Excellence and Diversity: A Guide for Faculty Search Committee Chairs.” Available in PDF format online at: <http://wiseli.engr.wisc.edu/initiatives/hiring/SearchBook.pdf> , and also available for purchase for \$4.00 per book plus mailing costs at <https://wisccharge.wisc.edu/wiseli/items.asp> .

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http://wiseli.engr.wisc.edu/NSF_SiteVisit/NSF_2002Report.pdf .

Grant Proposals in Support of WISELI:

NSF Partnerships for Adaptation, Implementation, and Dissemination (PAID) program. "ADVANCE Partnerships for Adaptation, Implementation, and Dissemination." PI: Jennifer Sheridan. Co-PIs: Molly Carnes, Jo Handelsman, Amy Wendt. Submitted January 27, 2006. Funded 1/1/07 – 12/31/09.

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Presentations of WISELI Activities to Campus Groups

Deans' Council—9/4/2002, 12/10/2003, 4/27/2005, 10/26/2005, 5/24/2006, 5/9/2007
CALS Department Chairs/Deans—10/28/2002, 1/26/2004, 12/1/2005, 1/23/2006
ENGR Department Chairs and Deans—11/6/2002, 2/4/2004, 1/4/2006
Medical School Clinical Science Chairs—10/14/2002, 3/9/2004, 1/10/2006
Medical School Basic Science Chairs—10/8/2002
Medical School Retreat—3/12/2005
Pharmacy Division Heads and Deans—4/12/2004, 12/15/2005
SVM Department Chairs and Deans—12/17/2002, 2/5/2004, 11/15/2005
L&S Natural Science Chairs—11/18/2002, 9/20/2004, 12/19/2005
L&S (All) Department Chairs—12/19/2005
SoHE Department Chairs and Deans—2/23/2004
Education Department Chairs and Deans—3/3/2004
Biological Science Deans—12/16/2003
Graduate School Deans—9/30/2004, 8/31/2005
University Committee—2/14/2005
UW System AA/EEO Program Directors—2/21/2005
Wisconsin Technical Colleges AA/EEO Officers—10/14/2005
Council for Non-represented Classified Staff (CNCS)—2/13/2006
Department of Plant Pathology—12/4/2002
Women in Physical Sciences—5/2003, 2/23/2004
Women in Engineering—3/18/2004
University League—11/24/2003
College of Engineering (CoE) Academic Affairs—11/21/2003, 10/11/2007
CoE Equity & Diversity Committee—4/14/2004
CoE Committee on Academic Staff Issues—4/28/2004
Committee on Women in the University—2/18/2004, 1/12/2005, 11/9/2005, 12/13/2006
Women Faculty Mentoring Program—9/19/2003
Plan 2008 Campus Resource Fair/Diversity Forum—5/7/2002, 9/21/2006, 9/28/2007
Showcase—4/3/2002, 4/5/2004, 3/27/2007
Women Faculty in Medical School—3/11/2005
Academic Staff Executive Council—3/6/2003, 3/5/2004, 2/25/2005
Office of Human Resources—2/16/2005

WEMPEC—2/11/2005
UW System EEO Officers—4/13/2005
William S. Middleton Memorial VA Hospital—3/17/2005, 4/26/2005
CIRTL/DELTA—2/2/2005, 9/20/2005
UW Teaching & Learning Symposium—5/24/2005, 5/17/2006
UW Foundation—8/23/2005, 11/10/2005, 12/7/2005
WISELI Seminar—10/20/2003, 11/17/2003, 2/16/2004, 3/22/2004, 11/10/2004,
12/8/2004, 3/9/2005, 9/22/2005, 11/10/2005
Provost Department Chair Training—8/31/2006, 11/3/2006, 8/31/2006,
12/1/2006, 8/30/2007
L&S Equity & Diversity Committee—12/15/2006
Women's Philanthropy Council—4/26/2006
Bacteriology Teaching Institute—10/13/2006
Campus Diversity Plan Oversight Committee—2/8/2007
Wisconsin Institute for Discovery Program Committee—3/26/2007
SMPH Committee on Academic Staff Issues—5/15/2007

NSF Informational Handout

- Objective** NSF ADVANCE at the University of Wisconsin-Madison was a five-year project to promote institutional transformation in science and engineering fields by increasing the participation, success and leadership of women faculty in academic science and engineering. The grant was administered through the **Women in Science & Engineering Leadership Institute (WISELI)**, an institutionalized research center.
- Constituents** Science and engineering faculty and staff in the **six schools** with the largest science and engineering faculty: College of Engineering, College of Letters & Sciences, College of Agricultural and Life Sciences, the School of Veterinary Medicine, the School of Pharmacy, and the School of Medicine and Public Health. We target **70 departments/units** and **1,200 faculty** in the biological and physical sciences.
- Activities** With a strong evaluation component in all that we do, our research and initiatives feed back to each other, improving our activities with each iteration.



Grant Programs

- Vilas Life Cycle Professorship Program
- Celebrating Women in Science & Engineering Grants

Workshops

- Workshops for Search Committee Chairs
- Climate Workshops for Department Chairs
- Workshops for PIs on Building Effective Research Teams (in development)

Other Initiatives

- Conversion of staff to tenure track
- Awards and honors for women faculty
- Leadership development for academic staff
- Conversations with senior women faculty
- Documentary video
- WISELI Seminar series
- WISELI website, listserv

Evaluative Research

- Interviews with women faculty and staff
- Study of Faculty and Academic Staff Worklife (climate survey)
- Resource studies
- Issue Studies
- Evaluation of existing programs at UW-Madison

Other Research

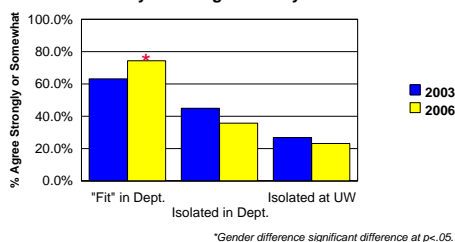
- Discourse analysis of women's communication strategies
- Ethnographic study of gendered interactions in the laboratory setting
- Study of Career Choices in Engineering
- Expanding Entrepreneurial Activity for Senior Women

Selected Results

Climate

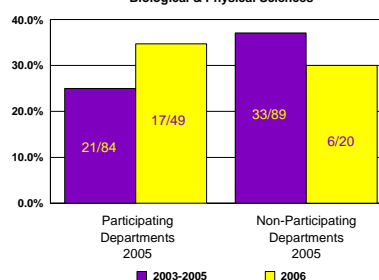
Isolation and "Fit"

Women Faculty in Biological & Physical Sciences



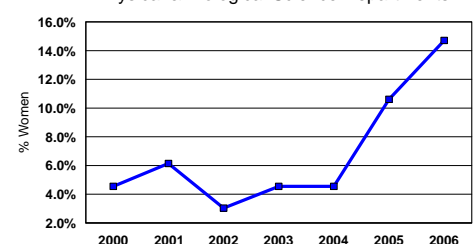
Hiring

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



Leadership

Percent Women Department Chairs
 Physical & Biological Science Departments



- Significant increase in the percentage of women faculty who felt they "fit" in their departments.
- Women faculty in bio. and phys. sciences reported less isolation in 2006 than in 2003, both in their departments and at UW-Madison.
- Departments sending at least one faculty member to our workshops for search committee chairs showed an increase in new women hires; non-participating departments showed a decrease in new women hires.
- At beginning of grant period (2002), there were only 2 women department chairs (of 68). By 2006, UW-Madison had 10 women chairs in the 68 biological and physical science departments.

Products (see <http://wiseli.engr.wisc.edu/products.htm>):

- Climate:**
- *Benefits and Challenges of Diversity*
 - *Enhancing Department Climate: A Chair's Role: Resources*
 - *Advice to the Top: Top 10 Tips for Academic Leaders to Accelerate the Advancement of Women in Science and Engineering*
 - *Sex and Science: Tips for Faculty*
 - *Study of Faculty Worklife at the University of Wisconsin-Madison* (survey instrument and results)
- Hiring:**
- *Recruiting Applicants: Research on Bias and Assumptions (2nd Edition)*
 - *Searching for Excellence and Diversity: A Guide for Faculty Search Committee Chairs*
- Selected Publications:**
- Gunter, R. and Stambach, A. 2003. "As Balancing Act and as Game: How Women and Men Science Faculty Experience the Promotion Process." *Gender Issues*. 21(1):24-42.
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 - Ford, C. In press. "Questioning in Meetings: Participation and Positioning." In *The Function of Questions in Institutional Discourse* (S. Erlich and A. Free, Eds.) Oxford University Press.
- Awards & Honors:**
- *Advancing Your Career through Awards and Recognitions: A Guide for Women Faculty in the Sciences & Engineering*
- Documentary Videos:**
- *WISELI: Advancing Institutional Transformation*
 - *WISELI: Building on a Legacy*
 - *WISELI: FORWARD with Institutional Transformation*

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Annual Report 2007

Co-Directors, *University of Wisconsin-Madison*

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Dr. Jo Handelsman, Howard Hughes Medical Institute Professor of Plant Pathology and Bacteriology, Chair of Bacteriology
Dr. Amy Wendt, Professor of Electrical and Computer Engineering and co-Chair, Electrical and Computer Engineering
Dr. Jennifer Sheridan, WISELI

April, 2008

Table of Contents

<i>I. Executive Summary: Major Accomplishments in Year 6</i>	<i>1</i>
<i>II. Activities: Status of WISELI Initiatives</i>	<i>2</i>
A. Workshops	2
B. Grant Programs	3
C. Research & Evaluation Projects	4
D. Networking Activities.....	5
E. Dissemination Activities	6
<i>III. Changes in WISELI From 2006 to 2007</i>	<i>8</i>
A. Initiatives	8
B. Personnel	9
C. Funding Sources	10
<i>IV. Changes in Status of Women at UW-Madison from 2006 to 2007.....</i>	<i>10</i>
A. Hiring	10
B. Tenure	11
C. Awards and Honors.....	11
D. Leadership	12
<i>V. WISELI Management and Infrastructure.....</i>	<i>12</i>
A. Funding Sources	12
B. Personnel.....	13
C. Advisory Council.....	13
D. Internal Partners	13
<i>VI. Financial Report.....</i>	<i>14</i>
<i>VII. Expected WISELI Directions for 2008.....</i>	<i>15</i>
A. Initiatives.....	15
B. Personnel.....	15
C. Funding.....	15
E. Center Structure.....	15
<i>VIII. WISELI Publications and Presentations, 2007</i>	<i>16</i>

I. Executive Summary: Major Accomplishments in Year 6

2007 was a year of transition for WISELI. Although our ADVANCE: Institutional Transformation award was to end in December 2006, we obtained a six-month no-cost extension, and used the remaining funds to both wrap up evaluation of the ADVANCE project, and begin a new project that we originally outlined in the ADVANCE: IT proposal but never developed—workshops for PIs of laboratories. At the end of the no-cost extension period in June 2007, Jo Handelsman stepped down from her position as WISELI co-Director, in order to accept a new position as chair of the Bacteriology department. Amy Wendt, Professor of Electrical & Computer Engineering (and co-Chair of that department) agreed to serve as co-Director of WISELI in her place. Molly Carnes remains the other co-Director of WISELI.

Other changes in 2007 include a reduction in staff (particularly evaluation staff) due to the end of the ADVANCE funding; a move to new office space; dissolution of the Leadership Team and the External Advisory Team; addition of new projects and deletion of old ones; and a new conceptualization of WISELI's place in the expanding network of diversity-in-STEM-related programs at UW-Madison. In addition, dissemination of our hiring workshops outside of the UW-Madison became a larger part of our activities than we expected. Some of the highlights from 2007 include:

- For the first time, WISELI was invited into departmental meetings to implement a full *Searching for Excellence & Diversity* workshop. This provided an excellent opportunity to bring issues of diversity to an even wider audience of UW-Madison faculty.
- WISELI piloted a workshop for new PIs entitled *Running a Great Lab: Workshops for Principal Investigators*.
- We trained six new faculty members to serve as facilitators for the *Enhancing Department Climate: A Chair's Role* workshops.
- We secured a 20% increase in the Vilas Life Cycle Professorship budget, enabling us to serve even more faculty in need with this program.
- WISELI embarked on an exit interview study for the entire campus.
- We presented four *Implementing Training for Search Committees* train-the-trainers-style workshops at other campuses in 2007.
- WISELI organized the first Symposium in honor of Denice D. Denton, launching what will become an annual event.
- WISELI moved to a wonderful new location—2107 Mechanical Engineering Building.

As we move into a new period of refining and enhancing our programs and research agenda, we are excited to take on new initiatives while shedding old programs that were less effective than we had hoped. WISELI will be reorganizing in 2008, with new opportunities for collaboration with faculty, staff and students all across campus. It is an exciting time, and we are grateful for the continued support of the campus—especially the Office of the Provost, the College of Engineering, and the School of Medicine and Public Health—as we transition from an NSF-supported center to a center with mixed grant and campus support.

II. Activities: Status of WISELI Initiatives

A. Workshops

Searching for Excellence & Diversity: A Workshop for Search Committee Members

- WISELI continued to implement the *Searching for Excellence & Diversity* workshops in 2007. In total, this year we have run 11 workshops and trained 97 faculty members, and 153 persons overall, including staff and administrators. This is a marked increase over the numbers of faculty trained in 2006 (N=57).
 - Two departments—Chemistry and Art—requested workshops for their entire faculty for the first time in 2007. Preliminary feedback indicates that doing a workshop within a department does facilitate a department-wide discussion of hiring practices, and does change the diversity of the pool, although the diversity of final hires does not seem to be affected.
 - We have begun using the materials and workshop to train employees who hire primarily academic staff. We ran a full workshop for a staff unit (University Health Services), and ran a workshop for the Provost's Office, inviting people who primarily chair high-level administrative searches.
 - With the departure of Vice Provost Bernice Durand from the Office of the Provost, WISELI assumed responsibility in 2007 for the campus-wide hiring workshops for the first time. These workshops included both faculty and academic staff. We found that the materials do seem to translate well to academic staff searches.

Enhancing Department Climate: A Chair's Role

- In February through August of 2007, Jo Handelsman and Eve Fine created a workshop to train interested faculty to be facilitators of the *Enhancing Department Climate* workshops, and 6 UW-Madison faculty participated.
- A new *Enhancing Department Climate: A Chair's Role* workshop series was initiated in Fall of 2007, with one of the new facilitators leading the discussions. Response was somewhat lower than expected, with five departments participating in the fall session (3 in biological/physical science departments.) Unfortunately, two of the participating chairs (one in physical science, one in humanities) did not implement the survey portion of the workshop, so we cannot count their attendance at the meetings as full "participation" in the workshop.
- In 2007, two departments that had participated in previous climate workshops chose to re-survey their departments.
- A faculty member in a department that had previously participated in this workshop filed an open-records request to obtain a copy of the confidential report of results received by the department chair. The Chair denied the request, and as a result, the faculty member filed a lawsuit to obtain the report. As of the end of 2007, this case was still unresolved. We speculate that this may be dampening not only workshop participation, but also the willingness of Chairs to perform the department climate survey.

Running a Great Lab: Workshops for Principal Investigators

- Using the remains of the ADVANCE funding, a postdoctoral scholar (Ainslie Little) was hired in January 2007 to begin designing a new workshop series for PIs. A design team was gathered, and a pilot workshop began in Fall 2007, targeting new faculty.
- Forty-three faculty were invited to participate in the 8-session pilot workshop series, and over the course of the pilot 14 faculty attended at least one session, with 8 faculty participating regularly. Session content included:
 - What makes a great lab?
 - Getting the most out of your startup package
 - Hiring great employees
 - Creating a positive lab climate
 - How the money works
 - Mentoring students and employees
 - Professional development
 - Nuts and bolts of lab management
- Four sessions ran in 2007, with the remaining four in early 2008. At the conclusion of the entire series, a formative evaluation will be performed, and the workshop series will be revised before implementation in Fall 2008.

B. Grant Programs

Vilas Life Cycle Professorship Program

- The *Vilas Life Cycle Grants* continued in 2007, funded by the Estate of William F. Vilas in the amount of \$372,000 (an increase of 20% over the 2006 amount). Two rounds of awards were considered. 19 faculty and staff members applied for the awards, and 11 awards were made.
 - Because the applications in 2007 were overwhelmingly fundable, all Vilas funds were depleted before the third round of applications, and that third round was therefore canceled.
- Dr. Cecilia Ford stepped down as an evaluator of Vilas applications. She was replaced by Dr. Jane Zuengler, Professor of English.
- In spring of 2007, an evaluation report was presented to the Trustees of the Vilas Estate. Such a report will be continued annually to encourage the Trustees to continue funding the program. This report is available online at:
http://wiseli.engr.wisc.edu/initiatives/lifecycle/VLCP_Report_2007_External.pdf.

Celebrating Women in Science & Engineering Grant Program

- In 2007, the College of Agricultural and Life Sciences began contributing to this program, increasing the annual budget to \$12,000. The College of Engineering, the College of Letters & Sciences, the School of Veterinary Medicine, the School of Medicine & Public Health, and the School of Pharmacy continue to contribute \$2,000 annually.
- In 2007, 9 awards were made. Four of these awards went to first-time recipients of the funds.

C. Research & Evaluation Projects

Study of Faculty Worklife at UW-Madison

- Dissemination of findings from the 2006 *Study of Faculty Worklife* continued in 2007. Results were presented to 5 campus groups and at 4 professional conferences or meetings. They were also used to produce WISELI's final summative evaluation report (http://wiseli.engr.wisc.edu/initiatives/researcheval/FINAL_WISELI_Sum_Eval_Report.pdf) and the ADVANCE: IT Final Report for the National Science Foundation (http://wiseli.engr.wisc.edu/initiatives/researcheval/Final_Report_Final.pdf).

In-Depth Interviews with Women Faculty and Staff in STEM

- Although the interviews and data coding were primarily completed in 2006, analysis continued into 2007. These data contributed primarily to the Final Summative evaluation report, and also to a presentation at the American Association of Geographers Annual meeting.
- This research project is complete.

Exit Interview Study

- In late 2006, the Office of the Provost requested that WISELI take over the campus exit interview process, in order to standardize the interviews across campus. Data collection began in Fall 2007, with the resulting report due in early 2008.

“Women Speaking Up”: Gender & Discourse

- Dr. Cecilia Ford's work has culminated in an accepted book contract from Palgrave/Macmillan for *Women Speaking Up: Getting and Using Turns in Workplace Meetings*. The volume is in press, with an expected release date of mid-2008.

Gendered Interactions in Labs

- Ramona Gunter completed her dissertation using the data gathered for this study in January 2007. The dissertation is entitled “Laboratory Talk: Gendered Interactions and Research Progress in Graduate Science Education.”
- This research project is complete.

Gender Equity Indicators at UW-Madison

- Jennifer Sheridan continues to collect the data formerly required by the National Science Foundation, in order to track the status of women at UW-Madison. Margaret Harrigan in the Office of Academic Planning and Analysis; Eden Inoway-Ronnie in the Office of the Provost, and Lori Hayward in the Office of the Secretary of the Faculty are instrumental in the collection and reporting of these data, presented annually in WISELI reports and on the WISELI website.
- A summary of trends in the NSF indicators was produced in 2007 (http://wiseli.engr.wisc.edu/initiatives/researcheval/By_the_Numbers.pdf). As the period of NSF ADVANCE: IT funding is complete, some indicators will be discarded in the future; see the report for a complete list.

D. Networking Activities

Listserv

- The WISELI listserv has become a reliable way to communicate with our affiliates. Other organizations (e.g., the Provost's Office, the Wisconsin Women in Higher Education Leadership, CIRTLD/DELTA, and others) have been asking us to post notices to our listserv to further inform our affiliates of events and opportunities. At the end of December, 2007, we have over 290 affiliates on our listserv.

Website

- The WISELI website is one of our primary dissemination tools, and it has a high number of visitors. In 2007 we enhanced the website, developing the "WISELI Online Bookstore." This secure website allows visitors to order our products either with a credit card or via an invoice. These updates made the process to order our materials much clearer and also allows us to track with more precision exactly how many of our products are ordered by other campuses. The direct link to the "WISELI Online Bookstore" is <https://wisccharge.wisc.edu/wiseli/items.asp>, and a visitor can find it from the main WISELI website easily by clicking on this button:



- Traffic continues to remain high on the WISELI website in 2007. We received around 5,700 hits in 2007, which averages to almost 500 a month. Traffic increases when ADVANCE grant deadlines approach, or when women in science make national news (e.g., release of the *Beyond Bias and Barriers* report in 2006, or the Larry Summers remarks in 2005). Visitors to our site come mostly from the US (86.4%), but WISELI gets hits from across the globe. 4.5% of our hits come from Europe (especially Great Britain and Ireland); 1.9% of our hits are from Asia (India and Hong Kong have the most); 1.6% from Canada; 1.6% from Australia and New Zealand; 0.6% from the Middle East (especially Pakistan and Iran); 0.2% are from Mexico and South America (Mexico and Brazil have the most); and 0.2% are from Eastern Europe (Lithuania and the Russian Federation account for the most hits in Eastern Europe.) 2.4% of our hits are from unknown countries.
- An important element of our website include our online "library." The library was updated in June 2007, and contains over 1,150 entries.

Denice D. Denton Distinguished Lecture Series

- The Denice D. Denton Memorial Symposium became the first event in the newly-created *Denice D. Denton Distinguished Lecture Series*. The event was funded by the Office of the Chancellor and by the Maria Mitchell Association, and took place on July 29-30, 2007. Over 80 attendees enjoyed a keynote by Donna Shalala and comments from several of Dr. Denton's closest friends and colleagues. Outcomes from this event are posted online at: http://wiseli.engr.wisc.edu/events/denton_symposium2007.htm.

- Speakers for both 2008 (Dr. Nancy Hopkins) and 2009 (Joan Williams) were secured in 2007.

E. Dissemination Activities

Train the Trainers: *Implementing Training for Search Committees*

- WISELI continued to offer our *Implementing Training for Search Committees* workshops to other campuses in 2007. In addition, we allowed visitors from other campuses to observe our workshops and consult with us on campus as requested. In 2007, we worked with:
 - University of Wisconsin-Stout. Menomonie, WI. February 28-March 1, 2007.
 - Washington University in St. Louis. Medical School and Danforth Campus. March 5-March 7, 2007.
 - Catherine Duckett (Project Manager, Office for the Promotion of Women in Science, Engineering, and Mathematics). Rutgers University. May 18, 2007. (Visit to UW-Madison for consultation).
 - Deborah Love (Vice President for Institutional Equity) and Anne McCall (Associate Professor of French and Associate Dean, School for Liberal Arts). Tulane University. September 7, 2007. (Visit to UW-Madison for consultation).
 - University of Wisconsin-Whitewater. Whitewater, WI. September 20-21, 2007.
- The materials for these hiring workshops continues to be disseminated at institutions across the U.S. In 2007, we distributed our brochures and/or hiring guidebooks to 33 institutions, including:

Allegheny College	Michigan State University	University of Illinois-Chicago
Boston University	Mississippi State University	University of Illinois-Urbana Champaign
Bristol Community College (MA)	Ohio State University	University of Iowa
Brown University	Onondaga Community College (NY)	University of Maryland-Baltimore County
Children's Hospital Boston	Oregon Health and Science University	University of Minnesota
Community College of Spokane (WA)	Pennsylvania State University	University of Oklahoma
Drexel University	Purdue University	University of Texas-El Paso
Harper Community College (IL)	Rutgers University	University of Wisconsin-Eau Claire
Indiana University	Syracuse University	University of Wisconsin-Stout
Loyola Marymount University	Tulane University	Utah State University
Marshall University	University of Chicago	Washington University in St. Louis

- We also distribute hiring workshop materials at conferences; it is unclear which institutions received the materials in this case. At least 300 copies of the “Bias and Assumptions” brochure were distributed at the following meetings:
 - SET-Routes conference in Heidelberg, Germany in May 2007
 - WEPAN conference in Orlando, FL in June 2007
 - ASEE conference in Honolulu, HI in June 2007
 - American Association of Medical Colleges annual meeting in November 2007
 - “National Leadership Workshop on Mentoring Women in Biomedical Careers” held at the National Institutes of Health in late November 2007.

Train the Trainers: *Enhancing Department Climate: A Chair’s Role*

- WISELI developed a “Climate Workshop Facilitators’ Training Institute” as a method to train new facilitators for our *Enhancing Department Climate* workshop series. We implemented this training in spring and summer of 2007, and allowed a visitor from the University of Illinois-Chicago (UI-Chicago) to participate as well, as a means to disseminate this program to that campus. Linda Siebert Rapoport, Director of the Women in Science & Engineering System Transformation (WISEST) at UI-Chicago, attended on April 19, July 19, and August 30, 2007.

WISELI Documentary Videos

- Filming, script writing, and editing for our third and final video was completed in 2007. The video is available on the Research Channel website:
<http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Course Development

- WISELI co-PI Molly Carnes, in collaboration with Dr. Sarah Pfatteicher (Engineering), Prof. Trina McMahon (Engineering), and Prof. Teri Balser (CALS) developed a new course to be available in spring semester 2008. Entitled “Women and Leadership in Medicine, Science, and Engineering”, it will explore the current scholarship on women’s leadership in STEM fields. This course will be cross-listed in Soil Science and Women’s Studies.

Publications & Presentations

- In 2007, WISELI-affiliated researchers published 6 articles in peer-reviewed journals or conference proceedings. In addition, another four articles are accepted and either in press or under revision. See Section VIII for a detailed list of 2007 publications and presentations.
- In 2007, WISELI-affiliated researchers presented papers or posters at 3 conferences in 2007 (two were peer-reviewed). See Section VIII for a detailed list.

Other Dissemination Activities

- **Invited Talks.** WISELI-affiliated personnel gave at least 16 invited talks in 2007 on WISELI-related research and/or topics related to women in science. Some talks were at national funding agencies (NSF, NIH); some were for professional societies (Society for Environmental Toxicology & Chemistry, American Association of Geographers); and some were at other universities (Brown, Minnesota, Utah, Florida). A full list is available in Section VIII.
- **Participation on advisory boards.** Molly Carnes serves on the Advisory Board for the ADVANCE programs at University of Illinois-Chicago, and also on the Brown University ADVANCE advisory board. Jennifer Sheridan has been asked to serve on the advisory board for the North Dakota State University ADVANCE program if they are funded in 2008, as well as the START-IT program at the University of Wisconsin-La Crosse.
- **Advice/materials to individuals.** Over 69 groups or institutions (including some of our fellow ADVANCE: IT institutions) contacted WISELI in 2007 for advice, to request materials, or for some other reason pertaining to institutional transformation. The most common reasons for contact include: Information re: a specific WISELI program or effort (e.g., climate surveys, hiring workshops, climate workshops, Life Cycle Grants), request for our brochures or guidebook, administrative help for another ADVANCE institution, invitations to give a talk, general information useful for women in science (e.g., where to find the Donna Nelson data, a request for a citation, questions about the NSF indicators), advice for building an ADVANCE/PAID/START proposal, permission to use our materials, and more.

III. Changes in WISELI From 2006 to 2007

A. Initiatives

- **Hiring workshops.** Two new developments in WISELI's ongoing commitment to provide workshops for search committees developed in 2007. First, we had requests to provide department-based workshops for the first time. We ran a 2-session hiring workshop for the Department of Chemistry, and we ran two, 1-session workshops for the Art Department. These workshops went well, and we will be closely watching the hiring outcomes in these departments. One advantage to working with an entire department is that we have the opportunity to change the conversation because all faculty have been exposed to the ideas presented in the workshops, rather than relying on just one or two to deliver the messages. A disadvantage is that the natural sharing of different practices that occurs in a mixed group does not happen when only attendees from one department are present, leading to a defensiveness about the process in that department that would be dissipated if more departments were present.

The second development is that WISELI took over the all-campus workshops in 2007, with the retirement of Bernice Durand (Vice Provost for Climate and Diversity), who had previously facilitated the all-campus workshops. We ran four such all-campus workshops, which were attended by both faculty and staff. The inclusion of academic staff, and more emphasis on local searches for academic and classified staff, was a

potential worry to the flow of the workshops. This ended up to not be a problem and in fact we are encouraged that the material covered in the workshop is applicable to both faculty/national and staff/local searches.

- **Climate workshops.** With the departure of Jo Handelsman as WISELI co-Director, we trained new faculty facilitators for the *Enhancing Department Climate: A Chair's Role* workshops. In 2007, we began our first workshop series with a new facilitator (Denise Ney), which worked well. More workshops with different facilitators are planned for 2008.
- **PI workshops.** To use the remaining funds from our NSF ADVANCE grant, WISELI hired Dr. Ainslie Little, a postdoctoral researcher, to convene a design team and assemble the curriculum for a pilot workshop to train new PIs to manage great labs. The pilot workshop series began in September 2007, with eight sessions planned for the 2007/08 academic year. At the end of the pilot workshop series, a formative evaluation is planned.
- **Website.** With the ending of the NSF ADVANCE funding and the beginning of our PAID award, important changes are needed to the WISELI website to make it even more useful and accessible. In 2007 we added a new "online bookstore" section, to make it easier to order WISELI materials such as our brochures, guidebook, and videos. Customers can use a credit card to order these materials now. The website itself is under revision to provide direct links to more of our research and evaluation papers, and to streamline some of the menu options. These updates will continue in 2008 and beyond.
- **Denice D. Denton Distinguished Lecture Series.** Denice D. Denton was an important figure for women faculty on the UW-Madison campus. During her time here, she organized women faculty into support groups that still exist today, and which had an important impact on the ADVANCE grant here at UW-Madison because this core group of women faculty had already been working on the issues for so long. Upon her death in 2006, several of Dr. Denton's closest friends formed the "Committee Honoring Denice's Memory", and began raising funds for a student scholarship, and also for an annual "Denice D. Denton Distinguished Lecture Series." WISELI will administer the Lecture Series annually. In 2007 we held our first event, featuring a keynote by Donna Shalala. See <http://wiseli.engr.wisc.edu/denton/index.htm> for more information.
- **Exit Interview Study.** At the request of the Office of the Provost, WISELI has been commissioned to perform formal exit interviews for all faculty who leave the campus prior to retirement. Data collection began in 2007, with a final report due in early 2008. This is expected to be an annual activity for WISELI.

B. Personnel

- **Directors.** WISELI co-Founder and co-Director Jo Handelsman stepped down in July 2007, at the official end of the NSF ADVANCE grant. She embarked on a new role as Department Chair of the Bacteriology Department. Dr. Amy Wendt, Professor of Electrical & Computer Engineering and co-Chair of that department, replaced Dr. Handelsman. Molly Carnes remains co-Director of WISELI.
- **Staff.** Due to the end of the ADVANCE grant, two evaluators hired just for collecting summative data ended their appointments: Brenda Parker and Kathy O'Connell. For the first six months of 2007, WISELI added Aislie Little to our staff, to help develop the PI

training pilot workshop. Ainslie's appointment ended in July 2007. Other staffing (Jennifer Sheridan, Eve Fine, Christine Pribbenow, Deveny Benting, Carol Sobek, Jessica Winchell) remained the same.

- **Leadership Team.** The WISELI Leadership Team was disbanded at the end of the ADVANCE grant. A new team ("WISELI Advisory Council") will be convened in 2008.
- **External Advisory Team.** The External Advisory Team (EAT) was also disbanded in 2007, at the end of the ADVANCE grant. It is unclear whether WISELI will reconvene an external advisory team. Rather, an Internal Advisory Committee made up primarily of campus leaders and administrators will provide oversight for the new WIRED institute (see below); this Committee will likely replace the WISELI EAT.

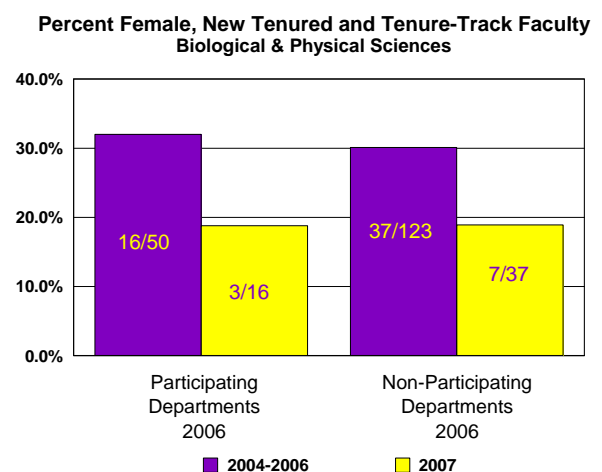
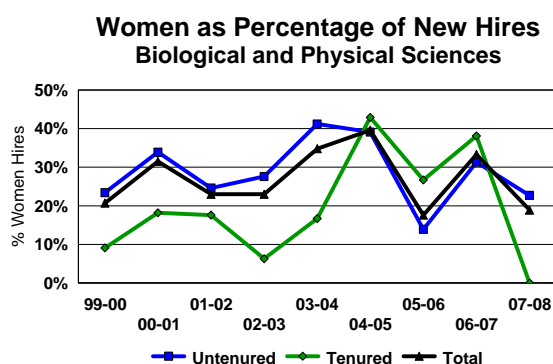
C. Funding Sources

- In 2007, WISELI changed from being primarily funded through the NSF ADVANCE program, to being primarily funded through contributions from campus. NSF grants currently account for only 37% of the total WISELI budget after the end of the IT grant in July 2007. Details on funding levels from various units on campus are detailed below, in Sections V and VI.

IV. Changes in Status of Women at UW-Madison from 2006 to 2007

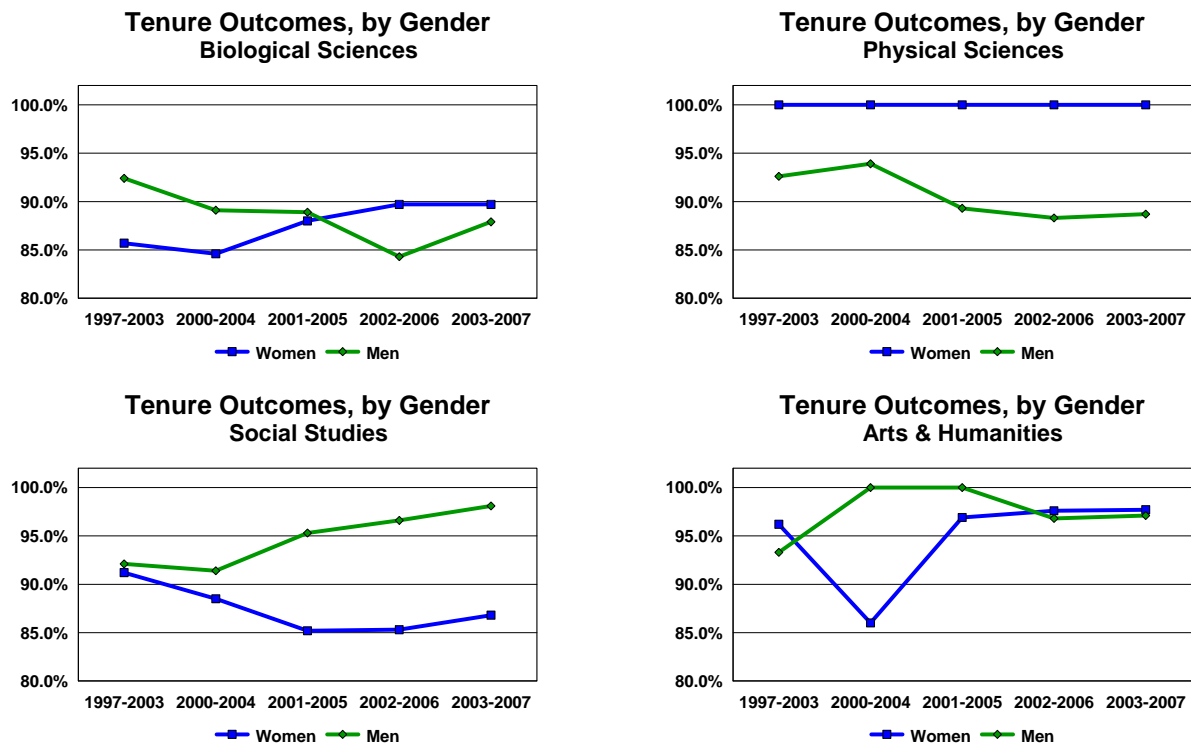
A. Hiring

- Hiring of women in STEM decreased in 2007. No senior women in biological and physical sciences were hired—this has not happened since we began tracking new hires. Furthermore, we found no relationship between hiring of women and participation in WISELI workshops for first time.



B. Tenure

- Tenure rates by cohort are equitable by gender, but the numbers of women and men *denied* tenure over an 8-year period is unequitable for the Biological Sciences and Social Studies divisions.



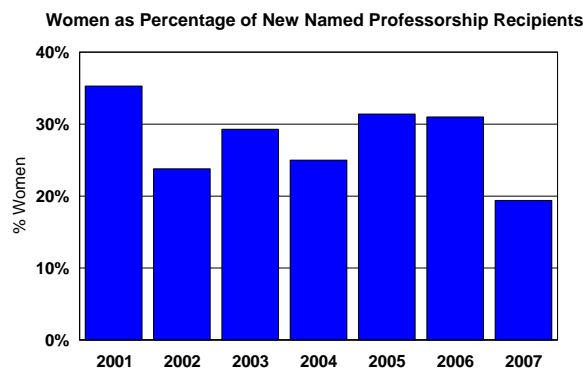
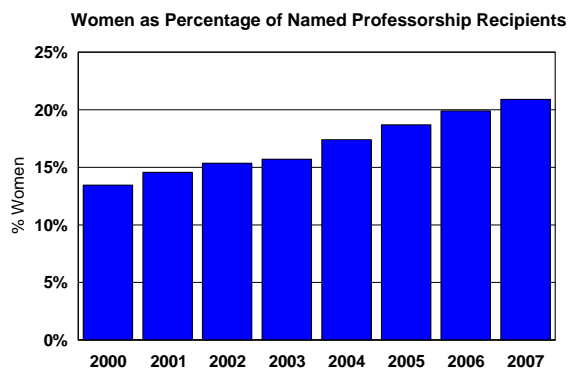
Tenure Denials* at Divisional Committee Level, 2000-2007

	Women						Men						% Female	
	# Reviewed	Denials/Deferrals	Dean Reversal	Later Promotion	Total Denials	% Denied	# Reviewed	Denials/Deferrals	Dean Reversal	Later Promotion	Total Denials	% Denied	Reviewed	Denied
Biological Sciences	47	9	1	1	7	15%	92	10	3	4	3	3%	34%	70%
Physical Sciences	15	0	0	0	0	0%	93	10	0	5	5	5%	14%	0%
Social Studies	54	8	1	0	7	13%	73	1	0	0	1	1%	43%	88%
Arts & Humanities	56	2	0	0	2	4%	49	1	0	0	1	2%	53%	67%

* Some denials/deferrals from recent years may not have been re-considered yet. Some reversals may have occurred in 2000-2003, but data are incomplete for that time period. Thus, these data may OVERESTIMATE total denials in this time period.
SOURCE: Secretary of the Faculty

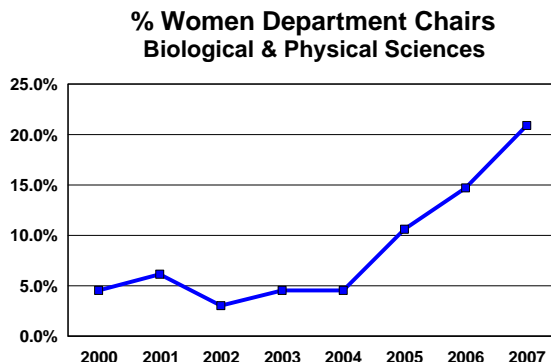
C. Awards and Honors

- Overall the percentages of honors and awards (e.g., named professorships) going to women is slowly increasing over time. However, in 2007, any new named professorships that were awarded on campus went to women at a much lower rate than in the past.



D. Leadership

- The numbers and percentages of women department chairs continues to increase rapidly in the STEM disciplines.



V. WISELI Management and Infrastructure

A. Funding Sources

- Grants.**
 - The NSF ADVANCE Institutional Transformation award officially ended on 6/30/2007.
 - The NSF PAID award began on 1/1/2007; however, spending was postponed until 7/1/2007. The funds from PAID primarily support Eve Fine, Deveny Benting, and provide some support for Molly Carnes, Jo Handelsman, and Amy Wendt.
 - New grants were applied for in 2007 that would run through WISELI, and support some of WISELI's programming. An NSF AGEF (Alliance for Graduate Education and the Professoriate) proposal was submitted in Fall 2007; co-PIs included Molly Carnes. In addition, Jennifer Sheridan participated as a co-PI on an NSF PAID grant, in collaboration with colleagues from the Committee on Institutional Cooperation (CIC).
- Campus Support.**
 - The Office of the Provost is providing a large amount of funds to the WISELI program. Funds provide support for 100% of Jennifer Sheridan's salary. In

addition, the campus provides \$55,000 annually until 2009. These funds support Deveny Benting, Jessica Winchell, and miscellaneous travel and supply expenses.

- The School of Medicine and Public Health is providing \$70,000, renewable annually. These funds are used to pay the salary of Christine Pribbenow, and Molly Carnes. \$2,000 of the funds are used to support the Celebrating Women in S&E grant program.
- The College of Engineering is providing \$33,922 annually (which includes 25% of the salary for WISELI grants administrator Carol Sobek), as well as providing WISELI with excellent new space in the newly-remodeled Mechanical Engineering Building. These funds are used to pay for supplies and travel for WISELI employees, and \$2,000 is set aside for the Celebrating Women in S&E grant program.
- The College of Agricultural & Life Sciences, the College of Letters & Science, the School of Pharmacy, and the School of Veterinary Medicine all provide \$2,000 per year in support of the Celebrating Women in S&E grant program.
- **Income-Generating Activities.**
 - Sales of our brochures and guidebooks, and presentation of our hiring workshops to outside universities, have generated almost \$40,000 in additional income for WISELI in 2007.

B. Personnel

Co-Directors: Molly Carnes, Jo Handelsman (January-June), and Amy Wendt (July-December)

Executive & Research Director: Jennifer Sheridan

Evaluation Director: Christine Maidl Pribbenow

Researcher: Eve Fine

Research Specialist: Deveny Benting

Grants & Contracts Specialist: Carol Sobek

Project Assistant: Jessica Winchell

Graduate Student Interns: Anuschka Neuwald and Vansa Shewakramani

C. Advisory Council

In Development.

D. Internal Partners

In Development.

VI. Financial Report

2007 Financial Report

	Account						Total
	101 190240-4	144-KU26 190240-4	144-PW16 190240-4	150-E874 190240-4	133-JM60 190240-4	136 190240-4	
Income							
NSF		\$271,773	\$499,991				\$771,764
College of Engineering	\$23,922			\$10,000			\$33,922
Office of the Provost	\$117,381						\$117,381
Office of the Chancellor					\$15,000		\$15,000
School of Medicine & Public Health	\$70,000						\$70,000
College of Agriculture & Life Sciences	\$2,000						\$2,000
School of Veterinary Medicine	\$2,000						\$2,000
College of Letters & Sciences	\$2,000						\$2,000
School of Pharmacy	\$2,000						\$2,000
Foundation Fund					\$200		\$200
Income Generating Activities						\$38,097	\$38,097
Expenditures							
Salaries							
Faculty Directors	\$21,648	\$30,820	\$7,801			\$2,111	\$62,380
WISELI Staff	\$100,997	\$57,956	\$14,689		\$2,843	\$3,916	\$180,401
Evaluation Staff	\$21,165	\$27,302	\$3,905			\$6,398	\$58,771
Fringe Benefits		\$38,045	\$9,898		\$1,066	\$4,710	\$53,719
Tuition Remission	\$3,556	\$4,000					\$7,556
Travel	\$114	\$7,713	\$860	\$2,922			\$11,609
Supplies and Equipment	\$1,872	\$13,438		\$194		\$454	\$15,958
Initiatives							
Celebrating Grants	\$5,200	\$1,630					\$6,830
Research & Evaluation Expenses							\$0
Library	\$339	\$431	\$143	\$1,267			\$2,180
Denice D. Denton Distinguished Lecture Series					\$8,660		\$8,660
Professional Development Activities for Faculty, Staff & Students		\$50		\$199			\$249
Workshop Expenses		\$963		\$433			\$1,396
Brochures, Booklets, & Other Publications	\$146	\$3,199				\$550	\$3,896
Dissemination Activities		\$3,300				\$2,907	\$6,207
Overhead		\$82,926	\$17,530				\$100,455
Total Income	\$219,303	\$271,773	\$499,991	\$10,000	\$15,200	\$38,097	\$1,054,364
Total Expenditures	\$155,036	\$271,773	\$54,827	\$5,015	\$12,569	\$21,047	\$520,267
Remaining Funds	\$64,267	\$0	\$445,164	\$4,985	\$2,631	\$17,051	\$534,097

VII. Expected WISELI Directions for 2008

A. Initiatives

- *Searching for Excellence & Diversity* hiring workshops, *Enhancing Department Climate: A Chair's Role* climate workshops, *Vilas Life Cycle Professorships*, and *Celebrating Women* grants will continue as in the past.
- WISELI will continue to offer *Implementing Training for Hiring Committees* external workshops as time permits to disseminate knowledge and generate income.
- Planning for 2011 *Study of Faculty Worklife* survey will begin.
- An evaluation plan for the *Celebrating Women in Science & Engineering* grant program will be designed.
- *Running a Great Lab* PI workshops will be evaluated and revised, with a changed series offered in Fall 2009.
- Continued monitoring of institutional data.
- We expect to apply for at least two grants: NSF I³ (Innovation through Institutional Integration) and NIH "Research on Causal Factors and Interventions that Promote and Support the Careers of Women in Biomedical and Behavioral Research" R01 funding.

B. Personnel

- Christine Pribbenow is expected to move to WCER in 2008. She will retain a 25% appointment with WISELI, until a new evaluation director can be funded.

C. Funding

- Funding levels are expected to remain the same in 2008. We will likely raise our rates for outside workshops slightly to account for actual costs of providing these workshops.

E. Center Structure

- WISELI has worked closely with related diversity programs WiscAMP (Wisconsin Alliance for Minority Participation), and GERS (Graduate Engineering Research Scholars), and with the move to new space in the Mechanical Engineering Building which co-locates these three programs, we are sharing resources and creating a shared vision of diversity efforts in STEM at UW-Madison overall. To that end, we are creating a new, umbrella organization called WIRED in STEM (Wisconsin Institute for Research and Evaluation on Diversity in STEM) which will encompass WISELI, WiscAMP, GERS (and the affiliated AGEF program if it is funded), PAID, and any other NSF-funded diversity programs written by co-PIs Molly Carnes, Doug Henderson, Jennifer Sheridan, Manuela Romero, and/or Amy Wendt.

The purpose of WIRED is to support the UW-Madison campus in diversifying the STEM workforce in terms of gender, race/ethnicity, and disability, by providing core resources for all programs on campus with a mission to enhance the diversity of the STEM workforce, including evaluation, web support, and data support. These core resources will primarily be supported by an NSF I³ grant (Innovation through Institutional Integration), should it be funded. If I³ is funded, the Center Status and UDDS that is currently named WISELI will change to WIRED, and WISELI will be one program within the WIRED umbrella.

VIII. WISELI Publications and Presentations, 2007

Papers Published:

Handelsman, Jo and Robert Birgeneau. September 25, 2007. "Women Advancing Science: A Few Significant Changes in the Academic System Could Stem the Loss of Talented Women, Thereby Fortifying our Scientific Leadership." *Technology Review*. <http://www.technologyreview.com/blog/guest/21855/>.

Marchant, Angela; Abhik Bhattacharya; and Molly Carnes. 2007. "Can the Language of Tenure Criteria Influence Women's Academic Advancement?" *Journal of Women's Health*. 16(7): 998-1003.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. 2007. "Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?" American Society for Engineering Education (ASEE) 2007 Conference Proceedings. <http://www.asee.org/acPapers/AC%202007Full992.pdf>. June 2007.

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. 2007. "Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?" Women in Engineering Programs & Advocates Network (WEPAN) 2007 Conference Proceedings (on CD-ROM). http://dpubs.libraries.psu.edu/DPubS?service=Repository&version=1.0&verb=Disseminate&handle=psu.wepan/1200322686&view=body&content-type=pdf_1#. June 2007.

Carnes, Molly and JudyAnn Bigby. 2007. "Jennifer Fever in Academic Medicine." *Journal of Women's Health*. 16(3):299-301.

Carnes, Molly and Carole Bland. 2007. "A Challenge to Academic Centers and the NIH to Prevent Unintended Gender Bias in Selection of CTSA Leaders." *Academic Medicine*. 82(2):202-206.

Working Papers:

Sheridan, Jennifer; Jo Handelsman; Amy Wendt; and Molly Carnes. 2007. "ADVANCE at the University of Wisconsin-Madison: Progress Towards Transforming the College of Engineering." Working paper.

Crone, Wendy. *Survive and Thrive: A Self-Assessment Guide for Untenured Faculty*. 2007 draft under review/tentative publication agreement. Cambridge University Press.

Pribbenow, Christine Maidl; Jennifer Sheridan; and Deveny Benting. 2007. "Extending the Tenure Clock: The Experiences of Faculty at One University."

Dissertations:

Gunter, Ramona. 2007. "Laboratory Talk: Gendered Interactions and Research Progress in Graduate Science Education." Doctoral Dissertation: University of Wisconsin-Madison.

Presentations:

Carnes, Molly. November 29, 2007. ADVANCE Distinguished Lecture Series. "UW-Madison ADVANCE Program: Did we transform the institution in 5 years?" National Science Foundation. Washington, DC.

Carnes, Molly. November 27-28, 2007. Chair, NIH National Leadership Workshop on Mentoring Women in Biomedical Careers. National Institutes of Health. Washington, DC.

Handelsman, Jo. November 15-16, 2007. "Beyond Bias and Barriers: Strategies for an Equitable Hiring Process." University of Maryland-Baltimore County. Baltimore, MD.

Mathews, Nancy. November 13, 2007. Invited presentation, "Balancing Work and Life in the Academy in the 21st Century: A Changing Paradigm for Women?" 28th Annual meeting of the Society for Environmental Toxicology and Chemistry. Milwaukee, WI.

Carnes, Molly. November 4, 2007. Panelist, "Women's Academic Advancement: The Influence of Language." Association of American Medical Colleges Annual Meeting. Washington, DC.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. June, 2007. "Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?" American Society for Engineering Education (ASEE) Annual Meetings. Honolulu, HI.

Sheridan, Jennifer. June, 2007. Moderator, "Climate Surveys Panel." 6th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. June 2007. "Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?" Women in Engineering Programs & Advocates Network (WEPAN) 2007 Annual Meeting. Orlando, FL.

Carnes, Molly. May 23-25, 2007. "Women in Academic Medicine: Institutional Transformation Required" (Whittington Lecturer) and "Careers in Academic Medicine:

Evaluation at Gatekeeping Junctions” (Medical Grand Rounds). University of Florida. Gainesville, FL.

Carnes, Molly. May 2-3, 2007. “NIH Director's Pioneer Award: Lesson in Scientific Review” and “Workshop: Lessons Learned in Shaping a Career” (Invited speaker). Brown University. Providence, RI.

Parker, Brenda. April 19, 2007. “NSF ADVANCE: Lessons for Geography Departments” (Panelist). American Association of Geographers Annual Meetings. San Francisco, CA.

Carnes, Molly and Jennifer Sheridan. April 11-12, 2007. “Overview of WISELI: Lessons Learned” and “Overview of WISELI: New Initiatives at UW-Madison” (Invited speakers). University of Minnesota. Minneapolis, MN.

Sheridan, Jennifer. March 27, 2007. “WISELI: Improve Departmental Climate for Women Faculty and Faculty of Color” (Poster). Showcase 2007. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. March 21-22, 2007. “Careers in Academic Medicine: Evaluation at Gatekeeping Junctions” (Medical Grand Rounds) and “Women Leaders in Academic Health Sciences: Institutional Transformation Required” (Invited speaker). University of Utah. Salt Lake City, UT.

Carnes, Molly. March 14, 2007. “Bias in Scientific Review: The Case of the NIH Directors Pioneer Award.” Center for the Study of Cultural Diversity in Healthcare Training Seminar. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. February 22, 2007. “Words Matter: How Language Can Promote the Activation of Stereotypes” (Invited speaker). University of Illinois-Chicago. Chicago, IL.

Carnes, Molly. February 21, 2007. “Gender Bias in Scientific Review” (Invited speaker). Medical College of Wisconsin. Milwaukee, WI.

Sheridan, Jennifer. January 30, 2007. “Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering.” Center for Demography & Ecology Training Seminar. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer. January 17, 2007. “Beyond Bias and Barriers.” Zonta International. Madison, WI.

Campus Visits/Dissemination of Programming:

“Searching for Excellence & Diversity” workshop, and “Implementing Workshops for Search Committees” workshop. September 20-21, 2007. University of Wisconsin-Whitewater. Whitewater, WI.

Meet for information re: implementing *Searching for Excellence & Diversity* workshops. September 7, 2007. Deborah Love (Vice President for Institutional Equity) and Anne

McCall (Associate Professor of French and Associate Dean, School for Liberal Arts). Tulane University.

Meet for information re: ADVANCE. May 18, 2007. Catherine Duckett (Project Manager, Office for the Promotion of Women in Science, Engineering, and Mathematics). Rutgers University.

Meet for information re: ADVANCE institutionalization. May 29, 2007. Trish Kalbas-Schmidt (Program Leader, ADVANCE). Utah State University.

Meet for information re: ADVANCE. April 11-12, 2007. Molly Carnes and Jennifer Sheridan travel to Institute of Technology, hosted by Roberta Humphries (Professor of Astronomy and Associate Dean for Academic Affairs). University of Minnesota.

Participation in training for facilitators for *Enhancing Department Climate: A Chair's Role* workshop. April 19, July 19, and August 30, 2007. Linda Siebert Rapoport (Director, Women in Science & Engineering System Transformation). University of Illinois-Chicago.

"Implementing Workshops for Search Committees." A train-the-trainer workshop for campuses wanting to implement training for faculty search committee chairs. March 5-March 7, 2007. Medical School and Danforth Campus. Washington University in St. Louis.

"Searching for Excellence & Diversity" workshop, and "Implementing Workshops for Search Committees" workshop. February 28-March 1, 2007. University of Wisconsin-Stout.

WISELI in the Press:

"Help Women Stay in Science: A Female Scientist Gives Her Top 10 List of Tips for Her Male Colleagues—What Are Yours?" *The Scientist.com*. September 27, 2007. <http://www.the-scientist.com/news/home/53655/>.

Products Available to the Public:

"WISELI: *FORWARD* with Institutional Transformation." Documentary Video, third in series of three. Available online through *The Research Channel*: <http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345>.

"Reviewing Applicants: Research on Bias and Assumptions." 2nd Edition. Brochure available online at: http://wiseli.engr.wisc.edu/initiatives/hiring/BiasBrochure_2ndEd.pdf, and also available in large quantities for 25¢/brochure plus mailing costs by contacting at <https://wisccharge.wisc.edu/wiseli/items.asp>.

Reports to Funding Agencies:

Sheridan, Jennifer; Molly Carnes, Jo Handelsman, and Amy Wendt. December 2007. "Partnerships for Adaptation, Implementation, and Dissemination Annual Report 2007."

Sheridan, Jennifer; Molly Carnes and Jo Handelsman. September 2007. "Final Report of the ADVANCE Program for University of Wisconsin-Madison. 2002-2007."
http://wiseli.engr.wisc.edu/initiatives/researcheval/Final_Report_Final.pdf .

Grant Proposals in Support of WISELI:

NSF Partnerships for Adaptation, Implementation, and Dissemination (PAID) program. "ADVANCE Partnerships for Adaptation, Implementation, and Dissemination." PI: Jennifer Sheridan. Co-PIs: Molly Carnes, Jo Handelsman, Amy Wendt. Submitted January 27, 2006. Funded 1/1/07 – 12/31/09.

Evaluation Reports:

Sheridan, Jennifer; Molly Carnes and Jo Handelsman. September 2007. "Final Report of the ADVANCE Program for University of Wisconsin-Madison. 2002-2007."
http://wiseli.engr.wisc.edu/initiatives/researcheval/Final_Report_Final.pdf .

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."
http://wiseli.engr.wisc.edu/initiatives/researcheval/FINAL_WISELI_Sum_Eval_Report.pdf .

Sheridan, Jennifer. May 2007. "Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006."
http://wiseli.engr.wisc.edu/initiatives/researcheval/By_the_Numbers.pdf .

Pribbenow, Christine Maidl and Jennifer Sheridan. April 2007. "Evaluation of the Vilas Life Cycle Professorships Program."

Benting, Deveny. March 29, 2007. "Evaluation of the Workshop: 'Implementing Training for Search Committees'. Presented to the Washington University Medical School on March 5, 2007."

Benting, Deveny. March 28, 2007. "Evaluation of the Workshop: 'Implementing Training for Search Committees'. Presented to the Washington University Danforth Campus on March 6, 2007."

Benting, Deveny. March 26, 2007. "Evaluation of 'Searching for Excellence and Diversity: A Workshop for Search Committees'. Presented at UW-Stout on March 1, 2007."

Sheridan, Jennifer. February 8, 2007. "Climate Change for Faculty at UW-Madison: Evidence from the 2003 and 2006 *Study of Faculty Worklife*." Report prepared for the Campus Diversity Plan Oversight Committee.

Presentations of WISELI Activities to Campus Groups

Deans' Council—5/9/2007

College of Engineering (CoE) Academic Affairs—10/11/2007

Plan 2008 Campus Resource Fair/Diversity Forum—9/28/2007

Showcase—3/27/2007

Provost Department Chair Training—8/30/2007

Campus Diversity Plan Oversight Committee—2/8/2007

Wisconsin Institute for Discovery Program Committee—3/26/2007

SMPH Committee on Academic Staff Issues—5/15/2007

Institutional Data, 2007

Table 1. Number and Percent of Women Faculty in Science/Engineering by Department, 2007

Division/Department	Women	Men	% Women
Physical Sciences	60.50	401.60	13.1%
Biological Systems Engineering	1.00	10.25	8.9%
Soil Science	4.50	14.00	24.3%
Chemical & Biological Engineering	2.00	17.00	10.5%
Civil & Environmental Engineering	3.00	23.75	11.2%
Electrical & Computer Engineering	6.00	37.50	13.8%
Biomedical Engineering	3.00	6.10	33.0%
Industrial Engineering	3.50	14.00	20.0%
Mechanical Engineering	3.00	29.75	9.2%
Materials Science & Engineering	3.00	10.00	23.1%
Engineering Physics	1.25	21.50	5.5%
Engineering Professional Development	0.00	5.00	0.0%
Astronomy	3.75	8.00	31.9%
Chemistry	3.50	33.00	9.6%
Computer Sciences	5.00	33.00	13.2%
Geology & Geophysics	5.00	17.00	22.7%
Mathematics	2.25	47.75	4.5%
Atmospheric & Oceanic Sciences	1.00	15.00	6.3%
Physics	6.25	46.75	11.8%
Statistics	3.50	12.25	22.2%
Biological Sciences	182.31	576.00	24.0%
Agronomy	2.50	15.00	14.3%
Animal Science	1.00	14.60	6.4%
Bacteriology	5.00	14.00	26.3%
Biochemistry	7.50	25.00	23.1%
Dairy Science	1.00	11.40	8.1%
Entomology	3.00	11.00	21.4%
Food Microbiology & Toxicology	0.00	1.00	0.0%
Food Science	2.00	12.00	14.3%
Genetics	2.50	11.67	17.6%
Horticulture	2.00	13.50	12.9%
Nutritional Sciences	5.00	6.50	43.5%
Plant Pathology	5.50	8.00	40.7%
Forest Ecology & Management	0.50	12.50	3.8%
Natural Resources - Wildlife Ecology	0.00	5.00	0.0%
Kinesiology	9.00	7.00	56.3%
Nelson Institute for Environmental Studies	3.50	6.25	35.9%
Botany	6.50	8.50	43.3%
Communicative Disorders	10.00	4.00	71.4%
Zoology	8.00	15.00	34.8%
Anatomy	5.00	14.50	25.6%
Anesthesiology	0.00	5.50	0.0%
Biostatistics & Medical Informatics	2.75	10.75	20.4%
Family Medicine	2.00	7.75	20.5%

Genetics	2.00	5.93	25.2%
Obstetrics & Gynecology	1.00	9.00	10.0%
Medical History & Bioethics	2.50	5.90	29.8%
Human Oncology	1.00	8.25	10.8%
Medicine	10.50	50.65	17.2%
Dermatology	0.00	7.00	0.0%
Medical Microbiology	6.20	8.50	42.2%
Medical Physics	1.00	13.75	6.8%
Neurology	1.00	10.50	8.7%
Neurological Surgery	2.00	8.00	20.0%
Oncology	5.50	11.90	31.6%
Ophthalmology & Visual Sciences	3.50	10.00	25.9%
Orthopedics & Rehabilitation	2.00	8.50	19.0%
Pathology & Laboratory Medicine	5.00	14.00	26.3%
Pediatrics	10.25	12.20	45.7%
Pharmacology	2.00	9.00	18.2%
Biomolecular Chemistry	2.80	7.75	26.5%
Physiology	5.00	14.00	26.3%
Population Health Sciences	10.30	12.50	45.2%
Psychiatry	6.51	7.60	46.1%
Radiology	2.50	13.65	15.5%
Surgery	1.00	26.00	3.7%
School of Pharmacy	5.50	22.00	20.0%
Medical Sciences	3.00	8.00	27.3%
Pathobiological Sciences	1.00	15.00	6.3%
Comparative Biosciences	4.00	10.00	28.6%
Surgical Sciences	1.00	6.00	14.3%
Social Studies	236.20	350.22	40.3%
Agricultural & Applied Economics	2.00	21.90	8.4%
Life Sciences Communication	5.00	5.00	50.0%
Rural Sociology	4.00	7.00	36.4%
Natural Resources-Landscape Architecture	4.00	4.00	50.0%
Urban & Regional Planning	1.00	4.00	20.0%
School of Business	14.75	58.00	20.3%
Counseling Psychology	4.00	4.00	50.0%
Curriculum & Instruction	18.25	16.15	53.1%
Educational Leadership & Policy Analysis	5.50	10.00	35.5%
Educational Policy Studies	5.00	6.00	45.5%
Educational Psychology	7.00	11.00	38.9%
Rehabilitation Psychology & Special Education	5.00	6.00	45.5%
School of Human Ecology	23.00	14.00	62.2%
Law School	15.50	25.25	38.0%
Anthropology	9.00	13.00	40.9%
Afro-American Studies	6.50	4.25	60.5%
Communication Arts	10.00	12.00	45.5%
Economics	4.20	25.00	14.4%
Ethnic Studies	1.00	0.00	100.0%
Geography	3.00	13.00	18.8%
LaFollette School of Public Affairs	4.50	6.75	40.0%
School of Journalism & Mass Communication	6.00	7.50	44.4%

School of Library & Information Studies	9.00	1.50	85.7%
Political Science	7.00	25.25	21.7%
Psychology	14.00	16.00	46.7%
Social Work	10.50	4.00	72.4%
Sociology	15.00	22.92	39.6%
Urban & Regional Planning	0.00	4.75	0.0%
School of Nursing	20.50	0.00	100.0%
Professional Development & Applied Studies	2.00	2.00	50.0%
Humanities	157.25	208.23	43.0%
Art	10.00	17.00	37.0%
Dance	1.00	2.00	33.3%
African Languages & Literature	3.00	3.50	46.2%
Art History	9.00	4.75	65.5%
Classics	4.00	3.00	57.1%
Comparative Literature	1.00	2.25	30.8%
East Asian Languages & Literature	5.00	6.00	45.5%
English	28.20	22.30	55.8%
French & Italian	9.00	13.25	40.4%
German	6.00	9.35	39.1%
Hebrew & Semitic Studies	2.00	2.00	50.0%
History	17.50	29.00	37.6%
History of Science	2.00	4.50	30.8%
Linguistics	4.00	3.00	57.1%
School of Music	15.50	31.00	33.3%
Philosophy	3.00	16.00	15.8%
Scandinavian Studies	4.00	2.00	66.7%
Slavic Languages	2.00	6.00	25.0%
Languages & Cultures of Asia	4.00	7.33	35.3%
Spanish & Portuguese	11.00	14.00	44.0%
Theatre & Drama	7.75	8.00	49.2%
Women's Studies Program	4.50	0.00	100.0%
Social Sciences	0.00	1.00	0.0%
Liberal Studies & the Arts	3.80	1.00	79.2%

SOURCE: October 2007 IADS Frozen slice

NOTES: Faculty are assigned to discipline based on tenure home departments using the the classification system developed for the Women in Science and Engineering Leadership Institute (WISELI). An individual tenured in more than one department is shown based on the tenure split. Thus, a person who is 50% statistics and 50% plant pathology is shown as .5 FTE in Physical Sciences and .5 FTE in Biological Sciences. Faculty with zero-dollar appointments and faculty who are paid wholly through an administrative appointment (such as dean or chancellor) are excluded from the salary median and salary FTE calculations. Years are calculated based on current faculty appointment. (Some individuals have held appointments at UW Madison prior to the current appointment. The years in the prior appointment are not included in this calculation.)

Prepared by : Margaret Harrigan, Office of Academic Planning and Analysis

Table 2. Number and Percent of Women Faculty in Science/Engineering by Rank and Department, 2007

Division/Department	Women			Men			% Women		
	Full	Associate	Assistant	Full	Associate	Assistant	Full	Associate	Assistant
Physical Sciences	27.00	13.00	24.00	267.25	54.10	76.75	9.2%	19.4%	23.8%
Biological Systems Engineering	0.00	0.00	1.00	8.25	1.00	1.00	0.0%	0.0%	50.0%
Soil Science	0.00	2.50	2.00	10.00	2.00	2.00	0.0%	55.6%	50.0%
Chemical & Biological Engineering	1.00	0.00	1.00	10.00	4.00	3.00	9.1%	0.0%	25.0%
Civil & Environmental Engineering	1.00	0.00	2.00	15.75	6.00	2.00	6.0%	0.0%	50.0%
Electrical & Computer Engineering	2.00	0.00	4.00	25.50	8.00	4.00	7.3%	0.0%	50.0%
Biomedical Engineering	3.00	0.00	3.50	0.00	0.60	2.00	100.0%	0.0%	63.6%
Industrial Engineering	3.50	0.00	0.00	7.00	3.00	4.00	33.3%	0.0%	0.0%
Mechanical Engineering	1.00	1.00	1.00	17.75	6.00	6.00	5.3%	14.3%	14.3%
Materials Science & Engineering	1.00	0.00	2.00	6.00	1.00	3.00	14.3%	0.0%	40.0%
Engineering Physics	0.25	1.00	0.00	14.50	3.00	4.00	1.7%	25.0%	0.0%
Engineering Professional Development	0.00	0.00	0.00	4.00	1.00	0.00	0.0%	0.0%	N/A
Astronomy	1.75	1.00	1.00	5.00	1.00	2.00	25.9%	50.0%	33.3%
Chemistry	1.50	1.00	1.00	25.00	1.00	7.00	5.7%	50.0%	12.5%
Computer Sciences	2.00	2.00	1.00	19.00	4.00	10.00	9.5%	33.3%	9.1%
Geology & Geophysics	4.00	1.00	0.00	11.00	3.00	3.00	26.7%	25.0%	0.0%
Mathematics	0.75	1.00	0.50	36.00	5.00	6.75	2.0%	16.7%	6.9%
Atmospheric & Oceanic Sciences	0.00	0.00	1.00	10.00	1.00	4.00	0.0%	0.0%	20.0%
Physics	3.25	1.00	2.00	32.75	3.00	11.00	9.0%	25.0%	15.4%
Statistics	1.00	1.50	1.00	9.75	0.50	2.00	9.3%	75.0%	33.3%
Biological Sciences	74.31	44.25	63.75	366.70	107.55	101.75	16.8%	29.2%	38.5%
Agronomy	0.50	1.00	1.00	10.00	0.00	5.00	4.8%	100.0%	16.7%
Animal Science	0.00	0.00	1.00	9.60	2.00	3.00	0.0%	0.0%	25.0%
Bacteriology	2.00	2.00	1.00	10.00	2.00	2.00	16.7%	50.0%	33.3%
Biochemistry	6.00	0.00	1.50	21.00	2.00	2.00	22.2%	0.0%	42.9%
Dairy Science	1.00	0.00	0.00	6.40	3.00	2.00	13.5%	0.0%	0.0%
Entomology	1.00	1.00	1.00	8.00	1.00	2.00	11.1%	50.0%	33.3%
Food Microbiology & Toxicology	0.00	0.00	0.00	1.00	0.00	0.00	0.0%	N/A	N/A
Food Science	0.00	1.00	1.00	10.00	2.00	0.00	0.0%	33.3%	100.0%
Genetics	0.50	1.00	1.00	11.17	0.50	0.00	4.3%	66.7%	100.0%
Horticulture	0.00	1.00	1.00	7.50	3.00	3.00	0.0%	25.0%	25.0%
Nutritional Sciences	3.00	1.00	1.00	4.50	1.00	1.00	40.0%	50.0%	50.0%
Plant Pathology	4.50	0.00	1.00	7.00	0.00	1.00	39.1%	N/A	50.0%
Forest Ecology & Management	0.50	0.00	0.00	8.00	4.00	0.50	5.9%	0.0%	0.0%
Natural Resources - Wildlife Ecology	0.00	0.00	0.00	2.00	1.00	2.00	0.0%	0.0%	0.0%
Kinesiology	2.00	2.00	5.00	1.00	3.00	3.00	66.7%	40.0%	62.5%
Nelson Institute for Environmental Studies	1.50	0.00	2.00	3.65	0.60	2.00	29.1%	0.0%	50.0%
Botany	3.00	0.00	3.50	8.00	0.50	0.00	27.3%	0.0%	100.0%

Communicative Disorders	4.00	2.00	4.00	3.00	1.00	0.00	57.1%	66.7%	100.0%
Zoology	2.00	3.00	3.00	10.00	3.00	2.00	16.7%	50.0%	60.0%
Anatomy	3.00	2.00	0.00	9.50	3.00	2.00	24.0%	40.0%	0.0%
Anesthesiology	0.00	0.00	0.00	3.50	1.00	1.00	0.0%	0.0%	0.0%
Biostatistics & Medical Informatics	1.00	1.25	0.50	3.25	3.00	4.50	23.5%	29.4%	10.0%
Family Medicine	1.00	0.00	1.00	3.10	1.65	3.00	24.4%	0.0%	25.0%
Genetics	0.00	0.00	2.00	2.43	0.50	3.00	0.0%	0.0%	40.0%
Obstetrics & Gynecology	0.00	1.00	0.00	6.00	1.00	2.00	0.0%	50.0%	0.0%
Medical History & Bioethics	1.00	1.00	0.50	1.90	2.00	2.00	34.5%	33.3%	20.0%
Human Oncology	0.00	1.00	0.00	6.05	2.00	0.20	0.0%	33.3%	0.0%
Medicine	2.50	1.00	7.00	24.90	16.75	9.00	9.1%	5.6%	43.8%
Dermatology	0.00	0.00	0.00	4.00	2.00	1.00	0.0%	0.0%	0.0%
Medical Microbiology	2.50	0.50	3.20	6.50	2.00	0.00	27.8%	20.0%	100.0%
Medical Physics	0.00	1.00	0.00	6.90	3.65	3.20	0.0%	21.5%	0.0%
Neurology	0.00	0.00	1.00	7.50	1.00	2.00	0.0%	0.0%	33.3%
Neurological Surgery	1.00	0.00	1.00	2.00	2.00	4.00	33.3%	0.0%	20.0%
Oncology	1.50	2.00	2.00	10.90	0.00	1.00	12.1%	100.0%	66.7%
Ophthalmology & Visual Sciences	3.50	0.00	0.00	8.00	2.00	0.00	30.4%	0.0%	N/A
Orthopedics & Rehabilitation	1.00	0.00	1.00	3.50	3.00	2.00	22.2%	0.0%	33.3%
Pathology & Laboratory Medicine	4.00	1.00	0.00	8.00	2.00	4.00	33.3%	33.3%	0.0%
Pediatrics	3.00	2.50	4.75	10.20	0.00	2.00	22.7%	100.0%	70.4%
Pharmacology	1.00	1.00	0.00	6.00	2.00	1.00	14.3%	33.3%	0.0%
Biomolecular Chemistry	1.00	1.00	0.80	5.50	2.00	0.25	15.4%	33.3%	76.2%
Physiology	3.00	1.00	1.00	11.00	1.00	2.00	21.4%	50.0%	33.3%
Population Health Sciences	3.30	3.00	4.00	6.60	2.40	3.50	33.3%	55.6%	53.3%
Psychiatry	1.51	3.00	2.00	5.20	0.00	2.40	22.5%	100.0%	45.5%
Radiology	1.50	0.00	1.00	9.45	2.00	2.20	13.7%	0.0%	31.3%
Surgery	0.00	0.00	1.00	16.00	5.00	5.00	0.0%	0.0%	16.7%
School of Pharmacy	2.50	2.00	1.00	13.00	5.00	4.00	16.1%	28.6%	20.0%
Medical Sciences	1.00	2.00	0.00	5.00	2.00	1.00	16.7%	50.0%	0.0%
Pathobiological Sciences	0.00	1.00	0.00	10.00	3.00	2.00	0.0%	25.0%	0.0%
Comparative Biosciences	3.00	0.00	1.00	6.00	2.00	2.00	33.3%	0.0%	33.3%
Surgical Sciences	0.00	1.00	0.00	3.00	3.00	0.00	0.0%	25.0%	N/A

Social Studies	110.20	41.00	85.00	222.72	59.00	68.50	33.1%	41.0%	55.4%
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Agricultural & Applied Economics	0.00	0.00	2.00	15.90	4.00	2.00	0.0%	0.0%	50.0%
Life Sciences Communication	2.00	2.00	1.00	2.00	1.00	2.00	50.0%	66.7%	33.3%
Rural Sociology	2.00	0.00	2.00	5.00	1.00	1.00	28.6%	0.0%	66.7%
Natural Resources-Landscape Architecture	1.00	1.00	2.00	2.00	0.00	2.00	33.3%	100.0%	50.0%
Urban & Regional Planning	0.00	0.00	1.00	2.00	0.00	2.00	0.0%	N/A	33.3%
School of Business	3.00	4.75	7.00	31.00	16.00	11.00	8.8%	22.9%	38.9%
Counseling Psychology	2.00	0.00	2.00	4.00	0.00	0.00	33.3%	N/A	100.0%
Curriculum & Instruction	7.00	3.25	8.00	10.15	2.00	4.00	40.8%	61.9%	66.7%
Educational Leadership & Policy Analysis	3.50	1.00	1.00	7.00	1.00	2.00	33.3%	50.0%	33.3%
Educational Policy Studies	1.00	1.00	3.00	4.00	1.00	1.00	20.0%	50.0%	75.0%

Educational Psychology	2.00	3.00	2.00	8.00	2.00	1.00	20.0%	60.0%	66.7%
Rehabilitation Psychology & Special Education	3.00	1.00	1.00	3.00	1.00	2.00	50.0%	50.0%	33.3%
School of Human Ecology	12.00	5.00	6.00	8.00	3.00	3.00	60.0%	62.5%	66.7%
Law School	8.50	1.00	6.00	18.25	4.00	3.00	31.8%	20.0%	66.7%
Anthropology	6.00	2.00	1.00	7.00	5.00	1.00	46.2%	28.6%	50.0%
Afro-American Studies	3.50	1.00	2.00	3.25	0.00	1.00	51.9%	100.0%	66.7%
Communication Arts	4.00	1.00	5.00	7.00	3.00	2.00	36.4%	25.0%	71.4%
Economics	0.20	0.00	4.00	13.00	2.00	10.00	1.5%	0.0%	28.6%
Ethnic Studies	1.00	0.00	0.00	0.00	0.00	0.00	100.0%	N/A	N/A
Geography	1.00	0.00	2.00	10.00	1.00	2.00	9.1%	0.0%	50.0%
LaFollette School of Public Affairs	2.50	0.00	2.00	4.00	1.00	1.75	38.5%	0.0%	53.3%
School of Journalism & Mass Communication	3.00	0.00	3.00	7.00	0.50	0.00	30.0%	0.0%	100.0%
School of Library & Information Studies	3.00	3.00	3.00	0.00	0.50	1.00	100.0%	85.7%	75.0%
Political Science	3.00	3.00	1.00	14.50	3.00	7.75	17.1%	50.0%	11.4%
Psychology	12.00	0.00	2.00	11.00	2.00	3.00	52.2%	0.0%	40.0%
Social Work	2.50	3.00	5.00	3.00	0.00	1.00	45.5%	100.0%	83.3%
Sociology	7.00	2.00	6.00	16.92	5.00	1.00	29.3%	28.6%	85.7%
Urban & Regional Planning	0.00	0.00	0.00	3.75	0.00	1.00	0.0%	N/A	0.0%
School of Nursing	12.50	3.00	5.00	0.00	0.00	0.00	100.0%	100.0%	100.0%
Professional Development & Applied Studies	2.00	0.00	0.00	2.00	0.00	0.00	50.0%	N/A	N/A

Humanities	92.00	36.75	28.50	139.23	38.00	31.00	39.8%	49.2%	47.9%
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Art	6.00	3.00	1.00	8.00	6.00	3.00	42.9%	33.3%	25.0%
Dance	1.00	0.00	0.00	2.00	0.00	0.00	33.3%	N/A	N/A
African Languages & Literature	2.00	1.00	0.00	2.50	0.00	1.00	44.4%	100.0%	0.0%
Art History	4.00	3.00	2.00	4.75	0.00	0.00	45.7%	100.0%	100.0%
Classics	4.00	0.00	0.00	1.00	1.00	1.00	80.0%	0.0%	0.0%
Comparative Literature	1.00	0.00	0.00	0.25	2.00	0.00	80.0%	0.0%	N/A
East Asian Languages & Literature	1.00	3.00	1.00	1.00	2.00	3.00	50.0%	60.0%	25.0%
English	16.20	8.00	4.00	15.30	3.00	4.00	51.4%	72.7%	50.0%
French & Italian	5.00	2.00	2.00	11.25	1.00	1.00	30.8%	66.7%	66.7%
German	4.00	2.00	0.00	7.35	1.00	1.00	35.2%	66.7%	0.0%
Hebrew & Semitic Studies	2.00	0.00	0.00	2.00	0.00	0.00	50.0%	N/A	N/A
History	10.50	4.00	3.00	20.00	7.00	2.00	34.4%	36.4%	60.0%
History of Science	1.00	0.00	1.00	1.50	2.00	1.00	40.0%	0.0%	50.0%
Linguistics	3.00	0.00	1.00	2.00	0.00	1.00	60.0%	N/A	50.0%
School of Music	10.50	2.00	3.00	25.00	4.00	2.00	29.6%	33.3%	60.0%
Philosophy	2.00	0.00	1.00	13.00	1.00	2.00	13.3%	0.0%	33.3%
Scandinavian Studies	2.00	1.00	1.00	2.00	0.00	0.00	50.0%	100.0%	100.0%
Slavic Languages	2.00	0.00	0.00	4.00	1.00	1.00	33.3%	0.0%	0.0%
Languages & Cultures of Asia	3.00	0.00	1.00	5.33	1.00	1.00	36.0%	0.0%	50.0%
Spanish & Portuguese	5.00	4.00	2.00	6.00	3.00	5.00	45.5%	57.1%	28.6%
Theatre & Drama	2.00	2.75	3.00	4.00	3.00	1.00	33.3%	47.8%	75.0%
Women's Studies Program	1.00	1.00	2.50	0.00	0.00	0.00	100.0%	100.0%	100.0%
Social Sciences	0.00	0.00	0.00	0.00	0.00	1.00	N/A	N/A	0.0%

Liberal Studies & the Arts

3.80

0.00

0.00

1.00

0.00

0.00

79.2%

N/A

N/A

SOURCE: October 2007 IADS Frozen slice

NOTES: Faculty are assigned to discipline based on tenure home departments using the the classification system developed for the Women in Science and Engineering Leadership Institute (WISELI). An individual tenured in more than one department is shown based on the tenure split. Thus, a person who is 50% statistics and 50% plant pathology is shown as .5 FTE in Physical Sciences and .5 FTE in Biological Sciences. Faculty with zero-dollar appointments and faculty who are paid wholly through an administrative appointment (such as dean or chancellor) are excluded from the salary median and salary FTE calculations. Years are calculated based on current faculty appointment. (Some individuals have held appointments at UW Madison prior to the current appointment. The years in the prior appointment are not included in this calculation.)

Prepared by : Margaret Harrigan, Office of Academic Planning and Analysis

Table 3a. Tenure Promotion Outcomes by Gender, 2007

2003 - 2007

Division/Department	Women			Men		
	Reviewed	Achieved	%	Reviewed	Achieved	%
Physical Sciences	13	13	100.0%	71	63	88.7%
Biological Sciences	29	27	93.1%	66	58	87.9%
Social Studies	38	33	86.8%	52	51	98.1%
Humanities	44	43	97.7%	34	33	97.1%

SOURCE: Office of the Secretary of the Faculty.

Table 3b. Tenure Promotion Outcomes by Gender, 2007

Physical Sciences

Entering Cohort	Women				Men			
	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured
1987-91	17	0.0%	11.8%	88.2%	87	0.0%	24.1%	75.9%
1991-95	7	0.0%	57.1%	42.9%	35	0.0%	20.0%	80.0%
1995-99	10	0.0%	40.0%	60.0%	34	0.0%	11.8%	88.2%
1999-03	15	6.7%	20.0%	73.3%	75	5.3%	20.0%	74.7%
2003-07	20	90.0%	5.0%	5.0%	57	84.2%	5.3%	10.5%

Biological Sciences

Entering Cohort	Women				Men			
	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured
1987-91	27	0.0%	40.7%	59.3%	103	0.0%	32.0%	68.0%
1991-95	26	0.0%	26.9%	73.1%	83	0.0%	24.1%	75.9%
1995-99	22	0.0%	22.7%	77.3%	47	0.0%	25.5%	74.5%
1999-03	44	25.0%	13.6%	61.4%	84	14.3%	25.0%	60.7%
2003-07	31	93.5%	3.2%	3.2%	57	86.0%	5.3%	8.8%

Social Studies

Entering Cohort	Women				Men			
	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured
1987-91	72	0.0%	51.4%	48.6%	84	0.0%	53.6%	46.4%
1991-95	48	2.1%	43.8%	54.2%	49	0.0%	42.9%	57.1%
1995-99	41	0.0%	58.5%	41.5%	54	1.9%	50.0%	48.1%
1999-03	52	13.5%	48.1%	38.5%	79	2.5%	34.2%	63.3%
2003-07	63	84.1%	9.5%	6.3%	48	72.9%	12.5%	14.6%

Humanities

Entering Cohort	Women				Men			
	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured
1987-91	44	0.0%	36.4%	63.6%	50	0.0%	36.0%	64.0%
1991-95	27	0.0%	22.2%	77.8%	25	0.0%	24.0%	76.0%
1995-99	23	0.0%	21.7%	78.3%	21	0.0%	14.3%	85.7%
1999-03	47	4.3%	12.8%	83.0%	43	4.7%	20.9%	74.4%
2003-07	25	68.0%	12.0%	20.0%	25	76.0%	4.0%	20.0%

SOURCE: UW Madison Tenure file and IADS appointment information system, Aug 2008

NOTE: Numbers in **BOLDFACE** are final; numbers in normal typeface are in flux and will change year-to-year as new faculty are hired, are tenured, and/or leave the UW without tenure.

NOTE: Probationary faculty only. Adjustments made for time on tenure clock outside UW; no adjustments for tenure clock extensions.

NOTE: 1987-91 cohort hired between June 1987 and May 1991; 1991-95 cohort hired between June 1991 and May 1995; 1995-99 cohort hired between June 1995 and May 1999; 1999-03 cohort hired between June 1999 and May 2003; 2003-07 cohort hired after May 15 2003.

Table 5a. Time at Institution (Median Numer of Years) by Gender and Rank, 2007

Division/Department	Women				Men				Women's Median as % of Men's			
	ALL	Full	Associate	Assistant	ALL	Full	Associate	Assistant	ALL	Full	Associate	Assistant
Physical Sciences	5.0	16.0	6.0	2.0	14.0	19.0	6.0	1.0	35.7%	84.2%	100.0%	200.0%
Biological Sciences	7.0	15.0	8.0	3.0	13.0	18.0	7.0	2.0	53.8%	83.3%	114.3%	150.0%
Social Studies	6.0	16.0	6.0	1.0	12.0	18.0	6.0	2.0	50.0%	88.9%	100.0%	50.0%
Humanities	10.0	17.0	6.0	1.0	15.0	18.0	6.0	2.0	66.7%	94.4%	50.0%	50.0%

SOURCE: October 2007 IADS Frozen slice

Prepared by : Margaret Harrigan, Office of Academic Planning and Analysis

Table 5b. Attrition by Gender, 2006-2007

	Headcounts			%		
	Retired	Resigned	2006 Total	Retired	Resigned	Left UW
Total	64	50	2210	2.9%	2.3%	5.2%
Women	14	18	639	2.2%	2.8%	5.0%
Men	50	32	1571	3.2%	2.0%	5.2%
Physical Sciences						
Women	2	2	64	3.1%	3.1%	6.3%
Men	20	7	439	4.6%	1.6%	6.2%
Biological Sciences						
Women	1	5	163	0.6%	3.1%	3.7%
Men	20	10	539	3.7%	1.9%	5.6%
Social Studies						
Women	7	9	228	3.1%	3.9%	7.0%
Men	9	11	539	1.7%	2.0%	3.7%
Humanities						
Women	4	2	184	2.2%	1.1%	3.3%
Men	1	4	232	0.4%	1.7%	2.2%

SOURCE: IADS appointment system, Aug. 2008

NOTE:

Year is measured from July 1 through June 30.

Retired=all faculty who were age 55 or older at the time of termination.

Resigned=all faculty who were less than 55 years old at the time of termination.

Discipline is assigned based on appointment major department.

Prepared by : Margaret Harrigan, Office of Academic Planning and Analysis

Table 7a. Number and Percent of Women Scientists and Engineers in Administrative Positions, 2007

Division	Total Faculty (Full Profs.)			Department Chairs				
	Women	Men	% Women	Women	Men	% Women	% Women Chairs	% Men Chairs
Physical Sciences	27	284	8.7%	7	13	35.0%	25.9%	4.6%
Biological Sciences	78	389	16.7%	7	40	14.9%	9.0%	10.3%
Social Studies	78	173	31.1%	6	18	25.0%	7.7%	10.4%
Humanities	95	145	39.6%	9	12	42.9%	9.5%	8.3%
Total	266	940	22.1%	29	83	25.9%	10.9%	8.8%

SOURCE: IADS appointment system frozen slice, October 2007.

NOTE: Total faculty is a non-duplicating headcount of full professors. Excludes faculty who are in schools without departments (Business, Pharmacy, Nursing, Law, Human Ecology). Faculty by discipline will not sum to total, since faculty with tenure in more than one department are counted in each department in which they hold tenure (excludes 0% tenure appointments). Faculty members are assigned to a discipline based on their tenure department (not divisional committee affiliation). Thus, all faculty in the department of Biochemistry are shown in the Biological Sciences area. The vast majority of department chairs also hold the rank of full professor. However, in any year, a small percentage of department chairs (e.g., 7 chairs, or 6% of total in 2002) hold the rank of associate professor.

Prepared by: Margaret Harrigan, Office of Academic Planning and Analysis

Table 7b. Number and Percent of Women Scientists and Engineers in Administrative Positions, 2007

Division	Total Faculty (Full Profs.)			Deans (Faculty)				
	Women	Men	% Women	Women	Men	% Women	% Women Deans	% Men Deans
Physical Sciences	26	295	8.1%	1	7	12.5%	3.8%	2.4%
Biological Sciences	67	342	16.4%	3	13	18.8%	4.5%	3.8%
Social Studies	101	225	31.0%	12	16	42.9%	11.9%	7.1%
Humanities	109	150	42.1%	3	3	50.0%	2.8%	2.0%
Total	303	1012	23.0%	19	39	32.8%	6.3%	3.9%

SOURCE: IADS Frozen Appointment Data view, October 2007.

NOTE: Includes both paid and zero-dollar deans, associate deans, and assistant deans. Faculty are assigned to a discipline based on the divisional committee responsible for approving their tenure. Each faculty member may choose only one affiliation. However, faculty in the same department may choose different affiliations. For example, about half of the faculty in Biochemistry are affiliated with the Biological Sciences Divisional Committee, and half are affiliated with the Physical Sciences Division. Only faculty report a divisional committee affiliation.

Prepared by: Margaret Harrigan, Office of Academic Planning and Analysis

Table 7c. Number and Percent of Women Scientists and Engineers in Administrative Positions, 2007

Division	Total Faculty (Full Profs.)			Central Administration				
	Women	Men	% Women	Women	Men	% Women	% Women Admin.	% Men Admin.
Physical Sciences	26	295	8.1%	1	2	33.3%	3.8%	0.7%
Biological Sciences	67	342	16.4%	0	1	0.0%	0.0%	0.3%
Social Studies	101	225	31.0%	0	2	0.0%	0.0%	0.9%
Humanities	109	150	42.1%	1	1	50.0%	0.9%	0.7%
Total	303	1012	23.0%	2	6	25.0%	0.7%	0.6%

SOURCE: IADS Frozen Appointment Data view, October 2007.

NOTE: Faculty are assigned to a discipline based on the divisional committee responsible for approving their tenure. Each faculty member may choose only one affiliation. However, faculty in the same department may choose different affiliations. For example, about half of the faculty in Biochemistry are affiliated with the Biological Sciences Divisional Committee, and half are affiliated with the Physical Sciences Division. Only faculty report a divisional committee affiliation.

Prepared by: Margaret Harrigan, Office of Academic Planning and Analysis

Table 7d. Number and Percent of Women Scientists and Engineers in Administrative Positions, 2007

Division	Total Faculty (Full Profs.)			Large Center & Institute Directors				
	Women	Men	% Women	Women	Men	% Women	% Women Directors	% Men Directors
Physical Sciences	26	295	8.1%	0	12	0.0%	0.0%	4.1%
Biological Sciences	67	342	16.4%	0	14	0.0%	0.0%	4.1%
Social Studies	101	225	31.0%	8	13	38.1%	7.9%	5.8%
Humanities	109	150	42.1%	11	11	50.0%	10.1%	7.3%
Total	303	1012	23.0%	19	50	27.5%	6.3%	4.9%

SOURCE: IADS appointment system frozen slice, October 2007.

NOTE: Total faculty is a non-duplicating headcount of full professors. Faculty are assigned to a discipline based on their divisional committee affiliation. Includes both paid and zero-dollar academic program directors and associate or assistant academic program directors. Excludes three male assistant academic program directors without faculty status.

Prepared by: Margaret Harrigan, Office of Academic Planning and Analysis

**Table 8. Number of Women Science & Engineering Faculty in Endowed/Named Chairs
Chairs, 2007**

	<u>Women</u>	<u>Men</u>	<u>% Female</u>
Named Professorships			
Vilas Professors	4	11	26.7%
Hilldale Professors	3	9	25.0%
John Bascom Professors	1	3	25.0%
Evju-Bascom Professors	3	6	33.3%
Named-Bascom Professors	18	36	33.3%
Steenbock Professors	1	7	12.5%
Wisconsin Distinguished Professors	0	9	0.0%
Other named professorships (incl. WARF)	46	215	17.6%
Holds two named professorships	7	35	16.7%
New named professorships	7	29	19.4%
Number holding named professorships	69	261	20.9%
Full Professors at UW-Madison	303	1012	23.0%
Major Awards			
Vilas Associate Award	10	16	38.5%
Hilldale Award	0	4	0.0%
H. I. Romnes Faculty Fellowship	2	3	40.0%
WARF Kellett Mid-Career Award	3	3	50.0%
Tenured Professors at UW-Madison	440	1276	25.6%

SOURCE: Office of the Provost. Totals from IADS appointment system frozen slice October 2007.

NOTE: Counts of Full Professors are headcounts of active "Professor" appointments in October 2007; counts of Tenured Professors are headcounts of active "Professor" and "Associate Professor" appointments in October 2007.

Table 9. Number and Percent of Women Science & Engineering Faculty on Promotion and Tenure Committees, 2007

		Women	Men	% Female
Faculty Senate				
	Physical Sciences	3	41	6.8%
	Biological Sciences	12	60	16.7%
	Social Studies	23	34	40.4%
	Arts & Humanities	13	25	34.2%
	Senators (total)	51	160	24.2%
	Physical Sciences	4	34	10.5%
	Biological Sciences	17	51	25.0%
	Social Studies	16	25	39.0%
	Arts & Humanities	9	17	34.6%
	Alternates (Total)	46	127	26.6%
Athletic Board		8	17	32.0%
Campus Planning Committee		6	9	40.0%
Divisional Executive Committees*				
	Physical Sciences	4	8	33.3%
	Bio. Sciences, Curriculum Planning	4	5	44.4%
	Bio. Sciences, Strategic Planning	3	6	33.3%
	Bio. Sciences, Tenure	5	7	41.7%
	Social Studies	5	7	41.7%
	Arts & Humanities	8	4	66.7%
Faculty Compensation and Economic Benefits Commission*		4	5	44.4%
Faculty Rights and Responsibilities Committee*		5	4	55.6%
Library Committee*		6	6	50.0%
University Committee*		3	3	50.0%
University Academic Planning Council		4	10	28.6%
Graduate School Academic Planning Council		2	7	22.2%
Graduate School Executive Committee				
	Physical Sciences	0	5	0.0%
	Biological Sciences	3	2	60.0%
	Social Studies	2	4	33.3%
	Arts & Humanities	3	2	60.0%
Graduate School Research Committee				
	Physical Sciences	4	7	36.4%
	Biological Sciences	5	6	45.5%
	Social Studies	4	6	40.0%
	Arts & Humanities	4	6	40.0%
All Faculty		643	1555	29.3%
	Physical Sciences	65	441	12.8%
	Biological Sciences	161	530	23.3%
	Social Studies	228	355	39.1%
	Arts & Humanities	189	229	45.2%

SOURCE: 2007-2008 Faculty Senate and UW-Madison Committees, Office of the Secretary of the faculty, November 2008. Totals from IADS appointment system frozen slice October 2008.

NOTE: Counts of All Faculty by Division are headcounts of active faculty appointments in October 2008. Unassigned faculty have been temporarily assigned a division according to their departmental affiliation and/or research interests.

Prepared by: Jennifer Sheridan, WISELI

* Members chosen by election of faculty.

Table 10a. Salary of Science & Engineering Faculty by Gender (Controlling for Department), 2007

Division/Department	Women, Median	Men, Median	Women's Median as % of Men's
Physical Sciences	84,113	94,444	89.1%
Biological Systems Engineering	59,963	84,122	71.3%
Soil Science	63,020	77,003	81.8%
Chemical & Biological Engineering	105,331	100,178	105.1%
Civil & Environmental Engineering	81,062	96,444	84.1%
Electrical & Computer Engineering	84,641	103,888	81.5%
Biomedical Engineering	80,000	94,741	84.4%
Industrial Engineering	125,465	118,164	106.2%
Mechanical Engineering	89,803	96,884	92.7%
Materials Science & Engineering	84,072	101,842	82.6%
Engineering Physics	91,298	112,572	81.1%
Engineering Professional Development	N/A	95,173	N/A
Astronomy	77,726	88,434	87.9%
Chemistry	68,508	88,858	77.1%
Computer Sciences	92,087	113,563	81.1%
Geology & Geophysics	75,105	81,688	91.9%
Mathematics	80,000	90,765	88.1%
Atmospheric & Oceanic Sciences	61,140	87,693	69.7%
Physics	92,919	91,192	101.9%
Statistics	81,725	99,053	82.5%
Biological Sciences	79,279	88,535	89.5%
Agronomy	66,130	74,225	89.1%
Animal Science	81,539	79,549	102.5%
Bacteriology	85,674	87,292	98.1%
Biochemistry	92,868	112,740	82.4%
Dairy Science	85,052	77,016	110.4%
Entomology	60,587	85,366	71.0%
Food Microbiology & Toxicology	N/A	108,358	N/A
Food Science	64,510	83,383	77.4%
Genetics	69,161	114,460	60.4%
Horticulture	65,252	79,458	82.1%
Nutritional Sciences	82,199	97,308	84.5%
Plant Pathology	74,906	93,242	80.3%
Forest Ecology & Management	72,041	82,182	87.7%
Natural Resources - Wildlife Ecology	N/A	70,598	N/A
Kinesiology	59,744	64,454	92.7%
Nelson Institute for Environmental Studies	72,041	92,005	78.3%
Botany	64,000	95,220	67.2%
Communicative Disorders	79,791	83,046	96.1%
Zoology	65,812	80,314	81.9%
Anatomy	78,797	97,859	80.5%
Anesthesiology	N/A	93,646	N/A
Biostatistics & Medical Informatics	70,085	90,517	77.4%

Family Medicine	104,564	102,907	101.6%
Genetics	66,532	67,042	99.2%
Obstetrics & Gynecology	70,043	92,965	75.3%
Medical History & Bioethics	87,206	91,242	95.6%
Human Oncology	70,993	94,084	75.5%
Medicine	85,393	84,650	100.9%
Dermatology	N/A	102,308	N/A
Medical Microbiology	75,729	103,351	73.3%
Medical Physics	81,334	85,409	95.2%
Neurology	63,495	89,721	70.8%
Neurological Surgery	71,446	65,224	109.5%
Oncology	78,651	111,835	70.3%
Ophthalmology & Visual Sciences	102,102	108,842	93.8%
Orthopedics & Rehabilitation	72,508	66,066	109.8%
Pathology & Laboratory Medicine	95,071	88,353	107.6%
Pediatrics	91,235	110,808	82.3%
Pharmacology	91,762	95,335	96.3%
Biomolecular Chemistry	79,279	96,803	81.9%
Physiology	103,027	113,913	90.4%
Population Health Sciences	93,472	102,152	91.5%
Psychiatry	83,773	85,961	97.5%
Radiology	81,343	78,631	103.4%
Surgery	77,727	62,666	124.0%
School of Pharmacy	75,197	87,170	86.3%
Medical Sciences	85,865	94,526	90.8%
Pathobiological Sciences	69,549	96,903	71.8%
Comparative Biosciences	89,330	93,298	95.7%
Surgical Sciences	80,620	84,842	95.0%
Social Studies	76,599	95,440	80.3%
Agricultural & Applied Economics	74,971	93,155	80.5%
Life Sciences Communication	66,496	93,734	70.9%
Rural Sociology	94,475	73,007	129.4%
Natural Resources-Landscape Architecture	62,367	75,665	82.4%
Urban & Regional Planning	56,162	68,295	82.2%
School of Business	144,000	156,967	91.7%
Counseling Psychology	69,395	89,717	77.3%
Curriculum & Instruction	61,539	84,655	72.7%
Educational Leadership & Policy Analysis	76,082	94,036	80.9%
Educational Policy Studies	59,850	87,689	68.3%
Educational Psychology	62,932	95,000	66.2%
Rehabilitation Psychology & Special Education	73,184	67,213	108.9%
School of Human Ecology	73,240	77,110	95.0%
Law School	119,219	124,863	95.5%
Anthropology	71,812	71,694	100.2%
Afro-American Studies	84,375	102,442	82.4%
Communication Arts	67,054	76,794	87.3%
Economics	96,500	160,224	60.2%
Ethnic Studies	88,509	N/A	N/A
Geography	59,500	76,541	77.7%
LaFollette School of Public Affairs	88,823	94,933	93.6%

School of Journalism & Mass Communication	86,247	86,740	99.4%
School of Library & Information Studies	68,000	66,000	103.0%
Political Science	77,876	86,210	90.3%
Psychology	96,440	101,159	95.3%
Social Work	63,867	94,611	67.5%
Sociology	88,312	89,048	99.2%
Urban & Regional Planning	N/A	71,756	N/A
School of Nursing	88,000	N/A	N/A
Professional Development & Applied Studies	63,376	72,393	87.5%
Humanities	70,174	75,374	93.1%
Art	64,384	62,895	102.4%
Dance	64,187	62,904	102.0%
African Languages & Literature	90,666	76,659	118.3%
Art History	75,869	82,532	91.9%
Classics	85,718	73,248	117.0%
Comparative Literature	84,004	50,077	167.7%
East Asian Languages & Literature	57,862	59,323	97.5%
English	72,937	86,488	84.3%
French & Italian	63,550	81,821	77.7%
German	72,113	73,714	97.8%
Hebrew & Semitic Studies	74,927	100,230	74.8%
History	83,190	81,417	102.2%
History of Science	67,141	70,977	94.6%
Linguistics	72,672	64,590	112.5%
School of Music	69,625	75,677	92.0%
Philosophy	70,199	79,798	88.0%
Scandinavian Studies	67,107	75,013	89.5%
Slavic Languages	99,454	81,023	122.7%
Languages & Cultures of Asia	77,293	79,466	97.3%
Spanish & Portuguese	59,261	62,415	94.9%
Theatre & Drama	61,931	70,497	87.8%
Women's Studies Program	59,108	N/A	N/A
Social Sciences	N/A	69,374	N/A
Liberal Studies & the Arts	69,911	70,945	98.5%

SOURCE: October 2007 IADS Frozen slice

NOTE:

Salaries reported are for personnel paid within the department only; department members being paid as administrators, or who hold zero-dollar appointments, are not counted. Salary paid on 9-month basis.

Prepared by : Margaret Harrigan, Office of Academic Planning and Analysis

Table 10b. Salary of Science & Engineering Faculty by Gender (Controlling for Department and Rank), 2007

Division/Department	Women's Median Salary			Men's Median Salary			Women's Median Salary as % of Men's		
	Full	Associate	Assistant	Full	Associate	Assistant	Full	Associate	Assistant
Physical Sciences	110,385	80,000	79,696	107,818	82,189	75,000	102.4%	97.3%	106.3%
Biological Systems Engineering	N/A	N/A	59,963	85,574	64,712	65,000	N/A	N/A	92.3%
Soil Science	N/A	68,199	60,858	77,788	65,651	59,596	N/A	103.9%	102.1%
Chemical & Biological Engineering	105,331	N/A	N/A	125,877	85,801	79,715	83.7%	N/A	N/A
Civil & Environmental Engineering	103,534	N/A	78,863	111,425	79,456	81,409	92.9%	N/A	96.9%
Electrical & Computer Engineering	111,918	N/A	84,289	110,574	88,399	86,266	101.2%	N/A	97.7%
Biomedical Engineering	N/A	N/A	80,000	121,466	85,808	81,827	N/A	N/A	97.8%
Industrial Engineering	125,465	N/A	N/A	134,885	89,561	80,979	93.0%	N/A	N/A
Mechanical Engineering	144,068	89,803	78,908	108,934	83,694	76,779	132.3%	107.3%	102.8%
Materials Science & Engineering	107,322	N/A	82,621	122,812	82,522	84,566	87.4%	N/A	97.7%
Engineering Physics	102,286	91,298	N/A	129,687	91,761	89,685	78.9%	99.5%	N/A
Engineering Professional Development	N/A	N/A	N/A	105,013	77,767	N/A	N/A	N/A	N/A
Astronomy	92,644	77,726	77,000	94,879	77,137	78,147	97.6%	100.8%	98.5%
Chemistry	93,288	68,508	67,074	113,881	67,634	67,000	81.9%	101.3%	100.1%
Computer Sciences	117,830	86,885	86,000	123,967	91,675	86,041	95.0%	94.8%	100.0%
Geology & Geophysics	82,997	69,310	N/A	85,283	75,000	66,186	97.3%	92.4%	N/A
Mathematics	102,286	80,000	78,683	92,656	84,660	68,373	110.4%	94.5%	115.1%
Atmospheric & Oceanic Sciences	N/A	N/A	61,140	93,797	63,428	62,093	N/A	N/A	98.5%
Physics	132,189	69,664	70,000	95,000	73,934	70,000	139.1%	94.2%	100.0%
Statistics	152,016	81,725	66,335	107,453	73,694	69,702	141.5%	110.9%	95.2%
Biological Sciences	97,379	72,303	64,662	100,400	71,535	63,845	97.0%	101.1%	101.3%
Agronomy	N/A	67,260	65,000	74,779	N/A	59,891	N/A	N/A	108.5%
Animal Science	N/A	N/A	81,539	87,969	69,697	58,953	N/A	N/A	138.3%
Bacteriology	87,761	78,513	63,821	91,796	67,068	68,396	95.6%	117.1%	93.3%
Biochemistry	96,086	N/A	64,565	116,408	71,003	76,006	82.5%	N/A	84.9%
Dairy Science	85,052	N/A	N/A	89,225	67,129	67,320	95.3%	N/A	N/A
Entomology	90,961	60,587	58,813	89,820	59,136	60,417	101.3%	102.5%	97.3%
Food Microbiology & Toxicology	N/A	N/A	N/A	108,358	N/A	N/A	N/A	N/A	N/A
Food Science	N/A	68,425	60,595	87,040	70,233	N/A	N/A	97.4%	N/A
Genetics	N/A	70,220	66,381	114,460	67,042	N/A	N/A	104.7%	N/A
Horticulture	N/A	67,929	62,576	91,955	61,867	62,384	N/A	109.8%	100.3%
Nutritional Sciences	83,788	67,212	61,823	97,308	70,339	N/A	86.1%	95.6%	N/A
Plant Pathology	77,011	N/A	60,953	93,242	N/A	N/A	82.6%	N/A	N/A
Forest Ecology & Management	72,041	N/A	N/A	97,657	62,786	N/A	73.8%	N/A	N/A
Natural Resources - Wildlife Ecology	N/A	N/A	N/A	90,021	70,598	60,775	N/A	N/A	N/A
Kinesiology	84,421	66,392	58,098	109,706	67,197	57,538	77.0%	98.8%	101.0%
Nelson Institute for Environmental Studies	70,713	N/A	73,799	91,899	102,152	N/A	76.9%	N/A	N/A

Botany	98,208	N/A	54,132	95,220	73,694	N/A	103.1%	N/A	N/A
Communicative Disorders	108,310	73,995	63,193	88,526	76,309	N/A	122.3%	97.0%	N/A
Zoology	93,076	66,468	59,838	89,012	60,511	59,987	104.6%	109.8%	99.8%
Anatomy	97,379	78,704	N/A	106,314	78,609	69,253	91.6%	100.1%	N/A
Anesthesiology	N/A	N/A	N/A	106,364	80,740	66,219	N/A	N/A	N/A
Biostatistics & Medical Informatics	88,834	70,085	68,669	113,672	90,517	68,435	78.1%	77.4%	100.3%
Family Medicine	132,514	N/A	76,614	117,475	102,907	66,737	112.8%	N/A	114.8%
Genetics	N/A	N/A	66,532	98,415	67,042	64,879	N/A	N/A	102.5%
Obstetrics & Gynecology	N/A	70,043	N/A	102,964	68,302	60,176	N/A	102.5%	N/A
Medical History & Bioethics	146,837	87,206	61,058	145,160	80,187	58,605	101.2%	108.8%	104.2%
Human Oncology	N/A	70,993	N/A	94,718	60,984	68,960	N/A	116.4%	N/A
Medicine	122,727	90,466	79,532	104,695	75,973	67,311	117.2%	119.1%	118.2%
Dermatology	N/A	N/A	N/A	129,926	81,227	64,127	N/A	N/A	N/A
Medical Microbiology	114,443	85,282	68,960	114,959	88,088	N/A	99.6%	96.8%	N/A
Medical Physics	N/A	81,334	N/A	90,455	81,616	68,960	N/A	99.7%	N/A
Neurology	N/A	N/A	N/A	99,263	89,721	65,891	N/A	N/A	N/A
Neurological Surgery	81,967	N/A	60,924	114,864	46,145	65,224	71.4%	N/A	93.4%
Oncology	111,163	78,330	68,101	116,777	N/A	69,343	95.2%	N/A	98.2%
Ophthalmology & Visual Sciences	102,102	N/A	N/A	115,787	86,925	N/A	88.2%	N/A	N/A
Orthopedics & Rehabilitation	72,508	N/A	N/A	94,741	67,174	49,809	76.5%	N/A	N/A
Pathology & Laboratory Medicine	92,328	108,286	N/A	103,671	70,499	51,295	89.1%	153.6%	N/A
Pediatrics	111,824	85,282	64,662	121,836	N/A	53,881	91.8%	N/A	120.0%
Pharmacology	111,887	71,637	N/A	110,318	74,814	68,952	101.4%	95.8%	N/A
Biomolecular Chemistry	95,218	79,279	69,343	100,079	75,739	68,254	95.1%	104.7%	101.6%
Physiology	110,431	96,229	62,921	119,842	63,139	69,183	92.1%	152.4%	90.9%
Population Health Sciences	109,689	87,255	74,700	120,604	69,837	74,979	90.9%	124.9%	99.6%
Psychiatry	132,874	70,861	72,182	106,679	N/A	60,550	124.6%	N/A	119.2%
Radiology	67,178	N/A	81,818	78,631	83,484	68,960	85.4%	N/A	118.6%
Surgery	N/A	N/A	77,727	80,599	45,646	36,544	N/A	N/A	212.7%
School of Pharmacy	86,702	79,335	65,079	101,819	79,467	64,290	85.2%	99.8%	101.2%
Medical Sciences	107,668	79,943	N/A	104,727	76,661	68,626	102.8%	104.3%	N/A
Pathobiological Sciences	N/A	69,549	N/A	103,667	72,122	64,900	N/A	96.4%	N/A
Comparative Biosciences	100,064	N/A	62,929	95,053	66,518	68,321	105.3%	N/A	92.1%
Surgical Sciences	N/A	80,620	N/A	119,034	71,758	N/A	N/A	112.3%	N/A

Social Studies	89,509	65,543	61,123	103,263	76,511	64,062	86.7%	85.7%	95.4%
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Agricultural & Applied Economics	N/A	N/A	74,971	107,127	84,272	74,801	N/A	N/A	100.2%
Life Sciences Communication	82,663	66,019	61,194	96,713	N/A	64,254	85.5%	N/A	95.2%
Rural Sociology	104,214	N/A	60,000	75,217	71,250	62,729	138.6%	N/A	95.6%
Natural Resources-Landscape Architecture	97,234	68,047	56,372	84,999	N/A	56,949	114.4%	N/A	99.0%
Urban & Regional Planning	N/A	N/A	56,162	81,746	N/A	60,602	N/A	N/A	92.7%
School of Business	171,738	154,026	130,000	175,281	141,231	116,481	98.0%	109.1%	111.6%
Counseling Psychology	84,192	N/A	55,244	89,717	N/A	N/A	93.8%	N/A	N/A
Curriculum & Instruction	86,237	61,539	56,379	97,866	73,609	56,493	88.1%	83.6%	99.8%
Educational Leadership & Policy Analysis	77,270	66,991	N/A	100,436	58,732	57,076	76.9%	114.1%	N/A

Educational Policy Studies	77,359	69,680	56,753	91,166	65,619	N/A	84.9%	106.2%	N/A
Educational Psychology	90,481	62,932	56,500	102,094	62,001	55,152	88.6%	101.5%	102.4%
Rehabilitation Psychology & Special Education	80,280	63,373	57,105	87,152	63,254	57,417	92.1%	100.2%	99.5%
School of Human Ecology	82,295	65,329	56,915	80,903	65,688	62,000	101.7%	99.5%	91.8%
Law School	137,385	108,342	93,681	134,046	109,169	98,719	102.5%	99.2%	94.9%
Anthropology	74,073	64,077	60,589	87,701	62,332	52,381	84.5%	102.8%	115.7%
Afro-American Studies	84,375	62,059	N/A	112,967	N/A	64,900	74.7%	N/A	N/A
Communication Arts	77,970	55,994	54,966	84,428	65,899	56,463	92.4%	85.0%	97.3%
Economics	140,687	N/A	95,010	178,816	156,615	93,820	78.7%	N/A	101.3%
Ethnic Studies	88,509	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geography	66,461	N/A	58,195	86,790	65,192	59,285	76.6%	N/A	98.2%
LaFollette School of Public Affairs	114,627	N/A	71,189	107,135	82,123	72,596	107.0%	N/A	98.1%
School of Journalism & Mass Communication	99,645	N/A	58,633	86,740	68,449	N/A	114.9%	N/A	N/A
School of Library & Information Studies	81,000	67,330	59,819	N/A	68,449	66,000	N/A	98.4%	90.6%
Political Science	89,807	69,400	61,123	105,529	75,599	64,000	85.1%	91.8%	95.5%
Psychology	99,217	N/A	63,000	122,930	64,210	59,866	80.7%	N/A	105.2%
Social Work	81,644	65,073	63,327	95,440	N/A	64,124	85.5%	N/A	98.8%
Sociology	112,486	88,312	63,386	95,193	71,238	N/A	118.2%	124.0%	N/A
Urban & Regional Planning	N/A	N/A	N/A	71,756	N/A	N/A	N/A	N/A	N/A
School of Nursing	99,196	63,737	66,009	N/A	N/A	N/A	N/A	N/A	N/A
Professional Development & Applied Studies	63,376	N/A	N/A	72,393	N/A	N/A	87.5%	N/A	N/A

Humanities	79,596	60,221	54,498	83,356	60,137	52,445	95.5%	100.1%	103.9%
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Art	71,000	58,862	54,498	67,354	58,212	53,000	105.4%	101.1%	102.8%
Dance	64,187	N/A	N/A	62,904	N/A	N/A	102.0%	N/A	N/A
African Languages & Literature	93,320	61,162	N/A	95,589	N/A	51,000	97.6%	N/A	N/A
Art History	84,129	68,048	52,371	82,532	N/A	N/A	101.9%	N/A	N/A
Classics	85,718	N/A	N/A	87,227	73,248	51,000	98.3%	N/A	N/A
Comparative Literature	84,004	N/A	N/A	95,863	49,797	N/A	87.6%	N/A	N/A
East Asian Languages & Literature	90,509	57,862	49,198	104,353	66,729	50,216	86.7%	86.7%	98.0%
English	92,222	62,929	50,164	96,387	61,021	51,382	95.7%	103.1%	97.6%
French & Italian	70,999	59,625	59,000	83,460	61,820	53,026	85.1%	96.4%	111.3%
German	74,825	64,456	N/A	80,588	55,335	51,949	92.8%	116.5%	N/A
Hebrew & Semitic Studies	74,927	N/A	N/A	100,230	N/A	N/A	74.8%	N/A	N/A
History	85,369	67,355	55,949	99,619	67,721	55,869	85.7%	99.5%	100.1%
History of Science	78,450	N/A	55,831	85,331	70,278	52,712	91.9%	N/A	105.9%
Linguistics	77,106	N/A	49,319	77,594	N/A	52,445	99.4%	N/A	94.0%
School of Music	73,755	55,311	56,000	77,429	59,342	53,542	95.3%	93.2%	104.6%
Philosophy	81,345	N/A	61,154	87,655	68,000	54,837	92.8%	N/A	111.5%
Scandinavian Studies	83,878	50,867	55,000	75,013	N/A	N/A	111.8%	N/A	N/A
Slavic Languages	99,454	N/A	N/A	94,082	58,921	53,828	105.7%	N/A	N/A
Languages & Cultures of Asia	78,372	N/A	52,216	79,466	81,432	55,658	98.6%	N/A	93.8%
Spanish & Portuguese	76,403	53,038	50,426	76,187	57,167	50,491	100.3%	92.8%	99.9%
Theatre & Drama	87,102	63,357	56,594	77,677	56,866	55,683	112.1%	111.4%	101.6%
Women's Studies Program	69,332	54,347	59,108	N/A	N/A	N/A	N/A	N/A	N/A

Social Sciences	N/A	N/A	N/A	N/A	N/A	69,374	N/A	N/A	N/A
Liberal Studies & the Arts	69,911	N/A	N/A	70,945	N/A	N/A	98.5%	N/A	N/A

SOURCE: October 2007 IADS Frozen slice

NOTE:

Salaries reported are for personnel paid within the department only; department members being paid as administrators, or who hold zero-dollar appointments, are not counted. Salary paid on 9-month basis.

Prepared by : Margaret Harrigan, Office of Academic Planning and Analysis

Table 12a. Offers Made, 2004-2007

Division/School	Junior Offers Made			Junior Offers Accepted			
	Women	Men	% Women	Women		Men	
				N	% Accept	N	% Accept
Physical Sciences	21	75	21.9%	10	47.6%	47	62.7%
College of Engineering*	12	23	34.3%	5	41.7%	14	60.9%
Letters & Sciences	8	47	14.5%	5	62.5%	31	66.0%
College of Agricultural & Life Sciences	1	5	16.7%	0	0.0%	2	40.0%
Biological Sciences	26	55	32.1%	19	73.1%	47	85.5%
Letters & Sciences	4	0	100.0%	4	100.0%	N/A	N/A
School of Veterinary Medicine	0	3	0.0%	N/A	N/A	2	66.7%
School of Pharmacy	3	5	37.5%	1	33.3%	5	100.0%
Medical School*	16	34	32.0%	12	75.0%	29	85.3%
College of Agricultural & Life Sciences	3	13	18.8%	2	66.7%	11	84.6%
Division/School	Tenured** Offers Made			Tenured*** Offers Accepted			
	Women	Men	% Women	Women		Men	
				N	% Accept	N	% Accept
Physical Sciences	3	14	17.6%	2	66.7%	9	64.3%
College of Engineering	0	3	0.0%	N/A	N/A	3	100.0%
Letters & Sciences**	2	11	15.4%	1	50.0%	6	54.5%
College of Agricultural & Life Sciences	1	0	N/A	1	N/A	N/A	N/A
Biological Sciences	11	21	34.4%	9	81.8%	15	71.4%
Letters & Sciences	2	3	40.0%	2	100.0%	3	100.0%
School of Veterinary Medicine	1	1	50.0%	1	100.0%	1	100.0%
School of Pharmacy	1	3	25.0%	0	0.0%	2	66.7%
Medical School	5	9	35.7%	4	80.0%	5	55.6%
College of Agricultural & Life Sciences	2	5	28.6%	2	80.0%	4	80.0%

* One decision is pending.

** Two decisions are pending.

*** Associate Professor and Professor titles.

Table 12b. Base Salary (12 Month) Offers, 2004-2007

Division/School	Median Junior Offers Made		Women's Median as % of Men's	Median Junior Offers Accepted		Women's Median as % of Men's
	Women	Men		Women	Men	
Physical Sciences	\$97,778	\$94,111	103.9%	\$96,556	\$91,667	105.3%
College of Engineering	\$99,611	\$101,444	98.2%	\$97,778	\$102,056	95.8%
Letters & Sciences	\$91,667	\$85,556	107.1%	\$86,778	\$85,556	101.4%
College of Agricultural & Life Sciences	\$74,500	\$79,444	93.8%	N/A	\$75,722	N/A
Biological Sciences	\$79,139	\$80,333	98.5%	\$78,222	\$80,000	97.8%
Letters & Sciences	\$75,167	N/A	N/A	\$75,167	N/A	N/A
School of Veterinary Medicine	N/A	\$91,944	N/A	N/A	\$91,944	N/A
School of Pharmacy	\$85,556	\$81,889	104.5%	\$81,889	\$81,889	100.0%
Medical School	\$80,000	\$81,000	98.8%	\$80,000	\$80,000	100.0%
College of Agricultural & Life Sciences	\$71,000	\$86,472	82.1%	\$74,417	\$77,222	96.4%
Division/School	Median Senior Offers Made		Women's Median as % of Men's	Median Senior Offers Accepted		Women's Median as % of Men's
	Women	Men		Women	Men	
Physical Sciences	\$110,000	\$121,000	90.9%	\$103,889	\$119,778	86.7%
College of Engineering	\$110,000	\$128,333	85.7%	N/A	\$128,333	N/A
Letters & Sciences	\$140,556	\$110,000	127.8%	\$97,778	\$104,194	93.8%
College of Agricultural & Life Sciences	N/A	N/A	N/A	\$110,000	N/A	N/A
Biological Sciences	\$122,222	\$103,889	117.6%	\$96,500	\$97,778	98.7%
Letters & Sciences	\$137,500	\$103,889	132.4%	\$137,500	\$103,889	132.4%
School of Veterinary Medicine	\$96,500	\$156,444	61.7%	\$96,500	\$156,444	61.7%
School of Pharmacy	\$146,667	\$128,333	114.3%	N/A	\$110,000	N/A
Medical School	\$147,500	\$115,000	128.3%	\$150,000	\$117,500	127.7%
College of Agricultural & Life Sciences	\$88,611	\$73,000	121.4%	\$88,611	\$74,000	119.7%

Table 12c. Total Startup Package* Offers, 2004-2007

Division/School	Median Junior Offers Made		Women's Median as % of Men's	Median Junior Offers Accepted		Women's Median as % of Men's
	Women	Men		Women	Men	
Physical Sciences	\$264,750	\$250,800	105.6%	\$281,628	\$255,500	110.2%
College of Engineering	\$300,000	\$300,000	100.0%	\$300,000	\$265,706	112.9%
Letters & Sciences	\$253,500	\$255,500	99.2%	\$276,000	\$256,500	107.6%
College of Agricultural & Life Sciences	\$140,000	\$211,000	66.4%	N/A	\$201,500	N/A
Biological Sciences	\$230,000	\$212,000	108.5%	\$157,500	\$212,000	74.3%
Letters & Sciences	\$92,750	N/A	N/A	\$92,750	N/A	N/A
School of Veterinary Medicine	N/A	\$282,500	N/A	N/A	\$282,500	N/A
School of Pharmacy	\$543,000	\$445,000	122.0%	**	\$445,000	N/A
Medical School	\$270,000	\$225,000	120.0%	\$260,000	\$225,000	115.6%
College of Agricultural & Life Sciences	\$194,000	\$196,500	98.7%	\$204,000	\$193,000	105.7%
Division/School	Median Senior Offers Made		Women's Median as % of Men's	Median Senior Offers Accepted		Women's Median as % of Men's
	Women	Men		Women	Men	
Physical Sciences	\$70,000	\$255,250	27.4%	\$60,750	\$261,900	23.2%
College of Engineering	N/A	\$265,000	N/A	N/A	\$265,000	N/A
Letters & Sciences	\$765,250	\$248,600	307.8%	\$51,500	\$255,250	20.2%
College of Agricultural & Life Sciences	\$70,000	N/A	N/A	\$70,000	N/A	N/A
Biological Sciences	\$306,000	\$257,918	118.6%	\$226,750	\$275,000	82.5%
Letters & Sciences	\$232,750	\$169,500	137.3%	\$232,750	\$169,500	137.3%
School of Veterinary Medicine	**	\$275,000	N/A	**	\$275,000	N/A
School of Pharmacy**	\$1,000,000	\$1,350,000	74.1%	N/A	\$1,058,334	N/A
Medical School	\$300,000	\$262,500	114.3%	\$177,000	\$300,000	59.0%
College of Agricultural & Life Sciences	\$444,690	\$200,172	222.2%	\$444,690	\$220,504	201.7%

* Total Startup Package does not include Base Salary.

** Missing data for startup.

Table 13. New Hires, 2007

	2007-2008	
	Total Hires	Percent Women
Junior Hires		
Biological Sciences	27	29.6%
Physical Sciences	17	11.8%
Senior Hires		
Biological Sciences	5	0.0%
Physical Sciences	4	0.0%
Total Hires, Biological Sciences	32	25.0%
Total Hires, Physical Sciences	21	9.5%
Total Hires, Junior	44	22.7%
Total Hires, Senior	9	0.0%
TOTAL HIRES	53	18.9%

NOTE: Faculty hired as Assistant Professors are Junior Hires;
Associate and (Full) Professors are Senior Hires.

SOURCE: October 2007 IADS Frozen slice.

WISELI Research/Evaluation Report:

Sheridan, Jennifer; Molly Carnes and Jo Handelsman. September 2007. “Final Report of the ADVANCE Program for University of Wisconsin-Madison. 2002-2007.”

http://wiseli.engr.wisc.edu/initiatives/researcheval/Final_Report_Final.pdf.



Final Report of the ADVANCE Program for University of Wisconsin-Madison

2002-2007

Principals, *University of Wisconsin-Madison*

**Dr. Molly Carnes, Jean Manchester Biddick Professor of Medicine
Dr. Jo Handelsman, Howard Hughes Medical Institute Professor of Plant
Pathology
Dr. Jennifer Sheridan, WISELI**

September, 2007

Table of Contents

Introduction: What is ADVANCE? What is WISELI?	1
Section I: Status and Outcomes of all proposed activities	1
Research Proposed: Establish Longitudinal Data System	1
Research Proposed: Establish Baseline Data Collection	3
Research Proposed: Develop and Administer Climate Surveys	5
Research Proposed: Issue Studies	8
Research Proposed: Discourse Analysis	8
Research Proposed: Ethnographic Study	10
Research Proposed: Modeling Predictive Variables of Campus Climate	12
Research Proposed: Evaluation of Existing Campus Programs	12
New Initiative Proposed: Establish WISELI	13
New Initiative Proposed: Examine patterns of assigning institutional resources for uneven distribution by gender	18
New Initiative Proposed: Study the impact and feasibility of moving outstanding non- tenure line researchers into faculty positions	19
New Initiative Proposed: Workshops for Department Chairs	20
New Initiative Proposed: Workshops on Laboratory Management	22
New Initiative Proposed: Celebrating Women in Science and Engineering Seminar Series	23
New Initiative Proposed: Cluster Hire Initiative	25
New Initiative Proposed: Women in Science and Engineering Leadership Programs and Workshop	25
New Initiative Proposed: Life Cycle Research Grants	27
New Initiative Proposed: Endowed Professorships for Women in Science	28
New Initiative Proposed: Develop Networks, Promote Communication, Increase Visibility of Women in Science and Engineering	29
New Initiative Proposed: Time-Stretcher Services	30
New Initiative Proposed: Leadership Development of Non-Tenure Line Women in Science & Engineering	30
Section II: Status and Outcomes of other activities (not proposed)	32
Searching for Excellence & Diversity	32
WISELI Videos	34
Senior Women Project/Awards and Honors	35
WISELI Library	39
Individual Advocacy	39
National Influence	40
Section III: WISELI Personnel	46
Notes on WISELI organizational structure	58

Section IV: Financial Reports.....	60
Spending, NSF funds and direct support from campus	60
Effort distribution across campus	61
Direct and indirect cost distribution across campus	61
Cost-share report.....	62
Section V: ADVANCE Impact.....	63
ADVANCE Impact: By the Numbers.....	63
ADVANCE Impact: Climate for Women.....	66
ADVANCE Impact: Visibility of Women.....	71
ADVANCE Impact: Work/Life Balance	73
ADVANCE Impact: Leadership.....	75
ADVANCE Impact: Hiring Practices and Policies	76
ADVANCE Impact: Tenure Process and Policies.....	78
Section VI: Overall Summary	80
WISELI's Most Successful Strategies	80
WISELI's Least Successful Strategies.....	82
Future of ADVANCE at UW-Madison	84
Conclusion	85

Appendix 1: Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006

Appendix 2: Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute

WISELI: *FORWARD* With Institutional Transformation

Final Report to the National Science Foundation

Introduction: What is ADVANCE? What is WISELI?

In response to the concerns that we as a nation are not training enough or sufficiently diverse people to meet the growing demands of our scientific workforce and that there are already critical shortages in some fields, the National Science Foundation (NSF) launched the ADVANCE program. The goal of this program is to increase the participation and advancement of women in academic science and engineering, with particular emphasis on increasing the number of women in positions of leadership. In the inaugural round of funding, nine sites were awarded Institutional Transformation Awards (\$3.75 million over 5 years), including the University of Wisconsin-Madison (UW-Madison). The UW-Madison project, which began January 1, 2002, has established the Women in Science and Engineering Leadership Institute (WISELI). WISELI is approaching the issue comprehensively and with an evidence-based framework designed to answer the questions: What are the barriers impeding the participation and advancement of women in science and engineering? How can we eliminate or overcome these barriers?

WISELI is a centralized, visible administrative structure with a mission to address a number of impediments to women's academic advancement. The center structure of WISELI allows the institute to bring the issues of women scientists and engineers from obscurity to visibility. It provides an effective and legitimate means of networking women faculty across departments; performing research and evaluation on programs and initiatives designed to improve the environment for women; administering new programs (grant programs and workshops) promoting gender equity; bringing in new grants relevant to improving gender equity on campus and at other universities; and monitoring of gender equity indicators for the UW-Madison campus overall.

Section I: Status and Outcomes of all proposed activities

In this section, we provide brief reports on each proposed element of our ADVANCE project. Following the outline of the original proposal, we describe the intent of the proposed activity and whether the activity was implemented. If the form of implementation changed we describe the change. If an activity was not implemented, we explain why it was not; if it was implemented, we describe the participation in the activity, provide a summary of evaluation reports regarding the activity (if appropriate), and describe the future of the activity (e.g., institutionalization, dissemination plans, future funding.) The initial proposal first outlined a series of research and evaluation projects, and then outlined new initiatives ADVANCE would implement. Some of the new initiatives are actually research or evaluation projects; we retain the original headings and language as initially outlined in our proposal.

Research Proposed: Establish Longitudinal Data System

Description of Activity. We proposed to establish a system whereby data regarding gender equity on campus are collected in order to track progress. At the same time, we proposed to

develop a system whereby participant data are tracked and linked together with other data, centralized at WISELI. Such a database would become the core method of evaluation of all of WISELI's initiatives.

Implemented? This activity was implemented immediately upon creation of WISELI. Institutional Review Board (IRB) approval for all WISELI activity was obtained, and participants at almost all WISELI events were recorded in a database for future correlation with other data (survey data; institutional data; interview data) collected by WISELI. The "longitudinal data system" has been central to all of WISELI's evaluation activities. The collection and analysis of the "NSF 12" indicators were folded into the already-planned longitudinal data system.

Results. Some reports/publications resulting from data stored and collected in this longitudinal database include:

Refereed Presentations

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. 2007. "Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?" Women in Engineering Programs & Advocates Network (WEPAN) 2007 Conference Proceedings (on CD-ROM). <http://www.wepan.org/storelistitem.cfm?itemnumber=18> , Paper #0045. June 2007.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. 2007. "Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?" American Society for Engineering Education (ASEE) 2007 Conference Proceedings. <http://www.asee.org/conferences/v2search.cfm> , Paper #992. June 2007.

Working Papers

Frehill, Lisa; Cecily Jeser-Cannavale; Priscilla Kehoe; Ellen Meader; Jennifer Sheridan; Abby Stewart; and Helena Sviglin. January 2005. "Toolkit for Reporting Progress Toward NSF ADVANCE: Institutional Transformation Goals." <http://www.advance.nmsu.edu/Documents/PDF/toolkit1.pdf> .

Frehill, Lisa; Elena Batista; Sheila Edwards-Lange; Cecily Jeser-Cannavale; Jan Malley; Jennifer Sheridan; Kim Sullivan; and Helena Sviglin. May 2006. "Using Program Evaluation To Ensure the Success of Your ADVANCE Program." <http://www.advance.nmsu.edu/Documents/PDF/toolkit2.pdf> .

Non-Refereed Presentations

Sheridan, Jennifer. April 20, 2004. "ADVANCE Institutional Data: Using Institutional Data to Create Institutional Change." NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Sheridan, Jennifer. May 19, 2005. "Indicators and Dissemination: Question 2. What are the Outcomes of Institutional Processes of Recruitment and Advancement for Men and Women?" NSF ADVANCE P.I. Meeting, National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 17, 2006. "Data Collection and Reporting: The NSF Indicators." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Pribbenow, Christine. May 19, 2006. "Using Evaluation Data to Affect Institutional Change." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Evaluation Reports

Sheridan, Jennifer. May 2007. "Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006."

Future of Activity. WISELI continues to collect and store in a longitudinal fashion all data regarding gender equity and participation in WISELI activities. Human subjects protocols will remain active (they are renewable annually); collection of most of the "NSF 12" indicators will continue; linking of varied sources of data to answer particular questions will continue. These data, combined with the survey data (see below), will continue to be the bedrock of WISELI's institutional change efforts.

Research Proposed: Establish Baseline Data Collection

Description of Activity. In-depth interviews with 32 women faculty, conducted at the beginning of the grant period, will provide a baseline from which program evaluation will emanate. Follow-up interviews with the same women will occur in the last year of the grant.

Implemented? This activity was implemented immediately upon creation of WISELI. Some changes to the original plan were made. Rather than interviewing 32 women faculty, we interviewed 26 women faculty and 15 women academic staff in the sciences and engineering. Staff members were interviewed in addition to faculty in order to gather planning data to inform many of WISELI's proposed activities revolving around academic staff (e.g., promote staff women to faculty positions; leadership development for academic staff; creation of a climate survey for academic staff.) Respondents were selected using a stratified random sample of both faculty and staff, to ensure representation across schools and colleges, ranks, time at the institution, and divisional affiliation. In 2002, 26 faculty agreed to be interviewed (two were replacements—one due to a refusal, and one because the subject was planning to retire before the re-interview in 2006), and 15 staff agreed to be interviewed (four were replacements due to refusals.) In 2006, 19 out of 23 faculty remaining at UW-Madison agreed to be interviewed (three of the original 26 faculty interviewed in 2002 retired or otherwise left the University.) We did not follow up with the staff interviewees in 2006, as these interviews were primarily used for planning purposes and were not designed to be part of the summative evaluation of WISELI.

Results. Results from the 2002 phase of data collection are summarized in the following presentations and reports:

Refereed Publications

Gunter, Ramona and Amy Stambach. 2003. "As Balancing Act and As Game: How Women and Men Science Faculty Experience the Promotion Process." *Gender Issues*. 21(1):24-42.

Gunter, Ramona and Amy Stambach. 2005. "Differences in Men and Women Scientists' Perceptions of Workplace Climate." *Journal of Women in Minorities in Science & Engineering*. 11(1):97-116.

Pribbenow, Christine Maidl; Jennifer Sheridan; Molly Carnes; Eve Fine; and Jo Handelsman. "Departmental Climate: Differing Perceptions by Faculty Members and Chairs." *The Journal of Women and Minorities in Science and Engineering*. [2006 draft accepted and under revision.]

Working Papers

Pribbenow, Christine Maidl; Jennifer Sheridan; and Deveny Benting. 2007. "Extending the Tenure Clock: The Experiences of Faculty at One University."

Non-Refereed Presentations

Stambach, Amy and Ramona Gunter. May 2003. "As Balancing Act and As Game: How Women and Men Science Faculty Experience the Promotion Process." Gender, Science, and Technology International Conference. Trondheim, Norway.

Gunter, Ramona. October 20, 2003. "Science Faculty Talk about Self, Home, and Career." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Pribbenow, Christine Maidl. March 22, 2004. "The Climate for Women Faculty in the Sciences and Engineering: Blueprints for Failure and Success." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Parker, Brenda. April 19, 2007. "NSF ADVANCE: Lessons for Geography Departments" (Panelist). American Association of Geographers Annual Meetings. San Francisco, CA.

Evaluation Reports

Pribbenow, Christine Maidl, Lottridge, Sue, & Deveny Benting. February 2004. "The Climate for Women Faculty in the Sciences and Engineering: Their Stories, Successes, and Solutions."

Sheridan, Jennifer; Deveny Benting; and Christine Maidl Pribbenow. July 27, 2004. "Evaluation of the Women Faculty Mentoring Program at the University of Wisconsin-Madison."

Sheridan, Jennifer and Deveny Benting. October 29, 2004. "Evaluation of the Tenure Clock Extension Policy at the University of Wisconsin-Madison."

Sheridan, Jennifer; Deveny Benting; and Christine Maidl Pribbenow. December 2005. "Evaluation of Childcare Needs and Practices at the University of Wisconsin-Madison."

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

Future of Activity. Although interviews with women faculty and staff in the Science, Technology, Engineering, and Math (STEM) disciplines will remain an important method of monitoring gender equity progress, WISELI has no further plans to re-interview these particular subjects. This research project is complete.

Research Proposed: Develop and Administer Climate Surveys

Description of Activity. We proposed to create a climate survey based upon the interview data collected from the women faculty, and administer the climate survey to all faculty in the biological and physical sciences in year one, and again in year five.

Implemented? WISELI developed an extensive climate survey instrument based on the interview data from women faculty and staff in the STEM disciplines. The survey did not go into the field in year one as planned, however; it was actually administered at the beginning of Year 2 (February 2003). The Office of the Provost funded the administration of the survey to faculty in all divisions. Thus, we sent the survey to 2,221 faculty and received 1,338 responses, for a response rate of 60.2%. The follow-up survey was administered in 2006, and again the Office of the Provost funded its implementation to all faculty. We received a 55.7% response rate for the 2006 survey.

In addition to these faculty surveys, WISELI also created a climate survey for academic staff in research, teaching, and clinical positions based on the interview data from our in-depth interviews with academic staff. We surveyed a 50% random sample of academic staff in selected positions, and received a 47.6% response rate to this survey. We did not perform a follow-up to this survey of academic staff in 2006.

Results. The survey data have been instrumental to WISELI's efforts to transform the institution. A number of reports, presentations, and publications have resulted from the survey data, and more will come as the climate survey data have become an important campus resource on faculty and staff attitudes on satisfaction, climate, and more.

Climate survey instruments and selected results are available online:

2003 Faculty Survey:

<http://wiseli.engr.wisc.edu/initiatives/survey/results/facultypre/index.htm>

2006 Faculty Survey:

<http://wiseli.engr.wisc.edu/initiatives/survey/results/facultypost/index.htm>

2003 Academic Staff Survey:

<http://wiseli.engr.wisc.edu/Products/academicstaffversion.pdf>

Some of the reports/presentations using data from the climate surveys include:

Refereed Publications

Pribbenow, Christine Maidl; Jennifer Sheridan; Molly Carnes; Eve Fine; and Jo Handelsman. "Departmental Climate: Differing Perceptions by Faculty Members and

Chairs.” *The Journal of Women and Minorities in Science and Engineering*. [2006 draft accepted and under revision.]

Refereed Presentations

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. 2007. “Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?” Women in Engineering Programs & Advocates Network (WEPAN) 2007 Conference Proceedings (on CD-ROM). <http://www.wepan.org/storelistitem.cfm?itemnumber=18> , Paper #0045. June 2007.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. 2007. “Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?” American Society for Engineering Education (ASEE) 2007 Conference Proceedings. <http://www.asee.org/conferences/v2search.cfm> , Paper #992. June 2007.

Sheridan, Jennifer; Jo Handelsman; and Molly Carnes. August 14, 2004. “Assessing “Readiness to Embrace Diversity”: An Application of the Trans-Theoretical Model of Behavioral Change.” Annual Meeting of the American Sociological Association. San Francisco, CA.

Papers in Progress

Pribbenow, Christine Maidl; Jennifer Sheridan; and Deveny Benting. 2007. “Extending the Tenure Clock: The Experiences of Faculty at One University.”

Non-Refereed Presentations

Sheridan, Jennifer. January 12, 2004. “Women in Science & Engineering Leadership Institute at UW-Madison” (Panelist). AdvanceVT Inaugural Workshop, “ADVANCEing Women in Academe: Voices of Experience.” Virginia Tech. Blacksburg, VA.

Sheridan, Jennifer. February 17, 2004. “Implementing a Campus Climate Survey: Logistical Notes and Preliminary Findings.” Center for Demography & Ecology Training Seminar. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer. April 13, 2004. “Study of Academic Staff Work Life at UW-Madison: Preliminary Results.” Wisconsin Center for the Advancement of Postsecondary Education Academic Staff Institute 2004. University of Wisconsin-Madison. Madison, WI.

Sheridan, Jennifer. April 21, 2004. “WISELI’s Study of Faculty and Academic Staff Worklife Surveys.” NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Sheridan, Jennifer. March 17, 2006. “Climate and Institutional Change: ADVANCE Efforts to Improve Departmental Climate.” Committee on Institutional Change-Women in Science and Engineering (CIC-WISE) Group Meeting. Chicago, IL.

Fine, Eve. May 18, 2006. "Climate Workshops for Department Chairs." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 19, 2006. "Collection and Use of Climate Survey Data at the UW-Madison." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. March 27, 2007. "WISELI: Improve Departmental Climate for Women Faculty and Faculty of Color" (Poster). Showcase 2007. University of Wisconsin-Madison. Madison, WI.

Evaluation Reports

Sheridan, Jennifer; Deveny Benting; and Christine Maidl Pribbenow. July 27, 2004. "Evaluation of the Women Faculty Mentoring Program at the University of Wisconsin-Madison."

Sheridan, Jennifer and Deveny Benting. October 29, 2004. "Evaluation of the Tenure Clock Extension Policy at the University of Wisconsin-Madison."

Sheridan, Jennifer; Deveny Benting; and Christine Maidl Pribbenow. December 2005. "Evaluation of Childcare Needs and Practices at the University of Wisconsin-Madison."

Winchell, Jessica K. and Christine Maidl Pribbenow. April 2006. "Evaluation of the Gender Pay Equity Study and Equity of Faculty Salaries Policy at the University of Wisconsin-Madison."

Winchell, Jessica K. and Jennifer Sheridan. September 2006. "Evaluation of the Sexual Harassment Information Sessions at the University of Wisconsin-Madison."

Sheridan, Jennifer. October 31, 2006. "Perceived Benefits of and Barriers to Interdisciplinary Research at the UW-Madison: Evidence from the 2006 *Study of Faculty Worklife at the University of Wisconsin-Madison*." Prepared for and presented to the steering committee for the Wisconsin Institutes for Discovery.

Sheridan, Jennifer. December 4, 2006. "Department Climate in the College of Letters and Sciences: Evidence from the 2003 and 2006 *Study of Faculty Worklife*." Report prepared for the Equity and Diversity Committee in the College of Letters & Sciences.

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

Future of Activity. The climate surveys have been such an essential element of WISELI's success that we intend to continue surveying faculty every five years. We are actively setting

aside funding for these efforts, and expect our next survey to be implemented in 2011. We have also agreed to assist with a campus-funded climate survey for academic staff that encompasses more of the staff experience than we were able to study in our 50% sample in 2003.

Research Proposed: Issue Studies

Description of Activity. We proposed to complete three “issue studies” during years 2-4 of the ADVANCE funding. WISELI would identify some topic that requires more in-depth study, and then design a research study to collect data and produce useful findings for continued institutional transformation.

Implemented? WISELI directors and staff successfully identified and studied three different topics as “issue studies.” The first was a study of the differing perceptions that department chairs have regarding their departmental climate, compared to women faculty. The second study we called “Why Women Leave”, consisting of exit interviews with women faculty. This study was combined with our evaluation of the dual career hiring program, because the results were similar. Finally, we studied the efficacy of track changes from academic staff to faculty positions.

Results. The three papers/reports identified as WISELI “issue studies” are:

Refereed Publications

Pribbenow, Christine Maidl; Jennifer Sheridan; Molly Carnes; Eve Fine; and Jo Handelsman. “Departmental Climate: Differing Perceptions by Faculty Members and Chairs.” *The Journal of Women and Minorities in Science and Engineering*. [2006 draft accepted and under revision.]

Evaluation Reports

O’Connell, Kathleen; Christine Maidl Pribbenow; and Deveny Benting. March 2006. “The Climate at UW-Madison: Begins Sunny and Warm, Ends Chilly.”

O’Connell, Kathleen and Christine Maidl Pribbenow. December 2006. “She’s Got a Ticket to Ride: Strategies for Switching from Non-Tenure to Tenure-Track Position at UW-Madison.”

Future of Activity. WISELI will continue to identify topics of interest and will investigate as staff and faculty have the time and resources to do so.

Research Proposed: Discourse Analysis

Description of Activity. Prof. Cecilia Ford was selected to run a research study investigating the “ignoring my ideas” phenomenon often reported by women faculty. She planned to use observation, videotaping, transcription, and analysis of both men and women faculty to document the phenomenon among the women.

Implemented? Dr. Ford completed this research.

Results. As Dr. Ford began to more clearly formulate her research question, her focus shifted from documenting how women are ignored in meetings, to documenting how women get their voices heard in meetings. Using videotapes and detailed transcriptions of naturally-occurring conversations in a variety of meetings, Dr. Ford found that the women in her data regularly use questions to open participation and to project trajectories of further talk in which the questioners

emerge as major contributors. This finding contrasts with some previous studies that pointed to women's use of questioning as a powerless or weak strategy; Ford proposes that some forms of questioning give power to the questioner rather than the addressee. 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). Some of the presentations and publications in which she presents these findings include:

Refereed Publications

Ford, Cecilia. "Questioning in Meetings: Participation and Positioning." In *Why Do You Ask? The Function of Questions in Institutional Discourse* (Susan Erlich and Alice Freed, Eds.) Oxford University Press. In press.

Ford, Cecilia E. 2007. *Women Speaking Up: Getting and Using Turns in Workplace Meetings*. New York: Palgrave Macmillan.

Papers in Progress

Ford, Cecilia E. and Barbara A. Fox. 2005. "'Can I Make a Brief Comment on That': Reference and Social Organization In and Around an Extended Turn." In progress.

Refereed Presentations

Ford, Cecilia. July 2003. "Gender and Language in/as/on Academic Science: Combining Research with a Commitment to Institutional Change." Perception and Realization in Language and Gender Research Conference. Michigan State University. East Lansing, MI.

Ford, Cecilia. May 3, 2004. "'Having our ideas ignored': CA and a Feminist Project." American Association for Applied Linguistics Annual Conference. Colloquium entitled "CA as Applied Linguistics: Crossing Boundaries of Discipline and Practice." Portland, OR.

Ford, Cecilia. June 11-16, 2005. "'Can I Make a Brief Comment on That': Reference and Social Organization In and Around an Extended Turn" (Invited lecture). Symposium on Reference and Referential Form in Interactional Linguistics, organized by the Nordic Research Board. Helsinki, Finland.

Ford, Cecilia and Barbara A. Fox. July 6-9, 2005. "Reference and Repair as Grammatical Practices in an Extended Turn" (Plenary address). 15th Annual Meeting of the Society for Text & Discourse. Amsterdam, Netherlands.

Ford, Cecilia and Teddy Weathersbee. July 25, 2005. "Women's Agency and Participation: Feminist Research for Institutional Change." Symposium on Gender in Public Settings: Approaches to Third Wave Feminist Analysis at the 14th World Congress of Applied Linguistics Conference. University of Wisconsin-Madison. Madison, WI.

Ford, Cecilia. May 11-14, 2006. "Studying Turn Taking in Workplace Meetings as 'Interdisciplinary/Applied' Conversation Analysis." International Conference on Conversation Analysis. Helsinki, Finland.

Ford, Cecilia. May 15, 2006. "Methods and Challenges in the Study of Language in Interaction" (Invited speaker). Department of Linguistics. Stockholm University. Stockholm, Sweden.

Non-Refereed Presentations

Ford, Cecilia. September 16, 2003. "Gender and Talk: Looking Back and Looking Forward." Women's Health Forum of the UW-Madison Center for Women's Health and Women's Health Research. University of Wisconsin-Madison. Madison, WI.

Ford, Cecilia. February 16, 2004. "Getting our Voices Heard: Patterns of Participation in University Meetings." WISELI Seminar. Madison, WI.

Ford, Cecilia. May 2005. "Language and Heteronormativity." Workshop on Global Perspectives on Sexual Diversity and Gender Relations in a Changing World. Multicultural Student Center and International Student Services. University of Wisconsin-Madison. Madison, WI.

Ford, Cecilia. March 8, 2006. "The Extraordinary Precision of Ordinary Talk: A Linguist's Perspective on Social Interaction." University Roundtable. University of Wisconsin-Madison. Madison, WI.

Future of Activity. Once the scholarly book is published, Dr. Ford's 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. WISELI will continue to be involved in assisting Dr. Ford as she disseminates this work to a broader audience.

Research Proposed: Ethnographic Study

Description of Activity. Based upon knowledge gained from the initial interviews with women faculty, and also survey findings, participant observation in formal (e.g., faculty meetings, classrooms, theses defenses, etc.) and informal (e.g., labs and working spaces) settings will occur to 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. Open-ended interviews with observed participants will augment the observational data. Ultimately, data from the ethnographic study should feed back to inform the issue studies.

Implemented? Prof. Amy Stambach guided doctoral candidate Ramona Gunter's work for this proposed research project. The initial faculty/staff interviews were conducted, in part, by Dr. Gunter, and the focus of the project emanated from these in-depth interviews (but not the survey

data.) Gunter observed two different laboratory settings and also observed classrooms, as indicated in the proposal. She also interviewed additional lab members. The ethnographic research did not feed back into issue studies as expected, however. This project evolved as a stand-alone research project.

Results. Through the course of the interview and observational data she collected, Dr. Gunter reaffirmed the importance of *communication* in facilitating the learning and research progress of graduate students. What she discovered was not the usual finding that women were disadvantaged in their laboratory workgroups due to a lack of communication (i.e., isolation), but rather that gendered patterns of communication shaped conversations in ways that benefit men and hinder women. In addition to the gendered modes of interpersonal communication, Gunter uncovered both subtle and not-so-subtle examples of social structures and social expectations that also tended to enhance men's progress towards their degrees, and hinder women's progress.

Some of the publications, presentations, and other work emanating from this research project include:

Refereed Publications

Gunter, Ramona and Amy Stambach. 2003. "As Balancing Act and As Game: How Women and Men Science Faculty Experience the Promotion Process." *Gender Issues*. 21(1):24-42.

Gunter, Ramona and Amy Stambach. 2005. "Differences in Men and Women Scientists' Perceptions of Workplace Climate." *Journal of Women in Minorities in Science & Engineering*. 11(1):97-116.

Refereed Presentations

Stambach, Amy and Ramona Gunter. May 2003. "As Balancing Act and As Game: How Women and Men Science Faculty Experience the Promotion Process." Gender, Science, and Technology International Conference. Trondheim, Norway.

Non-Refereed Presentations

Gunter, Ramona. October 20, 2003. "Science Faculty Talk about Self, Home, and Career." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Gunter, Ramona. April 3, 2006. "Men and Women Graduate Students' Experiences in Two Plant Science Laboratories." Fort Atkinson Branch of American Association of University Women Meeting. Fort Atkinson, WI.

Dissertation

Gunter, Ramona. 2007. "Laboratory Talk: Gendered Interactions and Research Progress in Graduate Science Education." Doctoral Dissertation: University of Wisconsin-Madison.

Future of Activity. This project is completed. Dr. Gunter may produce a book and/or future journal articles from her dissertation work.

Research Proposed: Modeling Predictive Variables of Campus Climate

Description of Activity. After creating a scale measure of “perceived climate” using the faculty survey data, discriminant analysis will be used to uncover a set of variables that significantly affect perceived departmental climate. Analyses will be guided by Dr. Murray Clayton, who has used this technique in the past.

Implemented? This study was never completed, as Dr. Clayton took on first a high-level administrative leadership position in the University (chair of the University Committee), and then became chair of the Plant Pathology department.

Results. None.

Future of Activity. It may be possible to pursue this analysis in the future.

Research Proposed: Evaluation of Existing Campus Programs

Description of Activity. WISELI will gather and analyze data on the following existing programs at UW-Madison, in order to evaluate their effectiveness in creating gender equity: Dual Career Couples programs, Tenure clock extensions, Split Appointments, Gender Pay Equity Studies, Women Faculty Mentoring Program, The Chancellor’s UW-Madison Climate Initiative, Sexual Harassment Information Sessions, Campus Child Care, and the WISE Dormitory.

Implemented? Evaluation of the following existing programs was completed: Dual Career Couples programs, Tenure clock extensions, Campus Childcare, Gender Pay Equity Studies, Women Faculty Mentoring Program, and the Sexual Harassment Information Sessions. Split appointments were not investigated because we uncovered only one couple sharing a faculty appointment, and they left the UW-Madison in 2005/06. The UW-Madison Climate Initiative was not a formal program that we could evaluate, and the WISE Dormitory completed an internal evaluation in 1998 and planned a follow-up in 2003 in collaboration with the CIRTL/DELTA program, so it was unnecessary for us to duplicate these efforts.

Results. Main findings from each of the evaluation reports completed by the WISELI evaluation team are summarized in the final evaluation report (see Appendix 2).

Evaluation Reports

Sheridan, Jennifer; Deveny Benting; and Christine Maidl Pribbenow. July 27, 2004. “Evaluation of the Women Faculty Mentoring Program at the University of Wisconsin-Madison.”

Sheridan, Jennifer and Deveny Benting. October 29, 2004. “Evaluation of the Tenure Clock Extension Policy at the University of Wisconsin-Madison.”

Sheridan, Jennifer; Deveny Benting; and Christine Maidl Pribbenow. December 2005. “Evaluation of Childcare Needs and Practices at the University of Wisconsin-Madison.”

O’Connell, Kathleen; Christine Maidl Pribbenow; and Deveny Benting. March 2006. “The Climate at UW-Madison: Begins Sunny and Warm, Ends Chilly.”

Winchell, Jessica K. and Christine Maidl Pribbenow. April 2006. “Evaluation of the Gender Pay Equity Study and Equity of Faculty Salaries Policy at the University of Wisconsin-Madison.”

Winchell, Jessica K. and Jennifer Sheridan. September 2006. "Evaluation of the Sexual Harassment Information Sessions at the University of Wisconsin-Madison."

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

Future of Activity. WISELI evaluated many of these programs for the first time, and thus demonstrated the importance of evaluating diversity-related programs in order to both enhance the programs and justify the public funding supporting them. As WISELI evolves to become part of a wider diversity-related institute at UW-Madison, we anticipate that we will become a source of outside evaluation for other programs that have never been evaluated, thereby enhancing the UW-Madison's programming for diversity with an evidence-based approach.

New Initiative Proposed: Establish WISELI

Description of Activity. The Women in Science & Engineering Leadership Institute (WISELI) will be a centralized, visible administrative structure with space, a phone number, and a web site. At a Town Hall Meeting, to which all UW faculty and staff will be invited, our plans will be announced and discussed. Articles in the campus-wide and individual college newsletters and the local newspapers will announce the NSF award and the establishment of WISELI. Space will be provided in the College of Engineering (CoE) near the Dean's Office with prominent signage on the door. The Co-Directors (proposal PIs) will report directly to the Provost. A web page and letterhead will be developed and will include links to multiple national and local sites relevant to women in science and engineering.

Implemented? WISELI was established immediately in the College of Engineering. The promised space in the Deans' Suite in Engineering Hall was provided to the WISELI staff, and a website, listserv, phone number, and letterhead were all created. Town Hall meetings were implemented in April 2002. Announcements of WISELI's creation and the award of the ADVANCE grant were prominently advertised on the UW-Madison website and in the faculty/staff newspaper, *Wisconsin Week*. In Summer 2003, WISELI became an official University center when the Academic Planning Council approved our request for center status. The website is a wealth of information regarding both WISELI's programs, and other information related to women in science and engineering.

Website. <http://wiseli.engr.wisc.edu> .

Results. WISELI as a research center has been a very visible and recognizable center for research and programs related to gender equity on campus. As outlined in some detail in our final evaluation report (see Appendix 2), WISELI is generally acknowledged to have: (1) raised the awareness level about the climate for women on campus; (2) performed rigorous and valuable research; and (3) created high-quality, effective programs. These outcomes are acknowledged by both high-level administrators, and women faculty in STEM themselves. Elsewhere in the report, the success of WISELI's listserv and website in developing networks, promoting communication, and increasing the visibility of women in science and engineering are highlighted (see also "Develop Networks, Promote Communication, Increase Visibility of

Women in Science and Engineering” below.) Some of the presentations and publications we produced, or press articles about WISELI, include:

Refereed Presentations

Carnes, Molly and Jo Handelsman. October 2002. “The NSF ADVANCE Program at the University of Wisconsin-Madison: An Interdisciplinary Effort to Increase the Recruitment, Retention, and Advancement of Women in Academic Departments in the Biological and Physical Sciences.” Retaining Women in Early Academic Science, Mathematics, Engineering, and Technology Careers Conference. Iowa State University. Ames, IA.

Murphy, Regina. November 2002. “The Women in Science & Engineering Leadership Institute at UW-Madison.” American Institute of Chemical Engineers (AIChE) Annual Meeting. Indianapolis, IN.

Sheridan, Jennifer; Molly Carnes; and Jo Handelsman. 2003. “The University of Wisconsin-Madison ADVANCE Program: Progress to Date.” Women in Engineering Programs & Advocates Network (WEPAN) 2003 Conference Proceedings (on CD-ROM). <http://www.wepan.org/storelistitem.cfm?itemnumber=14> , Paper #1040. June 2003. Available online: http://dpubs.libraries.psu.edu/DPubS?service=Repository&version=1.0&verb=Disseminate&view=body&content-type=pdf_1&handle=psu.wepan/1181071718# .

Carnes, Molly. February 13, 2004. “Status of STEM Female Faculty Recruitment, Retention and Advancement” (Discussant). “Systemic Transformations in the Role of Women in Science and Engineering” Symposium, 2004 American Association for the Advancement of Science Annual Meeting. Seattle, WA.

Parker, Brenda. April 19, 2007. “NSF ADVANCE: Lessons for Geography Departments” (Panelist). American Association of Geographers Annual Meetings. San Francisco, CA.

Non-Refereed Presentations

Sheridan, Jennifer; Molly Carnes; and Jo Handelsman. April 3, 2002. “WISELI” (Poster). Showcase 2002. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo and Molly Carnes. December 2002. “University of Wisconsin-Madison Women in Science and Engineering Leadership Institute.” Plant Pathology Research Seminar Series. University of Wisconsin-Madison. Madison, WI.

Wendt, Amy. September 2003. “NSF ADVANCE at UW-Madison: WISELI Activities.” 25th Anniversary of the Women in Computer Science and Engineering Organization. University of California-Berkeley. Berkeley, CA.

Spear, Peter. April 21, 2004. "Sustainability of ADVANCE Programs" (Panelist). NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Carnes, Molly. October 20, 2004. "NSF ADVANCE Program at UW-Madison" (Invited Speaker). University of Illinois-Chicago. Chicago, IL.

Carnes, Molly; Jo Handelsman; Lillian Tong; and Amy Wendt. December 8, 2004. "WISELI Update—Status of Our Efforts to Promote the Advancement of Women in Science and Engineering." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Peercy, Paul. December 13, 2004. "NSF ADVANCE Institutional Transformation Award at UW-Madison." NSF ADVANCE Engineering Workshop. National Science Foundation. Washington, DC.

Coppersmith, Sue. April 8, 2005. "NSF ADVANCE Institutional Transformation Award at UW-Madison." Mathematical and Physical Sciences (MPS) Advisory Committee Meeting. National Science Foundation. Washington, DC.

Handelsman, Jo; Molly Carnes; Jennifer Sheridan; Eve Fine; and Christine Pribbenow. December 9, 2005. "NSF ADVANCE at the UW-Madison: Three Success Stories" (Poster). National Academies' "Convocation on Maximizing the Potential of Women in Academic Science and Engineering." National Academies of Science. Washington, DC.

Sheridan, Jennifer. May 17, 2006. "Lessons Learned from ADVANCE at the UW-Madison: What We Wish We Had Known...." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly and Jennifer Sheridan. April 11-12, 2007. "Overview of WISELI: Lessons Learned" and "Overview of WISELI: New Initiatives at UW-Madison" (Invited speakers). University of Minnesota. Minneapolis, MN.

Evaluation Reports

Sheridan, Jennifer; Jo Handelsman; and Molly Carnes. 2002. "Current Perspectives of Women in Science & Engineering at UW-Madison: WISELI Town Hall Meeting Report." Available online at:

http://wiseli.engr.wisc.edu/reports/TownHallReports/WISELI_Town_Hall_Report.pdf

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

Press Reports

"Women in Science Get a Major Boost From NSF, UW-Madison." *Wisconsin Week*. October 19, 2001. <http://www.news.wisc.edu/6687.html>.

“Institute Plans Effort to Boost Women in Science.” *Wisconsin Week*. March 26, 2002. <http://www.news.wisc.edu/7231.html> .

“Documentary Depicts Women in Science.” *Wisconsin Week*. February 24, 2004. <http://www.news.wisc.edu/9465.html> .

“NSF Program Working to Help Women Attain Leadership in Science and Engineering.” *UW-Madison College of Engineering Perspective*. Spring 2004. <http://www.engr.wisc.edu/alumni/perspective/30.3/PerspectiveSpr2004.pdf> .

“Working for Women.” *Wisconsin State Journal*. May 23, 2004. <http://www.madison.com/archives/read.php?ref=/wsj/2004/05/23/0405190389.php> .

“Women in Medicine Said to Face Widespread Bias.” *Richmond Times Dispatch*. March 6, 2005.

“Gender, Attitude, Aptitude and UW: In the Wake of the Harvard President’s Comments, UW Women Take a Look at Their Own Campus.” *Wisconsin State Journal*. March 27, 2005. <http://www.madison.com/archives/read.php?ref=/wsj/2005/03/27/0503260393.php> .

“For Women in Sciences, Slow Progress in Academia.” *The New York Times*. April 15, 2005. <http://select.nytimes.com/gst/abstract.html?res=FA0912FE3A5A0C768DDDAD0894DD404482> .

“A Woman’s Place in the Lab: Harvard Studies Efforts to Boost Female Faculty at U-Wisconsin.” *The Boston Globe*. May 1, 2005. http://www.boston.com/news/local/articles/2005/05/01/campus_strives_to_boost_female_faculty/ .

“Women Still Face Bias in Science.” *Financial Times*. August 19, 2005.

“Women in Science: Climbing the Career Ladder.” Talk of the Nation, *National Public Radio*. August 26, 2005. <http://www.npr.org/templates/story/story.php?storyId=4817270>.

“The Gender Gap in Science is Shrinking at Universities.” *St. Louis Post-Dispatch*. October 23, 2005.

“WISELI Survey to Analyze Quality of Worklife for UW-Madison Faculty.” *Wisconsin Week*. January 17, 2006. <http://www.news.wisc.edu/12040.html>.

“Looking Through the Glass Ceiling of Science: Women in Science and Engineering Continue to Struggle for Equality.” *The McGill Daily*. March 13, 2006.
<http://www.mcgilldaily.com/view.php?aid=4983> .

Products Available to the Public

“WISELI: Advancing Institutional Transformation.” Documentary Video, first in series of three. Available online through *The Research Channel*:
<http://www.researchchannel.com/program/displayevent.asp?rid=2217> .

“WISELI: Building on a Legacy.” Documentary Video, second in series of three. Available online through *The Research Channel*:
<http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

“WISELI: *FORWARD* with Institutional Transformation.” Documentary Video, third in series of three. Available online through *The Research Channel*:
<http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Future of Activity. As we wrote in an announcement to our WISELI affiliates in December 2006, “WISELI *will* go on!” Because we became an official center, with a UDDS code, this enabled WISELI to apply for other diversity-related grants. We were successful in obtaining an NSF Louis Stokes Alliance for Minority Participation grant (named the Wisconsin Alliance for Minority Participation, or WiscAMP), and have submitted an Alliance for Graduate Education and the Professoriate (AGEP) proposal in three successive cycles with the third submission currently under review. In 2006, we successfully obtained a Partnerships for Adaptation, Implementation, and Dissemination (PAID) grant, which enables WISELI to continue offering workshops at UW-Madison, disseminating our approach to hiring and departmental climate to other universities, and creating products such as brochures that enable faculty to talk to each other about ways to combat gender and other biases at performance evaluation junctures. In addition to grant funding, WISELI is funded through general purpose revenue contributions from the Office of the Provost, the College of Engineering (CoE), the College of Letters & Sciences (L&S), the School of Medicine and Public Health (SMPH), the College of Agricultural and Life Sciences (CALS), the School of Veterinary Medicine (VetMed), and the School of Pharmacy (Pharm). WISELI is also developing a plan to seek gift funds from which to operate, and has created a revenue-generating account so that the materials and services we provide to campus and to universities beyond UW-Madison can become a source of support for WISELI as well. We have applied for a trademark for “Women in Science & Engineering Leadership Institute” to protect our name.

At least through 2009, WISELI will continue to be housed within the College of Engineering. The organizational structure of WISELI will likely change in the future, however. WISELI will no longer be the umbrella organization that houses the WiscAMP and AGEP projects, but rather a new entity (tentatively titled the “Wisconsin Institute for Research and Evaluation on Diversity”, or WIRED) will be the umbrella organization housing WISELI, WiscAMP, AGEP/GERS, and other projects related to diversity of students, staff and faculty under the three major pillars funded by NSF: Sex and Gender, Race and Ethnicity, and Disability. The College of Engineering has identified space to house WIRED.

New Initiative Proposed: Examine patterns of assigning institutional resources for uneven distribution by gender

Description of Activity. 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 will be collected and examined for gender discrepancies. If discrepancies are uncovered, further investigation into the causes will ensue, and formal reports will be made to deans and other high-level administrators.

Implemented? Some of the listed institutional resources were examined for gender disparities directly, and others were investigated using survey data to look for gender differences in satisfaction with the resources (rather than with the level of resources themselves.) Other resources were not examined. Startup packages and assigned space were examined empirically and satisfaction with startup and space was examined using survey data. Survey data on faculty satisfaction with access to administrative support, assignment of TAs, and other resources not included in the initial grant (access to needed equipment, maintenance of equipment, departmental travel funds, internal funding for research, technical/computer support, and clinical support) were also included on the survey. We did not collect data (either empirical data or satisfaction data) on the types of teaching assignments, and the numbers of graduate students/postdocs.

Results. Men and women faculty report similar satisfaction with their office and their lab space, and they also report similar levels of TA support and maintenance of their equipment. Women report more often than men that they are dissatisfied with their animal space, departmental travel funds, technical/computer support, and access to office/clerical support. Women report more satisfaction than men on their access to internal funding. Although women report satisfaction with space (office and lab) at similar levels to men, we did collect data on the square footage of office and lab space for the six participating colleges. Results indicate that while women have significantly less lab space than men (but not office space), once grant funding is controlled the significant gender coefficient disappears. Startup packages appear to be roughly equivalent between men and women faculty. Startup data is now collected annually by the Office of Academic Planning & Analysis, which helps to ensure gender equity of offers.

Some of the resource study results can be found at:

Evaluation Reports

Sheridan, Jennifer. May 2007. "Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006."

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

Future of Activity. Periodic evaluation of institutional resources will continue to be pursued by WISELI as funding permits. With the induction of new deans in several colleges, we might have access to better data on space than we did in 2003 when we completed our initial study. An

empirical investigation of teaching assignments would likely be the next resource to examine, as this was not investigated fully in the faculty surveys, nor did we attempt to gather data on teaching assignments for men and women faculty during the ADVANCE period.

New Initiative Proposed: Study the impact and feasibility of moving outstanding non-tenure line researchers into faculty positions

Description of Activity. Many women with PhDs in STEM fields at UW-Madison are working not on our tenure-track faculty, but in academic staff positions instead. WISELI will establish a working group, including representatives from the Academic Staff Council and administration, to determine the number of possible track switches and identify administrative, financial, and attitudinal barriers to accomplishing conversions. If such a program would have a positive impact, WISELI will work with campus administration to develop a systematic process for such track conversion.

Implemented? Institutional and survey data were used to determine the numbers of women in academic staff positions who might be performing work appropriate for a faculty position, and survey data was also collected to gauge the overall interest in making this track switch among women staff scientists. WISELI co-PIs Jo Handelsman and Molly Carnes worked with eleven individual women academic staff to facilitate a track switch.

Results. Academic staff climate survey data indicated that relatively few women staff members actually desired a tenure-track faculty position. Furthermore, few of the academic staff women that WISELI co-directors thought would be eligible for such a switch actually decided to pursue the change. For those that did pursue a track change, the most successful cases occurred in the School of Medicine and Public Health (SMPH), where status differences between clinical professors and tenure-track professors are smaller than status differences between staff scientists and faculty outside the SMPH. One positive policy change was implemented when Drs. Carnes and Handelsman obtained a commitment from the Provost and the Graduate School to treat track changes as new hires; e.g., a startup package would be offered to an employee making such a switch. Our conclusion is that while advocacy and coaching for track switches for individual women may be important for the academic careers of those individual women, track-switches overall are not an effective or efficient way to increase the numbers of women on our STEM faculty. Publications and presentations with these results are:

Evaluation Reports

O'Connell, Kathleen and Christine Maidl Pribbenow. December 2006. "She's Got a Ticket to Ride: Strategies for Switching from Non-Tenure to Tenure-Track Position at UW-Madison."

Non-Refereed Presentations

Sheridan, Jennifer. April 13, 2004. "Study of Academic Staff Work Life at UW-Madison: Preliminary Results." Wisconsin Center for the Advancement of Postsecondary Education Academic Staff Institute 2004. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. May 19, 2005. "Converting Academic Staff to the Tenure Track at the UW-Madison: A Viable Strategy?" 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Future of Activity. Molly Carnes continues to advocate for women in the SMPH who are interested in a track switch. These cases are much more difficult outside of the SMPH, but WISELI personnel are prepared to assist in such cases when asked.

New Initiative Proposed: Workshops for Department Chairs

Description of Activity. We will introduce a workshop on climate into the existing Leadership Series offered by the Provost's Office. The new workshop will address the nature of climate, including real experiences of respected women scientists, strategies to address each of the manifestations of climate described above or discovered in our evaluation, and approaches to successful implementation of strategies.

Implemented? WISELI designed and implemented the workshop series *Enhancing Departmental Climate: A Chair's Role*. A series of three workshops, based on the concepts of active learning, the workshop engages small groups of department chairs in discussion about climate in their own departments, and provides chairs with the opportunity to learn from each others' experiences and ideas. A brief departmental climate survey administered between the first and second workshops allows chairs to identify specific issues of concern for their departments and develop a plan to address these issues. This series was not merged with the Academic Leadership series in the Provost's Office, because the Academic Leadership series ceased operating when Associate Vice Chancellor Linda Greene stepped down from the AVC position.

From 2003 through 2005, 27 department chairs representing 26 departments (one department participated twice) have participated in these intensive workshops. Workshops were not offered in 2006 to avoid interfering with two other survey efforts on campus—WISELI's own *Study of Faculty Worklife*, and the National Research Council (NRC) ranking survey that was issued in the fall. Most of the participating departments were in the biological and physical sciences; of the 70 STEM departments with which we work, 24 (or, 34%) participated in these workshops. Approximately 2,930 faculty, academic and classified staff, postdoctoral fellows, scientists, researchers and graduate students to assess climate in their departments. Of these, 1,401 responded for an average response rate of 48% (range 31% to 71%).

Website. http://wiseli.engr.wisc.edu/initiatives/climate/workshops_deptchairs.html .

Results. One of WISELI's most well-known initiatives, the *Enhancing Departmental Climate: A Chair's Role* workshops have been well-received by chairs, faculty, and the UW-Madison administration. Evaluation results show that department chairs value the information they receive in the workshops, and feel that they are taking positive steps towards enhancing departmental climate. When departments are re-surveyed, the climate scores tend to increase after participation in the workshop. Yet, the evidence of effectiveness among rank-and-file faculty members is mixed. Survey results show that minority faculty in departments who participated in the workshops thought their departmental climate improved between 2003 and 2006, but women faculty from participating departments did not think their climate improved; in fact, they report a slight decline in their departmental climate. Whether this decrease for women stems from some sort of backlash resulting from a chair's participation in the workshops, or from a generalized increase in awareness of climate issues brought on by a chair's participation remains to be seen.

WISELI has begun disseminating this workshop series by allowing the program coordinator of the University of Illinois-Chicago (UI-C) ADVANCE team (WISEST Director Linda Seibert Rapoport) to participate in an entire 3-session training workshop in spring/summer of 2007.

Some of the reports and presentations describing this workshop, or emanating from this workshop, include:

Refereed Publications

Committee on Maximizing the Potential of Women in Academic Science and Engineering. 2006. "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering." The National Academies Press: Washington, DC. <http://www.nap.edu/catalog/11741.html> . Pages 224-225.

Pribbenow, Christine Maidl; Jennifer Sheridan; Molly Carnes; Eve Fine; and Jo Handelsman. "Departmental Climate: Differing Perceptions by Faculty Members and Chairs." *The Journal of Women and Minorities in Science and Engineering*. [2006 draft accepted and under revision.]

Non-Refereed Presentations

Sheridan, Jennifer and Eve Fine. April 5, 2004. "WISELI Leadership Workshops" (Poster). Showcase 2004. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. May 20, 2005. "Affecting Climate/Culture Change — Using Multiple Points of Entry in the Department of Kumquat Science." 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Fine, Eve. May 20, 2005. "Working with Department Chairs: Enhancing Department Climate." 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Handelsman, Jo; Molly Carnes; Jennifer Sheridan; Eve Fine; and Christine Pribbenow. Dec. 9, 2005. "NSF ADVANCE at the UW-Madison: Three Success Stories" (Poster). National Academies' "Convocation on Maximizing the Potential of Women in Academic Science and Engineering." National Academies of Science. Washington, DC.

Sheridan, Jennifer. March 17, 2006. "Climate and Institutional Change: ADVANCE Efforts to Improve Departmental Climate." Committee on Institutional Change-Women in Science and Engineering (CIC-WISE) Group Meeting. Chicago, IL.

Fine, Eve. May 18, 2006. "Climate Workshops for Department Chairs." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Products Available to the Public

"Recommendations for Enhancing Department Climate." Available online at: <http://wiseli.engr.wisc.edu/initiatives/climate/Recommendations.pdf>

“Enhancing Department Climate: A Chair’s Role. Resources.” Available online at: http://wiseli.engr.wisc.edu/initiatives/climate/ResourceBook_07.pdf .

“Benefits and Challenges of Diversity.” Essay available online at: http://wiseli.engr.wisc.edu/initiatives/climate/Benefits_Challenges.pdf .

“Advice to the Top: Top 10 Tips for Academic Leaders to Accelerate the Advancement of Women in Science and Engineering.” Essay available online at: http://wiseli.engr.wisc.edu/Products/top_10_tips.pdf .

“Sex and Science: Tips for Faculty.” Essay available online at: http://wiseli.engr.wisc.edu/Products/Sex_and_Science.pdf .

“WISELI: Building on a Legacy.” Documentary Video, second in series of three. Available online through *The Research Channel*: <http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

“WISELI: *FORWARD* with Institutional Transformation.” Documentary Video, third in series of three. Available online through *The Research Channel*: <http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Evaluation Reports

Pribbenow, Christine Maidl. November 14, 2003. “WISELI Department Climate Workshops: Formative Evaluation Report.”

Pribbenow, Christine Maidl. July 14, 2005. “WISELI’s Climate Workshops for Department Chairs: Evaluation Report.”

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O’Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. “Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute.”

Future of Activity. Despite the mixed evidence of the effectiveness of this program, we plan to continue these workshops with a goal of running one, 3-session workshop each semester each year. In spring/summer of 2007, we trained 7 new faculty to serve as facilitators for this workshop series, and will begin a new workshop series in September 2007. As part of our PAID grant, we will design a plan to disseminate these workshops beyond UW-Madison, probably in consultation with UI-C as we see how their implementation of our workshops unfolds. We will continue to evaluate the workshops, and make a final designation of their effectiveness following the planned faculty climate survey in 2011.

New Initiative Proposed: Workshops on Laboratory Management

Description of Activity. 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.

Implemented? Design of this workshop series for PIs was not begun until early 2007, and a pilot workshop series will be implemented in fall 2007. The development of this workshop was postponed in order to develop the hiring workshops (see below). We have designed an 8-session workshop series, in which a cohort of new PIs will participate together in small group discussion on various topics of laboratory management, including hiring and retaining good employees and students, understanding how the money flows through the university, mentoring, lab climate, leadership, and other topics as they arise. A junior and senior faculty member in the sciences will facilitate the workshops, and many outside experts and presenters will be incorporated into the discussions.

Website. http://wiseli.engr.wisc.edu/initiatives/labmanagement/labmanagement_main.htm .

Results. Because this project is currently in the design phase, we have no results to report.

Future of Activity. We plan to pilot the workshop series in 2007/08, with 12-15 new faculty in biological sciences—primarily in CALS, but we will extend to new faculty in other colleges if we do not fill the 12-15 slots. These workshops will eventually be offered to all PIs in biological and physical sciences, and may be extended to all PIs (including social sciences) in the future. Evaluation of the PI workshops will be an important element of their design and continuation.

New Initiative Proposed: Celebrating Women in Science and Engineering Seminar Series

Description of Activity. A Celebrating Women in Science and Engineering Symposia series will be initiated. Outstanding women scientists will be hosted each semester of the granting period (a total of 10 series). When these women scientists are at UW-Madison, WISELI will sponsor trans-departmental receptions, and schedule special sessions with graduate students and postdoctoral fellows.

Implemented? The Celebrating Women in Science & Engineering seminar series was implemented slightly differently than envisioned in the original grant. Two “Celebrating” initiatives developed: (1) the WISELI seminar, and (2) the Celebrating Women in Science & Engineering grant program. The WISELI seminar began as a monthly seminar highlighting researchers on the UW-Madison campus who are studying issues related to women in STEM. In total, 23 WISELI seminars were presented from 2002 through 2006, see:

<http://wiseli.engr.wisc.edu/initiatives/seminar.html> . The Celebrating Women in S&E grants are awarded to student groups, departments, or other groups that want to bring in an outside speaker that will in some way address the status of women in science and engineering. This program was funded through contributions from five of the six schools and colleges housing the STEM fields. From 2002 through 2006, we awarded 34 grants, and have brought in 66 women speakers to 24 departments/programs in five schools/colleges.

Website. <http://wiseli.engr.wisc.edu/initiatives/celebrating/celebrate.html> .

Results. The WISELI seminars began with strong attendance and great enthusiasm, but within two years it became clear that this was not a good use of WISELI’s time and resources. Attendance began to dwindle, and we never developed a “core” group of attendees; it seemed that each seminar attracted a very different audience depending on the topic. Leadership Team members rarely attended the WISELI seminars. The final evaluation report (Appendix 2, Chapter VI) indicates a number of reasons why women faculty did not attend these seminars. We decided to discontinue offering them as of fall 2006.

The Celebrating Women in S&E grants, on the other hand, are thriving. In 2007 we received a commitment from all six of the STEM colleges to continue their contributions to the program through 2009 (the one college that did not contribute in 2002-2006 has now begun to contribute along with the rest of the STEM colleges.) Each individual grantee completes an evaluation of the program they hosted, and these evaluations indicate that women students, staff and postdocs in the departments who receive the funds appear to be the primary beneficiaries of the program. We have some anecdotal evidence that the availability of these funds facilitates grassroots organization of women in a STEM department. In several departments, women have collaborated to prepare a Celebrating grant, and then continued their association even after the grant ended. One of the events funded by the Celebrating program, a visit by Dr. Virginia Valian in 2003, is still cited by women faculty as one of the best programs WISELI presented during the course of our grant. Other events were open to the UW-Madison community more generally, and offered some professional development opportunities to women faculty, staff and students. Some of these professional development/leadership development events include:

- “Symposium on Women in Science Policy.” In partnership with Graduate Women in Chemistry.
- “Women and Environmental Leadership Symposium.” In partnership with Forest Ecology and Management department.
- “The Act of Teaching: Theatrical Tips for Teachers” led by Nancy Houfek (COACH). In partnership with the Astronomy department.
- “Encouraging Success in Science and Medicine.” In partnership with Medical Science Training Program.
- “Women in Science Roundtable Discussion: Striving for Equality in an Academic Environment” led by Dr. Linda Nicholson. In partnership with the Chemistry department.
- “How to Feel as Bright and Capable as Everyone Seems to Think You Are,” led by Valerie Young. In partnership with Graduate Women in Science (GWIS).
- “Communication Techniques for Strategic Negotiation and Leadership” led by Nancy Houfek (COACH). In partnership with Graduate Women in Chemistry.
- “Mentoring Women for Leadership,” a panel including all of the women deans at UW-Madison (Robin Douthitt, Luoluo Hong, Katharine May, Jeanette Roberts, and Frances Westley). In partnership with the Women Faculty Mentoring Program (WFMP).

Evaluation reports related to the Celebrating Women in Science & Engineering Grant Program include:

Evaluation Reports

Benting, Deveny and Christine Maidl Pribbenow. November 14, 2003. “Survey of the Virginia Valian Luncheon: Final Report.”

Winchell, Jessica. October 2004. “Celebrating Women in Science & Engineering Grant Program, 2002-2004: Interim Evaluation Report.”

Future of Activity. We have discontinued the WISELI seminars. However, the overwhelming success of the Virginia Valian visit in 2003 indicated to us that one very special event that brings together all women faculty on campus around an extraordinary speaker is worth more than many smaller, sparsely-attended events. Therefore, WISELI will be collaborating with the “Committee Honoring Denice’s Memory” (a small group of friends of Denice D. Denton) to host an annual Denice D. Denton Distinguished Lecture. Each year, the Denice D. Denton Memorial Fund and WISELI will host a high-profile campus visit, and include some sort of networking event for women faculty around that visit. In 2007, this event was the Denice D. Denton Memorial Symposium featuring Dr. Donna Shalala as the keynote speaker.

The Celebrating Women in S&E grants will continue through 2009, at which time an intensive evaluation on the program will be performed to ascertain whether it is meeting its goals. The issue of grassroots organizing of women faculty and students will be studied in more detail. The future of the program will be determined based on this summative evaluation.

New Initiative Proposed: Cluster Hire Initiative

Description of Activity. WISELI will work with senior women faculty in an interdisciplinary field of science or engineering to develop a proposal for a Cluster Hire: a group of new faculty positions for research in an interdisciplinary area.

Implemented? We were not able to develop a proposal for a new cluster for women in science and engineering, as the UW-Madison has not issued a call for new cluster proposals since November 2001—prior to the award of the ADVANCE grant.

New Initiative Proposed: Women in Science and Engineering Leadership Programs and Workshop

Description of Activity. We proposed to provide professional development opportunities for women in STEM, in a variety of formats and times. In addition to workshops for women in academic science and engineering, WISELI proposed to develop national training sessions for senior administrators (men and women) incorporating the principles established by WISELI's research and best practices.

Implemented? Although women at the very early Town Hall Meetings indicated that professional development was important to them (over 60% selected “Faculty and Staff Workshops” as a “high priority”), WISELI did not invest a great deal of effort into creating new professional development opportunities (although some were created through the Celebrating Women in Science & Engineering grant program, see page 24). We found that women faculty and staff at UW-Madison have access to an array of leadership development opportunities through programs already existing on campus. Thus, we shifted our priority from creating these opportunities from scratch, to facilitating women’s participation in already-existing professional development activities on campus. When we uncovered an opportunity in line with WISELI’s goals, we advertised it to the women faculty, staff and students on our listserv, and offered to facilitate registration and pay for attendance. We often negotiated group rates at training events. From 2002 through 2006, we sent over 35 women, both faculty and academic staff, to workshops or seminars such as: “Perspectives for Success Breakfast Series”, “A Framework for Understanding Campus Climate”, “Hail to the Chiefs: Leadership Insights from Those Who Have Seen Everything”, “Ethics, Law, and Postsecondary Education: A Primer for College and

University Administrators”, “Demystifying the Budget Process”, “Advancing Your Career in Campus Leadership”, and “Something Ventured, Something Gained: Negotiation for Women.”

Although not a workshop, one activity will result in a professional development opportunity for junior faculty. A WISELI Leadership Team member developed a “self-assessment guide” for untenured faculty. This project is under review by Cambridge University Press, and may be published as early as 2008.

The “national training sessions for senior administrators” was realized through the offering of a train-the-trainer workshop developed from the *Searching for Excellence & Diversity* hiring workshops. Two of these workshops were provided in Madison—one in June 2004 for faculty and administrators from the University of Wisconsin System universities (57 attendees from 12 universities), and one in January 2005 for faculty and administrators from the Wisconsin Technical College System (56 attendees from 15 institutions.)

Website. <http://wiseli.engr.wisc.edu/initiatives/hiring/OtherUniversities.htm> .

Results. We found that combining faculty and administrators from so many campuses did not necessarily facilitate the creation of hiring workshops on their own campuses. Thus, we committed to doing these “train-the-trainer” workshops at hosting institutions instead, so that a greater number of faculty and staff could experience the workshop first-hand, which increases the possibility that training is actually implemented on the campus. We have traveled to UW-Stout and Washington University in St. Louis to present these train-the-trainer workshops (entitled *Implementing Workshops for Search Committees*.)

Working Papers

Crone, Wendy. *Survive and Thrive: A Self-Assessment Guide for Untenured Faculty*. 2007 draft under review/tentative publication agreement. Cambridge University Press.

Evaluation Reports

Benting, Deveny and Christine Maidl Pribbenow. July 5, 2005. “Survey Results of WISELI’s ‘Implementing Training for Search Committees’ Workshop.”

Benting, Deveny and Christine Maidl Pribbenow. March 14, 2006. “Survey Results of WISELI’s ‘Implementing Training for Search Committees’ Workshops for the Wisconsin Technical College System.”

Benting, Deveny. March 26, 2007. “Evaluation of ‘Searching for Excellence and Diversity: A Workshop for Search Committees’”. Presented at UW-Stout on March 1, 2007.”

Benting, Deveny. March 28, 2007. “Evaluation of ‘Searching for Excellence and Diversity: A Workshop for Search Committees’”. Presented to the Washington University Danforth Campus on March 6, 2007.”

Benting, Deveny. March 29, 2007. "Evaluation of 'Searching for Excellence and Diversity: A Workshop for Search Committees'. Presented to the Washington University Medical School on March 5, 2007."

Future of Activity. Professional development activities on the UW-Madison campus abound for faculty members who are alert and watching for them. WISELI will continue to monitor such opportunities that are of special interest to women faculty and the issues affecting women more often, and will devote space on our website for such opportunities. However, due to the reduction of our funds, we will not be paying for faculty members to attend these events where there is a cost involved.

Reaching out to other universities and performing workshops that disseminate WISELI initiatives will remain an important element of the WISELI mission. We already have a system in place for disseminating our hiring workshops in this manner (see website above). As part of our PAID proposal, will develop a plan for disseminating our department chair climate workshops by 2009.

New Initiative Proposed: Life Cycle Research Grants

Description of Activity. 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.

Implemented? The Life Cycle Research Grant program was initiated in Fall of 2002. This pilot phase ran for three years, funding 10 faculty with additional support from the Graduate School and the Office of the Provost. In 2005, the Trustees of the Estate of William F. Vilas voted to fund the program annually, extending it to all faculty and permanent PIs in all divisions. In 2005 we awarded \$310,000 to 18 faculty, and in 2006 we awarded \$310,000 to 18 faculty. In 2006, the Vilas Trustees voted to increase the amount provided for this program to \$372,000.

Results. From the first Town Hall Meetings with women faculty, the proposal of the Life Cycle Research Grants (later renamed the Vilas Life Cycle Professorship program) generated a great deal of excitement and interest. The initial evaluation of the program showed that the goal of providing support during critical career junctures was being met. In addition, we found among the early recipients that:

- It is the only grant of its kind;
- The grant provided psychological support;
- It had an impact on others' lives as well;
- It was an investment in the grantees' futures *and* the University's.

This evaluation convinced the Provost, and the deans of the Graduate School, to find a funding mechanism so that the program could be continued on campus. WISELI prepared a proposal for the Vilas Trustees in February 2005, and were funded in time for a spring 2005 deadline for the newly-expanded program. In Spring 2006, the Vilas Life Cycle Professorship program was selected as a Sloan Foundation/American Council on Education Award for Faculty Career Flexibility, recognizing our innovation in career flexibility for tenured and tenure-track faculty.

Reports and presentations related to the Life Cycle Research Grants/Vilas Life Cycle Professorship program include:

Refereed Presentations

Sheridan, Jennifer. October 14, 2004. "WISELI's Life Cycle Research Grant Program." Society of Women Engineers 2004 National Conference. Milwaukee, WI.

Non-Refereed Presentations

Sheridan, Jennifer. May 19, 2005. "WISELI's Life Cycle Research Grant Program." 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Handelsman, Jo; Molly Carnes; Jennifer Sheridan; Eve Fine; and Christine Pribbenow. December 9, 2005. "NSF ADVANCE at the UW-Madison: Three Success Stories" (Poster). National Academies' "Convocation on Maximizing the Potential of Women in Academic Science and Engineering." National Academies of Science. Washington, DC.

Sheridan, Jennifer. May 18, 2006. "Vilas Life Cycle Professorship Program." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Products Available to the Public

"WISELI: Building on a Legacy." Documentary Video, second in series of three.

Available online through *The Research Channel*:

<http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

"WISELI: *FORWARD* with Institutional Transformation." Documentary Video, third in series of three. Available online through *The Research Channel*:

<http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Evaluation Reports

Pribbenow, Christine Maida and Deveny Benting. June 9, 2004 (revised September 23, 2004.) "WISELI's Life Cycle Research Grant Program: Formative and Summative Evaluation."

O'Connell, Kathleen and Jennifer Sheridan. April 2006. "Evaluation of the Vilas Life Cycle Professorships."

Pribbenow, Christine Maida and Jennifer Sheridan. April 2007. "Evaluation of the Vilas Life Cycle Professorships Program."

Future of Activity. The Vilas Life Cycle Professorship program will continue, administered by WISELI, as long as the Vilas Trustees continue to fund the program.

New Initiative Proposed: Endowed Professorships for Women in Science

Description of Activity. The Chancellor has included 10 professorships (20 million dollars) for women in science and engineering on the select list of targets for fundraising.

Implemented? While the Chancellor did include the professorships on the fundraising list, funds were not actively solicited for the program, in part because of the questionable legality of a

professorship program for women faculty only. Thus, no female faculty were ever awarded a professorship for women in science through this mechanism.

New Initiative Proposed: Develop Networks, Promote Communication, Increase Visibility of Women in Science and Engineering

Description of Activity. 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.

Implemented? Almost all of these activities were implemented, and most occurred within the first year of the grant period. WISELI has a listserv and a website. We sponsored Celebrating Women grants and also the WISELI seminar (see above). The Leadership Team served as a nominating committee, actively seeking awards for women faculty and staff (see also the “senior women” initiative below). WISELI-affiliated faculty and staff attended CIC-WISE meetings and other national meetings, including WEPAN, SWE, and of course the ADVANCE PI meetings. The WISE Research book was not implemented, and we did not produce a newsletter. Rather, we monitored UW-Madison press releases, and also the press releases of participating schools and colleges, to highlight the news and accomplishments of our women faculty and staff in an ever-changing “News” column on our webpage.

Website. <http://wiseli.engr.wisc.edu> .

Listserv. <http://wiseli.engr.wisc.edu/getin.html> .

Results. The success of WISELI to decrease isolation of women faculty in STEM at UW-Madison is outlined in the summative evaluation report (see Appendix 2, Section VI). Although causal relationships cannot be proved, women who responded to our faculty survey reported lower levels of both departmental isolation and isolation at UW-Madison overall between 2003 and 2006. The relationships are not statistically significant, likely due to the small numbers (N~150), but are large enough that we are very encouraged by the trend. For example, in 2003 44.9% of women reported feeling isolated in their departments, and in 2006 35.7% reported feeling isolated in their departments, a fairly large drop.

The visibility of women may be linked to the visibility of the WISELI website. Our website receives approximately 3,000 unique visitor “hits” each month, and the number one page accessed is the front page, on which we feature accomplishments of women STEM faculty at UW-Madison. The visibility of women in STEM might also be linked to the visibility of WISELI itself. WISELI has become a highly visible organization on the UW-Madison campus promoting gender equity for STEM faculty. In 2006, significantly more STEM faculty—men and women—report having heard of WISELI, and valuing WISELI, than did in 2003. In 2003, 20% of women faculty respondents to the survey had never heard of WISELI; in 2006 it was only 9%. Although men are significantly more likely to say they have never heard of WISELI, they too are much more aware of our presence in 2006 than they were in 2003. In 2003 over half of men faculty (56%) reported never having heard of WISELI, and in 2006 30.5% report never

having heard of WISELI. Among those faculty who have heard of WISELI, 71% report that WISELI is valuable. Women are significantly more likely than men to say that WISELI is valuable in 2006 (87% vs. 66%); still, two-thirds of male faculty agree that WISELI is a very, quite, or somewhat valuable program on campus.

The connections of women through WISELI's listserv have continued to grow over the years. When we began, we had only 68 affiliates on our listserv. As of the end of June 2007 we have 301 members, more than quadrupling over the course of the grant period.

Evaluation Reports

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

Future of Activity. WISELI will continue to use our website and listserv to connect women and make women's accomplishments more visible to the campus community, and the public at large; these plans include a major re-design of the website in 2007/08 which reflects the actual directions WISELI has taken. We plan to hold an annual event (the Denice D. Denton Distinguished Lecture) that will bring women faculty from all over campus together to promote networking (see "Celebrating Women in S&E" initiative). Finally, a study of gender equity in the images and press surrounding our women faculty in campus publications (*Wisconsin Week* and *On Wisconsin* alumni magazine) has been in a design phase for several years.

New Initiative Proposed: Time-Stretcher Services

Description of Activity. WISELI will 1) work with Joan Gillman (Director, Special Industry Programs) and a student in Journalism to compile available time-saving services currently available (e.g. all home delivered services) and make this publication available to everyone at UW-Madison and 2) work with Professor Anne Miner (UW Business School) to explore a UW-Community partnership to develop a Time-Stretcher Service. This service would enable women and men working for UW-Madison to hire individuals to run simple tasks that would take time away from activities important to their personal or professional development.

Implemented? Preliminary perusal of the landscape indicated that such a service already exists on campus—Errand Solutions. Therefore, this initiative was not implemented further. See: http://wiseli.engr.wisc.edu/initiatives/timestretcher/timestretcher_main.htm .

New Initiative Proposed: Leadership Development of Non-Tenure Line Women in Science & Engineering

Description of Activity. WISELI will promote the leadership development of staff women in science and engineering by including them in the proposed initiatives and developing special leadership training modules for staff scientists.

Implemented? Women on the academic staff who are doing STEM research and teaching STEM courses have been important constituents of WISELI. Staff women serve(d) on our Leadership Team (Susan Millar, Lil Tong, Cathy Middlecamp, Manuela Romero), they participated in our Town Hall meetings, and invitations to attend professional development workshops through WISELI were always extended to academic staff (see "Women in Science

and Engineering Leadership Programs and Workshop” above.) In addition, WISELI time and resources were invested in the “Study the impact and feasibility of moving outstanding non-tenure line researchers into faculty positions” outlined above, as well as the climate survey for academic staff (see “Develop and Administer Climate Surveys” above.)

Results. We learned through our research and initiatives that it is not easy to reach women staff, or to develop leadership capabilities of staff. Conversions to the tenure track are extremely difficult to negotiate, and women staff overall are not very interested in making these kinds of conversions (staff survey results.) The issues of status and respect, job security, professional development opportunities, and isolation are important for this group. More must be done, in cooperation with other campus organizations supporting our academic staff, to ensure that all our academic staff are reaching their full potential and making important contributions to science.

Future of Activity. Academic staff will continue to be an important constituent of WISELI, and WISELI is committed to improving the climate and working conditions of women staff.

WISELI will continue their policy of including women staff scientists and lecturers in our efforts to create networks and advocate for women in STEM on campus. Further, WISELI has committed to working with the Academic Staff Executive Committee (ASEC) and the Office of the Provost on a follow-up survey of academic staff, when and if campus finds the funding for such an effort.

Section II: Status and Outcomes of other activities (not proposed)

In this section, we outline six initiatives or areas of focus that were important additions to WISELI's portfolio, but which were not included in our original proposal to the National Science Foundation. Some of these initiatives were new ideas that surfaced after the writing of the proposal, and others were projects that emerged unexpectedly from other work we were doing. All were vital to the success of WISELI.

Searching for Excellence & Diversity

Description of Activity. WISELI has implemented a workshop, *Searching for Excellence and Diversity*, that provides faculty with information, advice, and techniques that will help them run more effective and efficient search committees, diversify their applicant pools, their interviewed candidates, the offers they make, and ultimately the new faculty they hire.

Implementation. Designed in 2002 and piloted in 2003, these workshops were implemented in full on campus beginning in Fall 2004. As of June 2007, 119 STEM faculty (10% of the total STEM faculty) in 49 STEM departments (70% of STEM departments) have received the training. Materials developed for this workshop include a guidebook and a brochure, and the materials and approach are in demand by other universities across the country. As of June 2007, we have shipped approximately 6,343 copies of our brochure "Reviewing Applicants: Research on Bias and Assumptions" to 21 institutions across the U.S. and Canada (not including UW-Madison). We offer these workshops in a variety of formats, using many different campus experts to inform chairs of faculty search committees of the university policies, best practices, and resources for hiring the best and most diverse faculty possible.

Website. http://wiseli.engr.wisc.edu/initiatives/hiring/training_hiring.html.

Results. One of WISELI's best-known and most successful initiatives, the *Searching for Excellence and Diversity* workshops have had a positive impact on hiring women faculty (and, to a lesser extent, faculty of color) in STEM departments at UW-Madison. Our evaluation reports show that the workshops are useful to the participants, and that departments who send at least one faculty member to a hiring workshop make more offers to women applicants, and hire more women applicants. Furthermore, the individuals who attend the workshops show a marked change in their attitudes towards diversity. Those who have attended the workshops appear to be much more likely to disagree that "The climate for faculty of color in my department is good", a finding we believe indicates a greater awareness of the actual climate experienced by faculty of color.

For information and results of WISELI's *Searching for Excellence & Diversity* workshops, see:

Refereed Presentations

Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. 2007. "Climate Change at the University of Wisconsin-Madison: What Changed, and Did ADVANCE Have an Impact?" Women in Engineering Programs & Advocates Network (WEPAN) 2007 Conference Proceedings (on CD-ROM). <http://www.wepan.org/storelistitem.cfm?itemnumber=18>, Paper #0045. June 2007.

Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. 2007. "Searching for Excellence & Diversity: Does

Training Faculty Search Committees Improve Hiring of Women?” American Society for Engineering Education (ASEE) 2007 Conference Proceedings.
<http://www.asee.org/conferences/v2search.cfm> , Paper #992. June 2007.

Non-Refereed Presentations

Carnes, Molly. October 13, 2004. “Searching for Excellence, Equity & Diversity: Unconscious Assumptions and Lessons From Smoking Cessation” (Invited Speaker). Virginia Commonwealth University. Richmond, VA.

Handelsman, Jo. March 2, 2005. Informal workshop on bias and prejudice in academic evaluation. Oregon State University. Corvallis, OR.

Carnes, Molly. May 9-10, 2005. “Incorporating Research on Biases and Assumptions into Search Committee Training” (Invited Speaker). University of Minnesota. Minneapolis, MN.

Handelsman, Jo; Molly Carnes; Jennifer Sheridan; Eve Fine; and Christine Pribbenow. December 9, 2005. “NSF ADVANCE at the UW-Madison: Three Success Stories” (Poster). National Academies’ “Convocation on Maximizing the Potential of Women in Academic Science and Engineering.” National Academies of Science. Washington, DC.

Sheridan, Jennifer. March 14, 2006. “Searching for Excellence & Diversity: An Evidence-Based Approach to Training Search Committees.” Wisconsin Technical College System Leadership Development Institute. Madison, WI.

Sheridan, Jennifer. April 7, 2006. “Searching for Excellence & Diversity: An Evidence-Based Approach to Training Search Committees.” 10th Annual Absence of Color Conference. Blackhawk Technical College. Janesville, WI.

Fine, Eve and Jennifer Sheridan. May 17, 2006. “Searching for Excellence & Diversity—Training Workshops for Search Committees” (Poster). 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 24, 2006. “Searching for Excellence & Diversity: An Evidence-Based Approach to Training Search Committees.” Wisconsin Association for Equal Opportunity’s 29th Annual Spring Conference. Milwaukee, WI.

Products Available to the Public

“Searching for Excellence and Diversity: A Guide for Faculty Search Committee Chairs.” Available in PDF format online at:
<http://wiseli.engr.wisc.edu/initiatives/hiring/SearchBook.pdf> , and also available for purchase for \$4.00 per book plus mailing costs at
<https://wisccharge.wisc.edu/wiseli/items.asp> .

“Reviewing Applicants: Research on Bias and Assumptions.” 2nd Edition. Brochure available online at:

http://wiseli.engr.wisc.edu/initiatives/hiring/BiasBrochure_2ndEd.pdf , and also available in large quantities for 25¢/brochure plus mailing costs by contacting at <https://wisccharge.wisc.edu/wiseli/items.asp> .

“WISELI: Building on a Legacy.” Documentary Video, second in series of three. Available online through *The Research Channel*: <http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

“WISELI: *FORWARD* with Institutional Transformation.” Documentary Video, third in series of three. Available online through *The Research Channel*: <http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Evaluation Reports

Winchell, Jessica K. and Christine Maidl Pribbenow. February 2006. “WISELI’s Workshops for Search Committee Chairs: Evaluation Report.”

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O’Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. “Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute.”

Future of Activity. As one of WISELI’s best-known and most successful initiatives, we plan to continue the *Searching for Excellence & Diversity* workshops at UW-Madison, expanding them to all departments on campus as well as searches for staff positions with funding from the Office of the Provost, the School of Medicine and Public Health, and from the NSF PAID award. We continue to revise and update the workshop materials (funded by an NSF ADVANCE PAID award), and offer them at cost plus shipping to other institutions via our “WISELI Bookstore” (<https://wisccharge.wisc.edu/wiseli/items.asp>). We have disseminated these workshops to other institutions through (1) large “train the trainers” workshops that invite small groups from several universities to come together to learn about our approach—we have done two of these; (2) “train the trainers” workshops that we run on another campus—we have done two of these and have two more scheduled for 2007/08; and (3) inviting interested people from off-campus to sit in on a hiring workshop in Madison—we have hosted people from Massachusetts General Hospital and University of Oklahoma to date, and are fielding inquiries for visits to our Fall 2007 workshops. Finally, we have moved to trademark the workshop title *Searching for Excellence & Diversity*.

WISELI Videos

Description of Activity. Document WISELI’s five-year “institutional transformation” project on video.

Implementation. In collaboration with Eclipse Multimedia Productions, we produced three documentary videos. In the first, “WISELI: Advancing Institutional Transformation”, we outline the grant and our hopes for the next five years. This video was the recipient of a Telly Award. The second video, “WISELI: Building on a Legacy,” outlines our three major initiatives (Life Cycle Grants, *Searching for Excellence & Diversity* workshops, and *Enhancing Department Climate: A Chair’s Role* workshops), and also introduces viewers to some of the unexpected outcomes in our quest for transformation. Finally, the third video, “WISELI:

FORWARD with Institutional Transformation” provides some evaluation data to document the success of the three initiatives discussed in video two, and discusses the future of those initiatives and the future directions of WISELI. These three videos have been playing in rotation on *The Research Channel* and have also been showing locally in Madison on the *Madison Metropolitan School District* local cable channel. For videos one and two, we held a public viewing of the videos.

Results. The three documentary videos provide us an alternative way of disseminating the work we have done. The videos also provide us with clips of faculty, department chairs, evaluators, WISELI personnel, high-level administrators, and knowledgeable outsiders, on elements of the WISELI program, allowing us to present our results in an eye-popping, original way.

Products Available to the Public

“WISELI: Advancing Institutional Transformation.” Documentary Video, first in series of three. Available online through *The Research Channel*:

<http://www.researchchannel.com/program/displayevent.asp?rid=2217> .

“WISELI: Building on a Legacy.” Documentary Video, second in series of three.

Available online through *The Research Channel*:

<http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

“WISELI: *FORWARD* with Institutional Transformation.” Documentary Video, third in series of three. Available online through *The Research Channel*:

<http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Future of Activity. This activity is complete, although we may continue to isolate specific interviews and quotes for use in future presentations.

Senior Women Project/Awards and Honors

Description of Activity. This initiative began with a simple idea—“let’s meet with all 80 of the female full professors in biological and physical sciences.” The goal was to understand what senior women wanted, particularly with respect to taking on formal leadership positions.

Implementation. We arranged meetings with approximately half (42) of the target group. Most meetings took place in small group discussions, although some individual meetings took place. Four senior women on the WISELI Leadership Team—Jo Handelsman, Molly Carnes, Bernice Durand, and Patti Brennan—facilitated the meetings, and Jennifer Sheridan attended all meetings to take notes. From these meetings, a concerted effort by WISELI to nominate women for campus and national awards occurred, as well as an effort to convince senior women themselves that it is important to pursue these honors.

Results. The results from this initiative are difficult to quantify. Nine women of the 42 who participated in the conversations have since taken leadership positions such as department chair, associate dean, or vice provost, compared to three women among the 40 we did not speak with. Of course, a selection effect is likely in place (whereby the women most interested in leadership were more likely to speak with us). A new interest in women’s access to awards and honors stemmed directly from these conversations: WISELI leaders called department chairs urging nominations of women for awards, and prepared nominations themselves; a brochure encouraging women to pursue honors and awards for themselves was developed; and a research

study of the language used in one high-visibility award (the NIH Director's Pioneer Award) resulted in numerous presentations and publications. A list of senior women (female full professors in biological and physical sciences) is maintained by WISELI, updated annually, and workshops, awards, or other opportunities that may be of interest are occasionally offered to this select group, enhancing our connections to them. Finally, some women brought particularly problematic issues to the table in these meetings, and came seeking WISELI's assistance in solving these problems; the expectation of individual advocacy was an unexpected side effect of these meetings, yet was very important in terms of cementing WISELI's reputation as a place on campus that helps change the system for women faculty.

Some of the publications and presentations related to senior women, women's leadership, and awards and honors include:

Refereed Publications

Carnes, Molly; Stacie Geller; Evelyn Fine; Jennifer Sheridan; and Jo Handelsman. 2005. "NIH Director's Pioneer Awards: Could the Selection Process be Biased Against Women?" *Journal of Women's Health*. 14(8):684-691.

Sheridan, Jennifer; Patricia Flatley Brennan; Molly Carnes; and Jo Handelsman. 2006. "Discovering Directions for Change in Higher Education Through the Experiences of Senior Women Faculty." *Journal of Technology Transfer*. 31(3): 387-396.

Carnes, Molly. 2006. "Gender: Macho Language and Other Deterrents." Letter to the Editor. *Nature*. 442:868.

Carnes, Molly and Carole Bland. 2007. "A Challenge to Academic Centers and the NIH to Prevent Unintended Gender Bias in Selection of CTSA Leaders." *Academic Medicine*. 82(2):202-206.

Carnes, Molly and JudyAnn Bigby. 2007. "Jennifer Fever in Academic Medicine." *Journal of Women's Health*. 16:299-301.

Marchant, Angela; Abhik Bhattacharya; and Molly Carnes. 2007. "Can the Language of Tenure Criteria Influence Women's Academic Advancement?" *Journal of Women's Health* (in press).

Non-refereed Presentations

Durand, Bernice. April 20, 2004. Session Coordinator, "Senior Women and Advancement—A Facilitated Discussion" panel. NSF ADVANCE National Conference. Georgia Institute of Technology. Atlanta, GA.

Carnes, Molly. October 20, 2004. "Women in Academic Leadership: The Issues, the Goals, the Process" (Invited Speaker, over 50 women faculty from UI-C STEM departments). University of Illinois-Chicago. Chicago, IL.

Brennan, Patricia; Molly Carnes; Bernice Durand; Jo Handelsman; and Jennifer Sheridan. November 10, 2004. "Discovering the Experiences of Senior Women in Academic Science & Engineering." WISELI Seminar. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. November 17, 2004. "The Impact of Unconscious Biases on Evaluation: Relevance to the NIH Director's Pioneer Awards" (Invited presenter). Office of Research on Women's Health Roundtable. National Institutes of Health. Bethesda, MD.

Carnes, Molly. March 4, 2005. "Women in the World of Medicine: What's Holding Us Back?" *Leadership Skills and Equity in the Workplace: Lessons Learned* Conference. Virginia Commonwealth University. Richmond, VA.

Carnes, Molly. March 12, 2005. "Women Physicians and Leadership: The Issues, The Goals, The Process" (Keynote). Women's Physician Council of the American Medical Association. Washington, DC.

Carnes, Molly. April 26, 2005. "Women in Academic Leadership: Institutional Transformation Required" (Grand Rounds/Merritt Lecture). Indiana University School of Medicine. Indianapolis, IN.

Carnes, Molly. May 9-10, 2005. "Incorporating Research on Biases and Assumptions into Search Committee Training;" "Women in the World of Academic Health Sciences: What's Holding Us Back?" "Women in Academic Leadership: Has There Been Progress?" (Invited Speaker). University of Minnesota. Minneapolis, MN.

Carnes, Molly. May 13, 2005. "Women in Academic Leadership: Has There Been Progress?" (Keynote). Women Against Lung Cancer Annual Meeting. Orlando, FL.

Carnes, Molly. May 19, 2005. "Insights from Social Science Research on Achieving Academic Awards and Honors: A Local and a National Example." 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. October 17, 2005. "Women in Academic Leadership: Institutional Transformation Required" and "Advice From a Few Mistakes I've Made & Some Things I've Done Right (workshop)." 8th Annual Professional Development Conference Focus on Health & Leadership for Women. University of Pennsylvania School of Medicine. Philadelphia, PA.

Carnes, Molly. October 21, 2005. "Women and Leadership: When Working Hard is Not Enough." Wisconsin Women's Health Foundation Rural Women's Health. Madison, WI.

Carnes, Molly. April 22, 2006. "Gender Bias in Scientific Review: The Case of the NIH Pioneer Awards" (Keynote). Institute for Research and Education on Women and

Gender, Graduate Student Conference. State University of New York-Buffalo. Buffalo, NY.

Carnes, Molly. May 18, 2006. "Engaging Senior Female Faculty" Roundtable (Chair). 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. June 19, 2006. "Gender Bias in Scientific Review: A Case Study of the NIH Pioneer Award." Annual meeting of the Graduate Women in Science. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. August 3, 2006. "Activation of Gender-Based Stereotypes: Can This Undermine Women's Academic Advancement?" (Keynote Plenary Address). Annual Meeting of the Association for Education in Journalism and Mass Communication. San Francisco, CA.

Carnes, Molly. February 21, 2007. "Gender Bias in Scientific Review" (Invited speaker). Medical College of Wisconsin. Milwaukee, WI.

Carnes, Molly. February 22, 2007. "Words Matter: How Language Can Promote the Activation of Stereotypes" (Invited speaker). University of Illinois-Chicago. Chicago, IL.

Carnes, Molly. March 14, 2007. "Bias in Scientific Review: The Case of the NIH Directors Pioneer Award." Center for the Study of Cultural Diversity in Healthcare Training Seminar. University of Wisconsin-Madison. Madison, WI.

Carnes, Molly. March 21-22, 2007. "Careers in Academic Medicine: Evaluation at Gatekeeping Junctures" (Medical Grand Rounds) and "Women Leaders in Academic Health Sciences: Institutional Transformation Required" (Invited speaker). University of Utah. Salt Lake City, UT.

Carnes, Molly. May 2-3, 2007. "NIH Director's Pioneer Award: Lesson in Scientific Review" and "Workshop: Lessons Learned in Shaping a Career" (Invited speaker). Brown University. Providence, RI.

Carnes, Molly. May 23-25, 2007. "Women in Academic Medicine: Institutional Transformation Required" (Whittington Lecturer) and "Careers in Academic Medicine: Evaluation at Gatekeeping Junctions" (Medical Grand Rounds). University of Florida. Gainesville, FL.

Products Available to the Public

"Advancing Your Career through Awards and Recognitions: A Guide for Women Faculty in the Sciences & Engineering." Brochure available in large quantities for 25¢/brochure plus mailing costs at <https://wisccharge.wisc.edu/wiseli/items.asp>.

Evaluation Reports

Benting, Deveny and Christine Maidl Pribbenow. July 24, 2003. "Meetings with Senior Women Faculty: Summary of Notes."

Future of Activity. Although this initiative officially ended in 2003, we continue to have special relationships with the women we met with in our first 18 months. We have considered doing a similar activity with women faculty of color.

WISELI Library

Description of Activity. Develop a library of articles, books, and webpages of materials related to gender equity. Produce an online version of this database that is easily searchable, and includes abstracts.

Implementation. As of June 2007, 1,164 items are indexed in the library. Hyperlinks to most journal articles are available in the online version, making it easy for users at a university with access to the major journal databases to easily access the articles with a click.

Website. <http://wiseli.engr.wisc.edu/library.html> .

Results. The WISELI "library" has been an indispensable resource for not only WISELI personnel, but for anyone working on gender equity issues. The library webpage is the third most-often referenced page on the entire WISELI website, after the main page, and the Larry Summers archive.

Future of Activity. We will continue to monitor the various research literatures that contribute to WISELI's efforts at UW-Madison, and continually update our online "library." Some users have suggested we develop a better search engine, or better organization of the library, or allow outside users to add their own entries. To date we have not pursued these options as the resources involved in programming are beyond our reach. However, should the library continue to be a valuable resource to the women-in-science community, we might consider applying for grants or working with other ADVANCE sites (such as Virginia Tech and the ADVANCE Portal) to improve this resource.

Individual Advocacy

Description of Activity. Women faculty with intractable problems approach WISELI leadership for help.

Implementation. Although these requests for help were unexpected, WISELI co-Directors did take on some cases where a clear injustice was being perpetrated. At least six women approached the co-Directors with problems they wanted addressed. Preliminary inquiries into the situations were performed to understand all of the issues involved in the case, and four cases were pursued by Carnes and Handelsman.

Results. When Carnes/Handelsman chose to champion a case, usually a good outcome occurred. In one case, they helped a woman negotiate a department change. In another, a tenure case was overturned. In a third case, a staff member who was impeding the research of a female faculty member was encouraged to retire. On the other hand, not all cases were pursued. Sometimes preliminary inquiries uncovered more complexity than the original case presented. In one case (a complaint of salary discrimination), an empirical analysis of the data showed that the faculty member was actually paid well in her department and that the comparison across departments was not a valid one. Overall, co-PI Handelsman has reported that the work done on behalf of individual women may have been unexpected, and may have been very time consuming, but in

the end this work may have been the most important that WISELI undertook because of the profound impact it had on the lives and careers of the individuals we helped.

Some of the publications and presentations in which we have discussed our individual advocacy work include:

Refereed Publications

Sheridan, Jennifer; Patricia Flatley Brennan; Molly Carnes; and Jo Handelsman. 2006. "Discovering Directions for Change in Higher Education Through the Experiences of Senior Women Faculty." *Journal of Technology Transfer*. 31(3): 387-396.

Non-Refereed Presentations

Handelsman, Jo. May 20, 2005. "Affecting Climate/Culture Change — Using Multiple Points of Entry in the Department of Kumquat Science." 4th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Products Available to the Public

"WISELI: Building on a Legacy." Documentary Video, second in series of three.

Available online through *The Research Channel*:

<http://www.researchchannel.org/prog/displayevent.asp?rid=3455> .

"WISELI: *FORWARD* with Institutional Transformation." Documentary Video, third in series of three. Available online through *The Research Channel*:

<http://www.researchchannel.org/prog/displayevent.aspx?rID=16095&fID=345> .

Future of Activity. Though this is not an "advertised" initiative of WISELI's, our visibility and strong leadership will continue to provide women who are experiencing difficulties a place to go for help. We refer such cases to the institution's ombuds where appropriate. However, sometimes strong intervention from a senior faculty member is the only way to solve a problem. WISELI's leaders are committed to continuing to advocate for women on a case-by-case basis, perhaps even formalizing the function by expanding the network of advocates into the future.

National Influence

Description of Activity. WISELI has been active in the national conversation about the leadership of women in academic science and engineering. Disseminating WISELI's work, becoming ambassadors of the ADVANCE program, participating on national panels about women in science, and providing leadership in times of "crisis" have been important to WISELI's mission to increase the participation and advancement of women in academic science and engineering.

Implementation. WISELI has contributed to the national conversation on women's leadership in science in many ways:

- Contribution of a theoretical framework ("stages of change") for thinking about the change process with regards to diversity;
- Publication of a high-profile piece in *Science* ("More Women in Science");

- Participation on the Committee on Maximizing the Potential of Women in Academic Science and Engineering, and dissemination of the committee's findings ("Beyond Bias and Barriers");
- Participation in collaborative efforts to share measurement and evaluation techniques across ADVANCE institutions;
- Engagement with the national conversation surrounding the January 14th, 2005 remarks of Harvard President Larry Summers (<http://wiseli.engr.wisc.edu/news/Summers.htm>), including meeting with President Summers and the Harvard deans;
- Numerous presentations to academic institutions, professional societies, and other organizations regarding the status of women in science and engineering (including in many cases an overview of the NSF's ADVANCE program);
- Help, assistance, and advice to institutions on specific topics (frequent topics include climate survey implementation, hiring committee training, department chair training, assistance with ADVANCE proposals, and examples of UW-Madison policies); and
- Leadership in national organizations promoting women in science.

Results. The institutions/organizations at which WISELI personnel have given invited talks include:

- American Institute of Chemical Engineers (Regina Murphy, November 2002)
- University of California, Berkeley (Amy Wendt, September 2003)
- Virginia Tech (Jennifer Sheridan, November 2003)
- Virginia Commonwealth University (Molly Carnes, October 2004 & March 2005)
- University of Illinois-Chicago (Molly Carnes, October 2004 & February 2007)
- NIH, Office of Research on Women's Health (Molly Carnes, November 2004)
- NSF, Engineering Directorate (Paul Peercy, December 2004)
- Oregon State University (Jo Handelsman, March 2005)
- NSF, MPS Directorate (Sue Coppersmith, April 2005)
- Indiana University (Molly Carnes, April 2005)
- University of Minnesota (Molly Carnes, May 2005; Molly Carnes & Jennifer Sheridan, April 2007)
- Women Against Lung Cancer (Molly Carnes, May 2005)
- American Astronomical Society (Ellen Zweibel, June 2005)
- Howard Hughes Medical Institute (Jo Handelsman, June 2005)
- Harvard University (Jo Handelsman, June 2005)
- University of Pennsylvania (Molly Carnes, October 2005)
- Colorado State University (Jo Handelsman, November 2005)
- Barnard College (Jo Handelsman, February 2006)
- Stanford University (Jo Handelsman, February 2006)
- Committee on Institutional Cooperation-WISE Group (Jennifer Sheridan, March 2006)
- Blackhawk Technical College (Jennifer Sheridan, April 2006)
- State University of New York at Buffalo (Molly Carnes, April 2006)
- Association for Education in Journalism and Mass Communication (Molly Carnes, August 2006)
- American Sociological Association (Jennifer Sheridan, August 2006)
- Briefing to aides of Senators Kennedy and Murray (Jo Handelsman, September 2006)

- NIH Officials and Women in Medicine Committee (Jo Handelsman, October 2006)
- Phillips Exeter Academy (Jo Handelsman, October 2006)
- University of Lethbridge (Alberta, CA) (Jo Handelsman, November 2006)
- Medical College of Wisconsin (Molly Carnes, February 2007)
- University of Utah (Molly Carnes, March 2007)
- American Association of Geographers (Brenda Parker, April 2007)
- Brown University (Molly Carnes, May 2007)
- University of Florida (Molly Carnes, May 2007)

In addition, we have provided specific help or advice to 94 additional institutions not listed above, including: Arizona State University, Boston University, Howard University, New York University, Purdue University, Rutgers University, Syracuse University, University of Alaska, Washington University in St. Louis, Yale University, and many campuses within the University of Wisconsin System. The majority of these requests are for specific information about some aspect of the WISELI program, especially advice on administering a climate survey or more information about our work with hiring committees. Many of the contacts are requests for permission to use our materials, especially our survey instruments and text from our “Searching for Excellence & Diversity” guidebook. Thirty different institutions have attended a hiring workshop, either visiting one on our campus, or attending a “train-the-trainers” workshop. Finally, at least 14 institutions have requested large quantities (i.e., 50 or more) of our “Reviewing Applicants” brochure.

WISELI has assumed leadership in national organizations promoting women in science and engineering. Cathy Middlecamp was an officer in AWIS; Jennifer Sheridan is co-chair of the WEPAN Research Committee, and Jo Handelsman is president of the Rosalind Franklin Society.

Some of the publications we have contributed to, and presentations we have made regarding “More Women in Science”, *Beyond Bias and Barriers*, the stages of change model, measurement of gender equity, the Larry Summers debate, and other national-level activities that are not specifically related to any of the initiatives outlined above include:

Refereed Publications

Handelsman, Jo; Nancy Cantor; Molly Carnes; Denice Denton; Eve Fine; Barbara Grosz; Virginia Hinshaw; Cora Marrett; Sue Rosser; Donna Shalala; and Jennifer Sheridan. 2005. “More Women in Science.” *Science*. 309(5738):1190-1191.

Carnes, Molly; Jo Handelsman; and Jennifer Sheridan. 2005. “Diversity in Academic Medicine: The Stages of Change Model.” *Journal of Women’s Health*. 14(6):471-475.

Committee on Maximizing the Potential of Women in Academic Science and Engineering. 2006. “Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering.” The National Academies Press: Washington, DC. <http://www.nap.edu/catalog/11741.html> .

Fine, Eve. 2008. “Response to Lawrence Summers’ Remarks on Women in Science.” In *The Blair Reader: Exploring Contemporary Issues*, 6th edition. Edited by Laurie G.

Kirsznner and Stephen R. Mandel. Prentice Hall. Originally published January 2005 on WISELI's website: (http://wiseli.engr.wisc.edu/news/LawrenceSummers_Response.pdf)

Non-Refereed Publications

Frehill, Lisa; Cecily Jeser-Cannavale; Priscilla Kehoe; Ellen Meader; Jennifer Sheridan; Abby Stewart; and Helena Svinglin. January 2005. "Toolkit for Reporting Progress Toward NSF ADVANCE: Institutional Transformation Goals."
<http://www.advance.nmsu.edu/Documents/PDF/toolkit1.pdf> .

Frehill, Lisa; Elena Batista; Sheila Edwards-Lange; Cecily Jeser-Cannavale; Jan Malley; Jennifer Sheridan; Kim Sullivan; and Helena Svinglin. May 2006. "Using Program Evaluation To Ensure the Success of Your ADVANCE Program."
<http://www.advance.nmsu.edu/Documents/PDF/toolkit2.pdf> .

Refereed Presentations

Sheridan, Jennifer; Jo Handelsman; and Molly Carnes. August 14, 2004. "Assessing "Readiness to Embrace Diversity": An Application of the Trans-Theoretical Model of Behavioral Change." Annual Meeting of the American Sociological Association. San Francisco, CA.

Sheridan, Jennifer. February 20, 2006. "Methodological Challenges in Measuring Institutional Transformation, Part II: The Limits of Quantitative Indicators." 2006 American Association for the Advancement of Science Annual Meeting. St. Louis, MO.

Sheridan, Jennifer. August 13, 2006. "Why Does ADVANCE Need Sociologists?" Annual Meeting of the American Sociological Association. Montréal, Canada.

Non-Refereed Presentations

Carnes, Molly. October 13, 2004. "Searching for Excellence, Equity & Diversity: Unconscious Assumptions and Lessons From Smoking Cessation" (Invited Speaker). Virginia Commonwealth University. Richmond, VA.

Sheridan, Jennifer. May 19, 2005. "Indicators and Dissemination: Question 2. What are the Outcomes of Institutional Processes of Recruitment and Advancement for Men and Women?" NSF ADVANCE P.I. Meeting, National Science Foundation. Washington, DC.

Handelsman, Jo. June 9-10, 2005. "Sex and Science." Howard Hughes Medical Institute New Investigator Training. Howard Hughes Medical Institute. Chevy Chase, MD.

Handelsman, Jo. July 11, 2005. "Diversity, Bias, and Change" (Invited speaker). Harvard Deans' Retreat. Harvard University. Cambridge, MA.

Handelsman, Jo. January 11, 2006. "More Women in Science." Madison Chapter of TEMPO. Madison, WI.

Sheridan, Jennifer. May 17, 2006. "Data Collection and Reporting: The NSF Indicators." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 17, 2006. "Lessons Learned from ADVANCE at the UW-Madison: What We Wish We Had Known...." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Sheridan, Jennifer. May 19, 2006. "Collection and Use of Climate Survey Data at the UW-Madison." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Pribbenow, Christine. May 19, 2006. "Using Evaluation Data to Affect Institutional Change." 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Carnes, Molly. May 19, 2006. "Institutionalization—Cross Site Findings of Institutionalization Workgroup" (Discussant). 5th Annual NSF ADVANCE PI Meeting. National Science Foundation. Washington, DC.

Handelsman, Jo. June 2006. Workshop on Diversity. National Academies Summer Institute on Undergraduate Education in Biology. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. September 26-27, 2006. Briefing of Senators Kennedy and Murray's aides on "Beyond Bias and Barriers" report from the National Academies Committee on Maximizing the Potential of Women in Academic Science and Engineering. Washington, DC.

Sheridan, Jennifer. October 21, 2006. "Systemic and Institutional Barriers Women Face in Science and Engineering." "Encouraging Success in Science and Medicine" Symposium. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. October 24, 2006. Briefing of NIH officials and the Women in Medicine committee on the "Beyond Bias" report. Bethesda, MD.

Handelsman, Jo. October 29-30, 2006. "Diversity." Invited speaker, all-school assembly at Phillips Exeter Academy. Exeter, NH.

Handelsman, Jo. November 3, 2006. "Beyond Bias and Barriers: A Call to Arms about Women in Science" (Keynote). Cabinet 99 Symposium. University of Wisconsin-Madison. Madison, WI.

Handelsman, Jo. November 10, 2006. "Best Practices and Gender Equity in the Academy." University of Lethbridge. Lethbridge, Alberta, Canada.

Sheridan, Jennifer. January 17, 2007. "Beyond Bias and Barriers." Zonta International. Madison, WI.

Sheridan, Jennifer. January 30, 2007. "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering." Center for Demography & Ecology Training Seminar. University of Wisconsin-Madison. Madison, WI.

Future of Activity. WISELI will continue to be a player in the national efforts to promote the participation and advancement of women in academic science and engineering.

Section III: WISELI Personnel

Faculty Paid on ADVANCE	
<p>Name: Molly Carnes Title: Professor, Medicine Role: co-Director of WISELI, 2002 - 2006 Percentage: 40%/year, 2002 - 2006 WISELI Initiative Contributions: Establish WISELI, senior women project, Stages of Change model, NIH Awards papers, designer, presenter and facilitator of <i>Searching for Excellence & Diversity</i> workshops, design team for <i>Enhancing Department Climate: A Chair's Role</i> facilitated academic staff conversions, individual advocacy for women faculty, and national leadership role. Notes: Prof. Carnes has worked with Prof. Douglass Henderson to secure an LSAMP grant, and submit AGEP proposals, all administered under the WISELI umbrella. She and Prof. Henderson are leading the effort to create a new administrative structure that will include WISELI, but broaden the mission to include other pillars of diversity.</p>	<p>Name: Jo Handelsman Title: Professor, Plant Pathology Role: co-Director of WISELI, 2002 - 2006 Percentage: 30%/year, 2002 - 2006 WISELI Initiative Contributions: Establish WISELI, senior women project, <i>More Women in Science, Beyond Bias and Barriers</i>, designer, presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops, designer and facilitator for <i>Enhancing Department Climate: A Chair's Role</i>, designer of PI workshops, facilitated academic staff conversions, individual advocacy for women faculty, and national leadership role. Notes: Prof. Handelsman stepped down as co-Director of WISELI upon completion of the grant in July 2007. She will become chair of Bacteriology in Fall 2007.</p>
<p>Name: Caitilyn Allen Title: Professor, Plant Pathology Role: Leadership Team member, 2002-2003 Percentage: 8%/Year, 2002 – 2003 WISELI Initiative Contributions: N/A. Notes: Prof. Allen stepped down as WISELI Leadership Team member in Fall 2003 in order to chair the Biological Sciences Divisional Committee.</p>	<p>Name: Vicki Bier Title: Professor, Industrial & Systems Engineering Role: Leadership Team member, 2002 - 2006 Percentage: 10%/year, 2002 - 2003 WISELI Initiative Contributions: N/A. Notes: Served as liaison to Campus Childcare Committee, and continues to be involved in WISELI through the "Committee Honoring Denice's Memory," which will fund and administer the Denice D. Denton Distinguished Lecture Series.</p>

Faculty Paid on ADVANCE (Continued)	
<p>Name: Patricia Brennan Title: Professor and Chair, Industrial & Systems Engineering Role: Leadership Team member, 2002 - 2006 Percentage: 10%/year, 2002 – 2006 WISELI Initiative Contributions: Senior women project, awards brochure, <i>Discovering Directions for Change</i> paper, preliminary analyses of patent disclosures by gender. Notes: Prof. Brennan became chair of ISE in Summer 2007.</p>	<p>Name: Wendy Crone Title: Associate Professor, Engineering Physics Role: Leadership Team member, 2006 Percentage: 10%/year, 2006 WISELI Initiative Contributions: “Survive and Thrive: A Self-Assessment Guide for Untenured Faculty.”</p>
<p>Name: Bernice Durand Title: Professor, Physics and Vice Provost for Diversity and Climate Role: Leadership Team member, 2002 - 2006 Percentage: 7%/year, 2002 and 2005 WISELI Initiative Contributions: Senior women project; designer, facilitator and presenter for <i>Searching for Excellence & Diversity</i> workshops; design team for <i>Enhancing Department Climate: A Chair’s Role</i> workshops. Notes: Prof. Durand assumed a major campus leadership role in 2003 when she accepted the position of Vice Provost for Diversity and Climate.</p>	<p>Name: Cecilia Ford Title: Professor, English Role: Leadership Team member, 2002 - 2006 Percentage: 18%/year, 2002 – 2006 WISELI Initiative Contributions: Discourse analysis linguistic research, Life Cycle Research Grant program. Notes: Prof. Ford has stepped down from the Vilas Life Cycle Professorship evaluation team in 2006.</p>

Faculty Paid on ADVANCE (Continued)	
<p>Name: Amy Stambach Title: Associate Professor, Curriculum & Instruction Role: Leadership Team member, 2002 - 2005 Percentage: 10%/year, 2003 - 2005 WISELI Initiative Contributions: Ethnographic research project. Notes: Prof. Stambach stepped down from the WISELI Leadership Team in 2005.</p>	<p>Name: Amy Wendt Title: Professor and Chair, Electrical & Computer Engineering Role: Leadership Team member, 2002 – 2006 Percentage: 8%/year, 2002 – 2004 WISELI Initiative Contributions: Life Cycle Research Grants, Celebrating Women in Science & Engineering Grants, examination of women’s career choices in engineering, facilitate <i>Enhancing Department Climate: A Chair’s Role</i>. Notes: Prof. Wendt assumed the Department co-Chair of ECE position in 2005, and will become co-Director of WISELI in Summer 2007, replacing Prof. Jo Handelsman. She is a member of the “Committee Honoring Denice’s Memory,” which will fund and administer the Denice D. Denton Distinguished Lecture Series.</p>

Academic Staff Paid on ADVANCE	
<p>Name: Deveny Benting Title: Research Specialist, WISELI Role: WISELI staff member and evaluation team member Percentage: 100%, 2002 - 2006 WISELI Initiative Contributions: WISELI website, documentary videos, listserv, baseline interview data, issue studies, evaluation of existing programs, <i>Enhancing Department Climate: A Chair’s Role</i> (evaluation), <i>Searching for Excellence & Diversity</i> workshops (evaluation), “Train the trainer” workshops for search committee training (evaluation), senior women project (evaluation), awards brochure.</p>	<p>Name: Dianne Bowcock Title: Assistant Scientist, WISELI Role: Evaluator Percentage: 50%, 2002 WISELI Initiative Contributions: Preliminary evaluation plan, baseline interview data.</p>

Academic Staff Paid on ADVANCE (Continued)	
<p>Name: Susan Daffinrud Title: Associate Researcher, WISELI Role: Evaluator Percentage: 25%, 2002-2003 WISELI Initiative Contributions: Baseline interview data, faculty and staff climate surveys, <i>Searching for Excellence & Diversity</i> workshops (evaluation).</p>	<p>Name: Evelyn Fine Title: Researcher, WISELI Role: WISELI staff member Percentage: 75%, 2002 - 2006 WISELI Initiative Contributions: <i>Searching for Excellence & Diversity</i> workshops, <i>Enhancing Department Climate: A chair's role</i> workshops, design team for PI workshops, WISELI library, Celebrating Women in S&E grants, WISELI website, WISELI seminar series, "Train the trainer" workshops for search committee training, and national leadership role (esp. Larry Summers response).</p>
<p>Name: Dennis Kennedy Title: Assistant Scientist, WISELI Role: Evaluator Percentage: 5%, 2002 WISELI Initiative Contributions: Preliminary evaluation plan.</p>	<p>Name: Ainslie Little Title: Research Associate, WISELI Role: WISELI staff member Percentage: 50%, 2007 WISELI Initiative Contributions: PI training workshops.</p>
<p>Name: Susan Millar Title: Senior Scientist, Wisconsin Center for Education Research Role: Leadership Team member, 2002 Percentage: 10%, 2002 WISELI Initiative Contributions: N/A. Notes: Dr. Millar resigned from the WISELI Leadership team in 2002, as she was making a major job change within the university at that time. She is a member of the "Committee Honoring Denice's Memory," which will fund and administer the Denice D. Denton Distinguished Lecture Series.</p>	<p>Name: Kathleen O'Connell Title: Assistant Researcher, WISELI Role: Evaluator Percentage: 75%, 2006 WISELI Initiative Contributions: Issue Studies, evaluate existing programs, Vilas Life Cycle Professorship program (evaluation).</p>
<p>Name: Brenda Parker Title: Assistant Researcher, WISELI Role: Evaluator Percentage: 25%, 2006 WISELI Initiative Contributions: Follow-up interview data.</p>	<p>Name: Christine Maidl Pribbenow Title: Assistant Scientist, WISELI Role: Evaluator Percentage: 50%, 2002 - 2006 WISELI Initiative Contributions: Baseline and follow-up interview data, faculty and staff climate surveys, issues studies, evaluation of existing programs, <i>Enhancing Department Climate: A Chair's Role</i> (design and evaluation), <i>Searching for Excellence & Diversity</i> workshops (evaluation), Life Cycle Research Grants (evaluation).</p>

Academic Staff Paid on ADVANCE (Continued)	
Name: Jennifer Sheridan Title: Assistant Scientist, WISELI Role: WISELI staff member Percentage: 100%, 2002 - 2006 WISELI Initiative Contributions: Establish WISELI, longitudinal data collection, climate surveys for faculty and staff, evaluation of existing programs, gender equity of campus resources studies, professional development opportunities for women faculty and staff, design team, facilitator and presenter for <i>Searching for Excellence & Diversity</i> workshops, design team for <i>Enhancing Department Climate: A Chair's Role</i> , design team for PI workshops, Celebrating Women in S&E grants, Life Cycle Research Grants, listserv, CIC-WISE representative, documentary videos, senior women project, <i>Discovering Directions for Change</i> paper, national leadership role.	Name: Lillian Tong Title: Faculty Associate, Center for Biology Role: Leadership Team member, 2002 - 2006 Percentage: 7%, 2003 - 2004 WISELI Initiative Contributions: Celebrating Women in Science & Engineering grants, design team for <i>Enhancing Department Climate: A Chair's Role</i> .

Students Paid on ADVANCE	
Name: Maimoona Bowcock Tasks: Transcription.	Name: Tina Chang Tasks: Transcription.
Name: J Kate Dawson Tasks: Transcription.	Name: Stephanie Dysert Tasks: Transcription.
Name: Nathaniel Greene Tasks: Transcription.	Name: Sharmarisa Hammonds Tasks: General clerical.
Name: Sarah Marxhausen Tasks: Transcription, WISELI library.	Name: Tia Marie Onsager Tasks: Transcription.
Name: Erin Ruffedt Tasks: Transcription.	Name: Kimberly Schultz Tasks: Transcription.
Name: Ayako Takasaki Tasks: Transcription, WISELI library.	Name: Anjali Tannan Tasks: Transcription. WISELI library.
Name: Margaret Tyler Tasks: Transcription.	Name: Teddy Weathersbee-Kardash Tasks: Research assistance, website maintenance.
Name: Jessica Winchell Tasks: Transcription, longitudinal data system, evaluation of existing programs, <i>Searching for Excellence & Diversity</i> workshops (evaluation), Celebrating Women in S&E grants (evaluation), faculty and staff climate surveys, WISELI library, research assistance, general clerical.	

Cost-Shared Faculty, Staff and Students	
Name: Judith Burstyn Title: Professor, Chemistry Role: Faculty director of WISE Residential Program Percentage: 5% effort, 2002 WISELI Initiative Contributions: N/A.	Name: Mei-Hsia Chen Title: Project Assistant Role: Researcher Percentage: 100% effort, 2003-2004 WISELI Initiative Contributions: Longitudinal database.
Name: Rosa Garner Title: Assistant Dean, SMPH Role: Ombudsperson Percentage: 5% effort, 2002-2006 WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> , and presenter, and facilitator for <i>Searching for Excellence & Diversity</i> workshops.	Name: Sandy Gossens Title: Administrative Program Specialist Role: Assistant to Jo Handelsman Percentage: 33% effort, 2004-2006 WISELI Initiative Contributions: N/A.
Name: Linda Greene Title: Professor, Law and Associate Vice Chancellor for Faculty Programs Role: Leadership Team member, 2002-2006 Percentage: 3% effort, 2002-2004 WISELI Initiative Contributions: Facilitated academic staff conversions, individual advocacy for women faculty, design team for <i>Searching for Excellence & Diversity</i> workshops, design team for <i>Enhancing Department Climate: A Chair's Role</i> .	Name: Ramona Gunter Title: Research Assistant (to Amy Stambach) Role: Researcher Percentage: 100% effort, 2004-2005 WISELI Initiative Contributions: Ethnographic research project, baseline interview data. Notes: Dr. Gunter received her PhD in 2006. She has been funded through the contribution of the Graduate School.
Name: Margaret Harrigan Title: Sr. Policy/Planning Analyst, Academic Planning and Analysis Role: Liaison to institutional data Percentage: 5% effort, 2002-2006 WISELI Initiative Contributions: Longitudinal data collection, baseline interview data (sample).	Name: Stephen Montagna Title: Media Specialist, UW Center for Women's Health Research Role: Webmaster Percentage: 5% effort, 2002-2005 WISELI Initiative Contributions: WISELI website.
Name: Gloria Sarto Title: Professor Emerita, OB/GYN Role: Leadership Team member, 2002-2006 Percentage: 5% effort, 2002 WISELI Initiative Contributions: N/A.	Name: Paru Shrestha Title: Project Assistant Role: Researcher Percentage: 100% effort, 2003-2004 WISELI Initiative Contributions: Longitudinal database. Notes: Paru's project assistant position was funded by the Office of the Chancellor.

Cost-Shared Faculty, Staff and Students (Continued)	
<p>Name: Carol Sobek Title: University Grants & Contracts Specialist Role: Financial manager Percentage: 50%, 2005-2006 WISELI Initiative Contributions: N/A. Notes: Provost office contributed 50% of Carol's salary, College of Engineering contributed 50%.</p>	<p>Name: Lindsey Stoddard-Cameron Title: Sr. Administrative Program Specialist, Office of the Secretary of the Faculty Role: Liaison to Committee on Women, Women Faculty Mentoring Program, Sexual Harassment Training Sessions, and New Faculty Training Percentage: 5% effort, 2002-2006 WISELI Initiative Contributions: Evaluation of existing programs.</p>
Leadership Team members, unpaid	
<p>Name: Pat Farrell Title: Vice Dean for Academic Affairs, College of Engineering; Provost Role: Leadership Team member, 2002-2006 WISELI Initiative Contributions: Design team for <i>Searching for Excellence & Diversity</i> workshops, design team for <i>Enhancing Department Climate: A Chair's Role</i>. Notes: Dr. Farrell, a member of WISELI's Leadership Team from the beginning and a contributor to the design of both the hiring workshops and the climate workshops, became Provost of UW-Madison in April, 2006.</p>	<p>Name: Douglass Henderson Title: Professor, Engineering Physics Role: Leadership Team member, 2003-2006 WISELI Initiative Contributions: N/A. Notes: Dr. Henderson is co-PI, with Molly Carnes, on the WiscAMP and the North Country Alliance (AGEP) programs.</p>
<p>Name: Nancy Mathews Title: Professor, Nelson Institute for Environmental Studies Role: Leadership Team member, 2005-2006 WISELI Initiative Contributions: Vilas Life Cycle Professorships, facilitate <i>Enhancing Department Climate: A Chair's Role</i> workshops. Notes: Dr. Mathews was one of the first recipients of the Life Cycle Research Grants, and she now serves on the evaluation committee for the grants.</p>	<p>Name: Cathy Middlecamp Title: Distinguished Faculty Associate, Chemistry Role: Leadership Team member, 2002-2006 WISELI Initiative Contributions: N/A. Note: Cathy Middlecamp is an academic staff member who unsuccessfully attempted to transfer to the tenure track.</p>

Leadership Team members, unpaid (Continued)	
Name: Paul Percy Title: Dean, College of Engineering Role: Leadership Team member, 2002-2006 WISELI Initiative Contributions: N/A. Note: Dean Percy has continued to provide space and support for WISELI in the College of Engineering beyond the 5-year grant period (including support for grants administrator Carol Sobek.)	Name: Manuela Romero Title: Assistant Scientist, WiscAMP Role: Leadership Team member, 2005-2006 WISELI Initiative Contributions: N/A. Notes: Dr. Romero is the executive director of WiscAMP, and co-PI of the North Country Alliance (AGEP) program.
Name: Gary Sandefur Title: Dean, College of Letters & Science Role: Leadership Team member, 2002-2006 WISELI Initiative Contributions: N/A. Notes: Dr. Sandefur, a member of WISELI's Leadership Team from the beginning, became Dean of L&S in August, 2004. He was the first dean to mandate attendance at WISELI's <i>Searching for Excellence & Diversity</i> workshops for all faculty hiring committee chairs.	

Evaluation Team members, unpaid	
Name: John Stevenson Title: Director, UW Survey Center Role: Evaluation Team member, 2002-2006 WISELI Initiative Contributions: Climate surveys for faculty and staff.	Name: Theresa Thompson-Coloñ Title: Project Director, UW Survey Center Role: Evaluation Team member, 2004-2006 WISELI Initiative Contributions: Climate surveys for faculty.
Name: Debra Wright Title: Project Director, UW Survey Center Role: Evaluation Team member, 2002-2003 WISELI Initiative Contributions: Climate surveys for faculty and staff.	
Administrative Partners, unpaid	
Name: Elton Aberle Title: Dean, College of Agricultural and Life Sciences, UW-Madison Role: Administrative partner, 2002-2004 WISELI Initiative Contributions: N/A.	Name: Daryl Buss Title: Dean, School of Veterinary Medicine, UW-Madison Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: N/A.
Name: Martin Cadwallader Title: Dean, Graduate School, UW-Madison Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: N/A.	Name: Phil Certain Title: Dean, College of Letters & Sciences, UW-Madison Role: Administrative partner, 2002-2003 WISELI Initiative Contributions: N/A.

Administrative Partners, unpaid (Continued)	
Name: Robin Douthitt Title: Dean, School of Human Ecology, UW-Madison Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: N/A.	Name: Phil Farrell Title: Dean, SMPH, UW-Madison Role: Administrative partner, 2002-2005 WISELI Initiative Contributions: N/A.
Name: Robert Golden Title: Dean, School of Medicine & Public Health, UW-Madison Role: Administrative partner, 2006 WISELI Initiative Contributions: N/A.	Name: David Hogg Title: Interim Dean, College of Agricultural and Life Sciences, UW-Madison Role: Administrative partner, 2005 WISELI Initiative Contributions: N/A.
Name: Molly Jahn Title: Dean, College of Agricultural and Life Sciences, UW-Madison Role: Administrative partner, 2006 WISELI Initiative Contributions: N/A.	Name: Katharine Lyall Title: President, UW System Role: Administrative partner, 2002-2003 WISELI Initiative Contributions: N/A.
Name: Cora Marrett Title: Sr. Vice President, UW System Role: Administrative partner, 2003-2005 WISELI Initiative Contributions: N/A.	Name: Katharyn May Title: Dean, School of Nursing, UW-Madison Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: N/A.
Name: Terry Millar Title: Associate Dean for Physical Sciences, Graduate School, UW-Madison Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: N/A.	Name: Tim Mulcahy Title: Associate Dean for Biological Sciences, Graduate School, UW-Madison Role: Administrative partner, 2002-2004 WISELI Initiative Contributions: N/A.
Name: Donna Paulnock Title: Associate Dean for Biological Sciences, Graduate School, UW-Madison Role: Administrative partner, 2005-2006 WISELI Initiative Contributions: N/A.	Name: Luis Piñero Title: Director, Office for Equity and Diversity Role: Administrative partner, 2004-2006 WISELI Initiative Contributions: Designer, presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.
Name: Jeanette Roberts Title: Dean, School of Pharmacy, UW-Madison Role: Administrative partner, 2003-2006 WISELI Initiative Contributions: N/A.	Name: Virginia Sapiro Title: Interim Provost, UW-Madison Role: Administrative partner, 2002-2004 WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.
Name: Don Schutt Title: Director, Office of Human Resource Development Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> , design team for PI workshops.	Name: Peter Spear Title: Provost, UW-Madison Role: Administrative partner, 2002-2004 WISELI Initiative Contributions: N/A.

Administrative Partners, unpaid (Continued)	
Name: Melvin Weinswig Title: Dean, School of Pharmacy, UW-Madison Role: Administrative partner, 2002 WISELI Initiative Contributions: N/A.	Name: Frances Westley Title: Director, Nelson Institute for Environmental Studies Role: Administrative partner, 2006 WISELI Initiative Contributions: N/A.
Name: Mariamne Whatley Title: Associate Dean, School of Education, UW-Madison; Chair, Women's Studies Program Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.	Name: John Wiley Title: Chancellor, UW-Madison Role: Administrative partner, 2002-2006 WISELI Initiative Contributions: N/A.

Other participating faculty and staff, unpaid	
Name: Teri Balser Title: Associate Professor, Soil Science WISELI Initiative Contributions: Design team for PI training workshops.	Name: Elizabeth Bolt Title: Assistant Dean for Human Resources, School of Medicine & Public Health WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.
Name: Ann Burgess Title: Director Emerita, BioCore WISELI Initiative Contributions: Design team for PI training workshops.	Name: Laurie Beth Clark Title: Professor of Art and Vice Provost for Faculty and Staff Programs WISELI Initiative Contributions: N/A.
Name: Sandy Courter Title: Adjunct Assistant Professor, Engineering Professional Development WISELI Initiative Contributions: Facilitator for <i>Searching for Excellence & Diversity</i> workshops.	Name: Sue Coppersmith Title: Professor & Chair, Physics WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> .
Name: Maury Cotter Title: Director, Office of Quality Improvement WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> .	Name: Steve Cramer Title: Professor of Civil and Environmental Engineering and Associate Dean for Academic Affairs, College of Engineering WISELI Initiative Contributions: N/A.
Name: Dawn Crim Title: Community Relations, Chancellor's Office WISELI Initiative Contributions: Presenter for <i>Searching for Excellence & Diversity</i> workshops.	Name: Mike Culbertson Title: Professor and Chair, Genetics WISELI Initiative Contributions: Design team for PI training workshops.

Other participating faculty and staff, unpaid (Continued)	
Name: Chris DeMarco Title: Professor and Former Chair, Electrical & Computer Engineering WISELI Initiative Contributions: Presenter for <i>Searching for Excellence & Diversity</i> workshops.	Name: John Dowling Title: Sr. University Legal Counsel WISELI Initiative Contributions: Presenter for <i>Searching for Excellence & Diversity</i> workshops.
Name: Randy Durand Title: Professor Emeritus, Physics WISELI Initiative Contributions: Design team for <i>Searching for Excellence & Diversity</i> workshops.	Name: Sarah L. Esmond Title: Project Manager, Center for the Study of Cultural Diversity in Healthcare WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.
Name: Chris Green Title: Professor (CHS) and Chair, Pediatrics WISELI Initiative Contributions: Facilitate <i>Enhancing Department Climate: A Chair's Role</i> workshops.	Name: Linda Heidman Title: Human Resource Manager, College of Agricultural & Life Sciences WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> .
Name: Kathleen Holt Title: Sr. Administrative Program Specialist, Employee Assistance Office WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> .	Name: Eden Inoway-Ronnie Title: Chief of Staff, Provost's Office WISELI Initiative Contributions: Design team for <i>Enhancing Department Climate: A Chair's Role</i> .
Name: Julia Koza Title: Professor, Music WISELI Initiative Contributions: Facilitate <i>Enhancing Department Climate: A Chair's Role</i> workshops.	Name: Patty Loew Title: Associate Professor, Life Sciences Communication WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.
Name: Steve Lund Title: Director, Office of Human Resources WISELI Initiative Contributions: Design team for <i>Searching for Excellence & Diversity</i> workshops.	Name: Laurie Mayberry Title: Assistant Vice Provost, Faculty Programs WISELI Initiative Contributions: Presenter for <i>Searching for Excellence & Diversity</i> workshops.
Name: Patty McManus Title: Professor, Plant Pathology WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.	Name: Denise Ney Title: Professor and Former Chair, Nutritional Sciences WISELI Initiative Contributions: Facilitate <i>Enhancing Department Climate: A Chair's Role</i> workshops.

Other participating faculty and staff, unpaid (Continued)	
Name: Phil O’Leary Title: Professor and Chair, Engineering Professional Development WISELI Initiative Contributions: Presenter for <i>Searching for Excellence & Diversity</i> workshops.	Name: Chris Pfund Title: Associate Researcher, Wisconsin Program for Scientific Teaching WISELI Initiative Contributions: Design team for PI training workshops.
Name: Sarah Pfatteicher Title: Assistant Dean for Academic Affairs, College of Engineering WISELI Initiative Contributions: Facilitator for <i>Searching for Excellence & Diversity</i> workshops.	Name: Dean Pribbenow Title: Academic Staff, Office of Quality Improvement WISELI Initiative Contributions: Design team for <i>Searching for Excellence & Diversity</i> workshops.
Name: Jeff Russell Title: Professor and Chair, Civil Engineering WISELI Initiative Contributions: Facilitate <i>Enhancing Department Climate: A Chair’s Role</i> workshops and presenter for <i>Searching for Excellence & Diversity</i> workshops.	Name: Steve Stern Title: Professor and Former Chair, English WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.
Name: Brian Yandell Title: Professor, Statistics and Horticulture WISELI Initiative Contributions: Presenter and facilitator for <i>Searching for Excellence & Diversity</i> workshops.	Name: Lydia Zepeda Title: Professor, Consumer Science WISELI Initiative Contributions: Member, “Committee Honoring Denice’s Memory.”
Name: Jane Zuengler Title: Professor, English WISELI Initiative Contributions: Evaluation Committee for Vilas Life Cycle Professorship program.	

External Advisory Team, unpaid	
Name: Denice D. Denton Title: Dean, College of Engineering, University of Washington; Chancellor, University of Santa Cruz Role: External advisor, 2002-2006 WISELI Initiative Contributions: N/A.	Name: Joan King Title: Consultant, Beyond Success Role: External advisor, 2002-2006 WISELI Initiative Contributions: N/A.
Name: Sally Gregory Kohlstedt Title: Professor, History of Science and Technology, University of Minnesota Role: External advisor, 2002-2006 WISELI Initiative Contributions: N/A.	Name: Charlotte Kuh Title: Deputy Executive Director of the Policy and Global Affairs Division, National Research Council Role: External advisor, 2002-2006 WISELI Initiative Contributions: N/A.

External Advisory Team, unpaid (Continued)	
Name: Sue Rosser Title: Dean, Ivan Allen College, Georgia Tech Role: External advisor, 2002-2006 WISELI Initiative Contributions: N/A.	

Notes on WISELI organizational structure

ADVANCE co-PIs Jo Handelsman and Molly Carnes became WISELI's co-Directors. Jennifer Sheridan was hired in February 2002 to become WISELI's Executive and Research director; later, Dr. Sheridan was added as a co-PI of the ADVANCE grant. These three individuals formed the core executive committee of WISELI.

The ADVANCE grant specified that a Leadership Team consisting of women faculty and staff from campus was to be created. Throughout the course of the grant, 19 individuals (in addition to co-Directors and other WISELI staff) served on the Leadership Team, some paid and some unpaid. Early in the grant, some of the funds designated for Leadership Team salary were moved to provide funding for additional WISELI staff to assist with workshop creation and research.

Throughout the course of the grant, WISELI has accomplished its goals with between 3.25 and 4.50 FTE of staff to perform the research, evaluation, programmatic, and administrative duties necessary to accomplish our mission. The core WISELI staff includes:

- Jennifer Sheridan, Ph.D. (Sociology). Executive and Research Director. Responsible for overall administration of WISELI, the Life Cycle Research Grants/Vilas Life Cycle Professorship program, research, and outreach. 1.0 FTE.
- Eve Fine, Ph.D. (History of Science). Researcher and Workshop Developer. Responsible for WISELI library and tracking all research literature related to WISELI's mission; developed the *Searching for Excellence & Diversity* and the *Enhancing Department Climate: A Chair's Role* workshop scripts and materials; runs the Celebrating Women in S&E grants and the WISELI seminars. 0.75 FTE.
- Christine Maidl Pribbenow, Ph.D. (Educational Leadership and Policy Analysis). Evaluation Director. Responsible for overall WISELI evaluation, survey administration for *Enhancing Department Climate: A Chair's Role*, issue studies, evaluation of existing programs, and formative evaluation of WISELI initiatives. 0.25 – 0.75 FTE.
- Deveny Benting, B.S. (Geography and Women's Studies). Research specialist. Responsible for assistance with evaluation, the WISELI videos, and web development. 1.0 FTE.
- Carol Sobek, B.S. (Accounting). Grants and Contracts Specialist. Responsible for all issues related to WISELI finances, including administration of Life Cycle/Vilas grants and Celebrating grants. 0.25 – 0.5 FTE (funded by Provost and the College of Engineering).
- Jessica Winchell, M.S. and ABD (Political Science). Project Assistant. Responsible for assisting with all research and evaluation needs of WISELI, and an invaluable member of the team. 50% appointment.

Originally, all evaluation was to be performed by staff from the LEAD (Learning through Evaluation, Adaptation, and Dissemination) Center. In the first year of the grant, WISELI's assigned Evaluation Director from LEAD changed two times, from Dianne Bowcock, to Sue Daffinrud, and finally to Christine Pribbenow. When in early 2003 the LEAD Center proposed to replace Dr. Pribbenow with a fourth evaluator, WISELI chose instead to hire Dr. Pribbenow and one of her staff persons (Deveny Benting) directly on the WISELI project, rather than continue to have turnover in this important position. Including evaluators directly on WISELI's staff provided the project with much more personal, in-depth evaluation than would have been possible even from the nearby LEAD Center. In 2005, the LEAD Center ceased to exist.

As the ADVANCE Institutional Transformation period nears its end, changes to the administrative structure of WISELI will occur. A new co-Director (Amy Wendt) will replace Jo Handelsman. The contracts of some evaluation staff who came on board to assist with the final summative evaluation will end, and the funding for the postdoc who is leading the design of the PI workshops will end. An opportunity to re-design our advisory teams—both internal and external—will ensue, replacing the old Leadership Team and External Advisory Team with a new structure. Finally, WISELI itself will be included under the umbrella of a new research center, along with other diversity-in-STEM programs such as the Wisconsin Alliance for Minority Participation (WiscAMP), the North Country Alliance for Graduate Education, and the Graduate Engineering Research Scholars (GERS). This new institute will be called the Wisconsin Institute for Research and Evaluation on Diversity (WIRED) for STEM.

Section IV: Financial Reports

Spending, NSF funds and direct support from campus

WISELI Final Financial Report

January 2002 - June 2007

	NSF Funds	Other* Funds
Income		
NSF ADVANCE	\$3,748,973	
Celebrating Grants		\$40,000
College of Engineering		\$59,000
Provost's Office		\$40,785
Expenditures		
Salaries and Fringes		
Directors	\$652,237	
WISELI Staff	\$815,991	\$40,785
Leadership Team	\$368,796	
Evaluators	\$384,603	
Travel	\$48,891	\$7,310
Supplies and Equipment	\$40,476	\$23,467
Initiatives		
Celebrating Women in S&E Grants	\$1,901	\$47,965
Life Cycle Research Grants	\$148,972	
Documentary Video	\$53,850	\$5,794
Faculty and Staff Climate Surveys	\$37,528	\$14,171
Books Distributed	\$2,151	
WISELI Seminar	\$6,214	
Senior Women Development	\$286	
Professional Development Workshops for Women Faculty & Staff	\$7,895	
<i>Enhancing Department Climate: A Chair's Role</i>	\$1,431	
<i>Searching for Excellence & Diversity</i>	\$6,830	\$293
Awards Brochure	\$315	
Dissemination Activities	\$6,181	
Overhead (45.5%)	\$1,164,269	\$0
Total Income	\$3,748,973	\$139,785
Total Expenditures	\$3,748,817	\$139,785
Remaining Funds	\$156	\$0

* Direct contributions to WISELI General Purpose Revenue (101) and Capital Exercise (150) accounts.

Effort distribution across campus

Use of WISELI's Resources, January 2002 - June 2007

	Searching for Excellence & Diversity Workshops		Climate Workshops for Department Chairs		Celebrating Women in S&E Grants		Life Cycle Research Grants and Vilas Life Cycle Professorships			
	# Particip.	% Total	# Particip.	% Total	\$ Awarded	% Total	# Apply	# Awarded	\$ Awarded	% Total
College of Engineering	34	10.3%	8	30.8%	\$9,026	17.5%	1	1	\$30,000	2.5%
School of Medicine & Public Health	84	25.4%	8	30.8%	\$10,100	19.6%	16	13	\$301,517	25.4%
College of Agricultural & Life Sciences	31	9.4%	3	11.5%	\$7,337	14.2%	13	7	\$188,716	15.9%
College of Letters & Sciences	80	24.2%	5	19.2%	\$19,320	37.5%	27	18	\$384,076	32.4%
School of Pharmacy	27	8.2%	1	3.8%	\$0	0.0%	1	1	\$30,000	2.5%
School of Veterinary Medicine	10	3.0%	1	3.8%	\$1,400	2.7%	1	1	\$30,000	2.5%
Other*	65	19.6%	0	0.0%	\$4,333	8.4%	14	11	\$222,525	18.7%

* Search Workshops: Business (2), Law (1), SoHE (1), Education (13), Nursing (2), Graduate School (2), and other units such as UHS and Dean of Students (44);
Celebrating Grants: GWIS; Life Cycle Grants: Education, SoHE, IES, Business, Nursing.

Direct and indirect cost distribution across campus

Contributions to WISELI/Indirects from WISELI, 2002 - 2006

	Direct Support		In-Kind Contributions ⁴		Indirects Received	
College of Engineering ¹	\$79,000	16.7%	\$3,985	0.8%	\$733,020	63.0%
School of Medicine & Public Health	\$10,000	2.1%	\$60,301	12.7%	\$187,761	16.1%
College of Agricultural & Life Sciences	\$0	0.0%	\$4,058	0.9%	\$142,802	12.3%
College of Letters & Sciences	\$20,000	4.2%	-	-	\$68,476	5.9%
School of Pharmacy	\$10,000	2.1%	-	-	-	-
School of Veterinary Medicine	\$10,000	2.1%	-	-	-	-
Provost's Office	\$130,753	27.6%	\$195,894	41.3%	-	-
Vilas Estate ²	-	-	\$28,959	6.1%	-	-
WISE Residential Program	-	-	\$36,825	7.8%	-	-
Graduate School	\$76,044	16.0%	-	-	-	-
Graduate School & Provost Office ³	\$138,007	29.1%	-	-	-	-
School of Education	-	-	-	-	\$28,345	2.4%
IES	-	-	-	-	\$3,865	0.3%

¹ College of Engineering provides office space, computer support, administrative/grants support, some supplies in addition to the discretionary funds noted under "Direct Support".

² A small portion of spending from Vilas Life Cycle Professorships was used as cost-share contribution.

³ Life Cycle Research Grants funded by Grad School or Provost's Office funds.

⁴ In-Kind contributions include cost-share contributions not indexed in the "direct support" columns.

Cost-share report

Official Cost Share Reporting, 2002 - 2006

	2002	2003	2004	2005	2006	Total	%
College of Engineering	\$10,803	\$30,403	\$35,334	\$20,663	\$16,766	\$113,968	15.2%
School of Medicine & Public Health	\$26,098	\$23,338	\$37,613	\$15,332	\$5,418	\$107,799	14.4%
College of Agricultural & Life Sciences	\$5,904	-	-	-	-	\$5,904	0.8%
School of Veterinary Medicine	-	\$1,771	\$3,192	\$3,254	-	\$8,217	1.1%
School of Pharmacy	-	\$1,771	\$3,192	\$3,254	-	\$8,217	1.1%
College of Letters & Science	\$7,275	\$1,771	\$3,192	\$3,254	-	\$15,492	2.1%
Office of Provost or Chancellor*	\$19,353	\$44,317	\$36,283	\$110,271	\$69,215	\$279,439	37.3%
Graduate School	\$15,446	\$80,638	\$31,174	\$17,325	\$20,997	\$165,580	22.1%
WISE Residential Program	\$17,493	\$13,631	\$8,336	\$5,923	-	\$45,383	6.1%
TOTAL TO NSF	\$102,372	\$197,640	\$158,317	\$179,275	\$112,396	\$750,000	100.0%

* Includes some cost-share from Vilas Life Cycle Professorships.

Section V: ADVANCE Impact

ADVANCE Impact: By the Numbers

The report “Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006” (Appendix 1) summarizes the trends in women’s presence in the ranks of biological and physical science faculty at UW-Madison, along with some measures of resource equity. Some of the main findings of the report include:

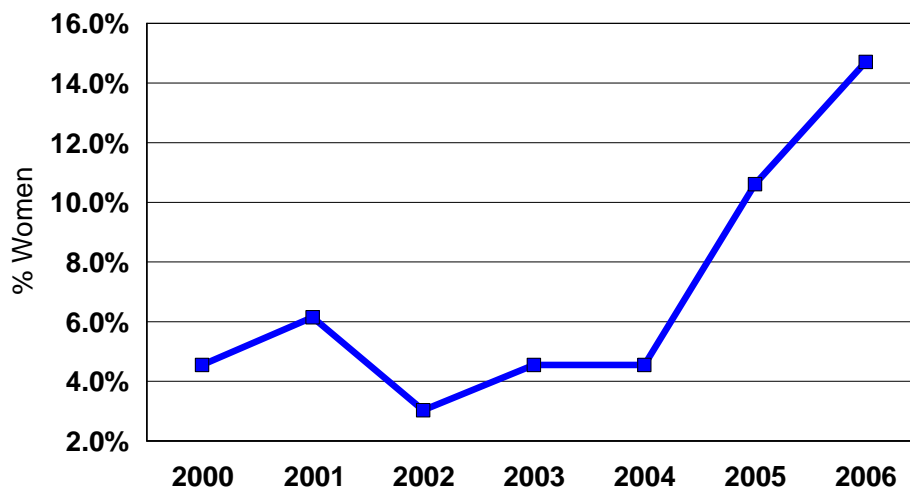
- Compared to 2000, there are more women faculty, and women are a higher percentage of the faculty, in biological science and physical science departments in 2006:

Increases in Percent Women Faculty, 2000 - 2006

Division	2000			2006			Percentage Change/Year, 2000 - 2006		
	Women FTE	Men FTE	% Women	Women FTE	Men FTE	% Women	Women FTE	Men FTE	% Women
Physical Sciences	42.25	414.79	9.2%	59.50	400.80	12.9%	5.7%	-0.6%	5.6%
Biological Sciences	139.26	590.54	19.1%	185.31	580.79	24.2%	4.8%	-0.3%	3.9%
TOTAL SCIENCE	181.51	1005.33	15.3%	244.81	981.59	20.0%	5.0%	-0.4%	4.5%
Social Studies	194.61	391.31	33.2%	230.20	360.23	39.0%	2.8%	-1.4%	2.7%
Arts & Humanities	136.47	235.99	36.6%	158.25	212.23	42.7%	2.5%	-1.8%	2.6%
TOTAL NON-SCIENCE	331.08	627.30	34.5%	388.45	572.46	40.4%	2.7%	-1.5%	2.6%

- In 2006, we have many more women department chairs in biological and physical science departments than we did in 2000:

Percent Women Department Chairs Physical & Biological Science Faculty Only



- 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):

Tenure Promotion Outcomes by Gender, 2006

Physical Sciences

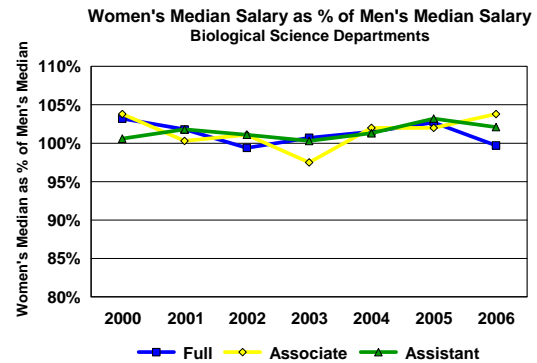
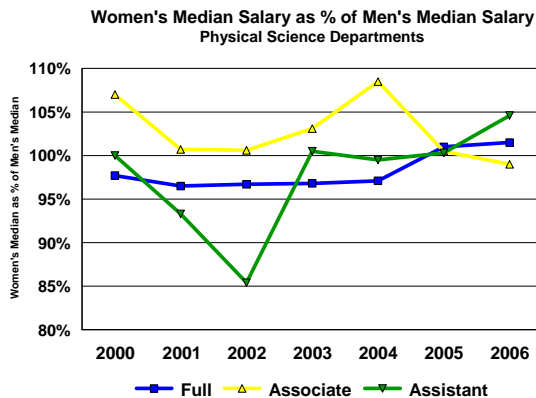
Entering Cohort	Women				Men			
	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured
1987-91	16	0.0%	12.5%	87.5%	87	0.0%	24.1%	75.9%
1991-95	7	0.0%	57.1%	42.9%	35	0.0%	20.0%	80.0%
1995-99	10	0.0%	40.0%	60.0%	34	0.0%	11.8%	88.2%
1999-03	15	46.7%	13.3%	40.0%	76	34.2%	13.2%	52.6%
2003-07	20	100.0%	0.0%	0.0%	57	94.7%	1.8%	3.5%

Biological Sciences

Entering Cohort	Women				Men			
	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured	Total Hired	% Still Probation	% Left w/o Tenure	% Tenured
1987-91	27	0.0%	40.7%	59.3%	103	0.0%	32.0%	68.0%
1991-95	26	0.0%	26.9%	73.1%	82	0.0%	24.4%	75.6%
1995-99	23	4.3%	21.7%	73.9%	49	2.0%	26.5%	71.4%
1999-03	46	45.7%	17.4%	37.0%	86	40.7%	20.9%	38.4%
2003-07	30	96.7%	3.3%	0.0%	57	94.7%	3.5%	1.8%

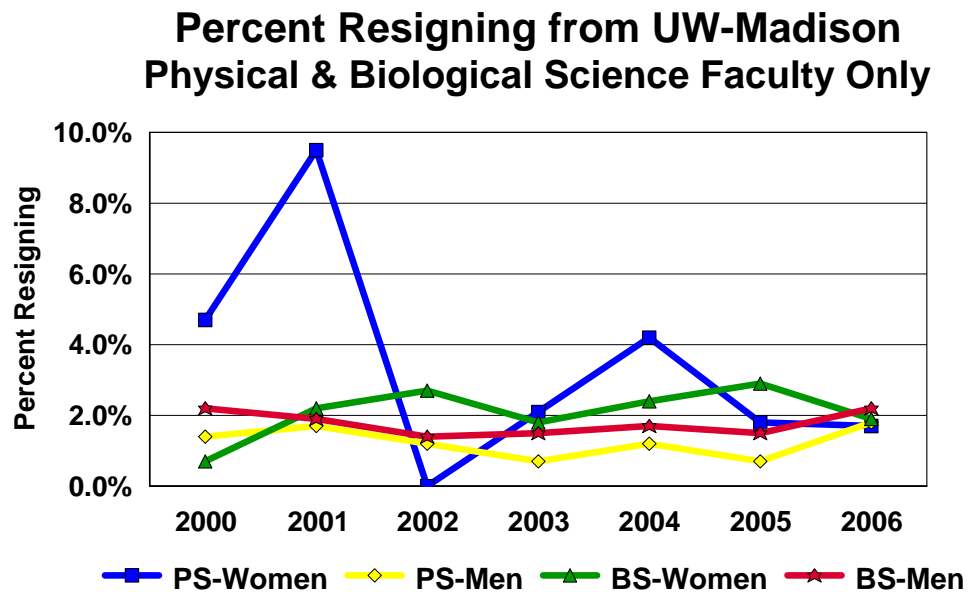
NOTE: Numbers in **BOLDFACE** are final; numbers in normal typeface are in flux and will change year-to-year as new faculty are hired, are tenured, and/or leave the UW without tenure.

- Men's and women's salaries are approximately the same once rank and division are controlled:

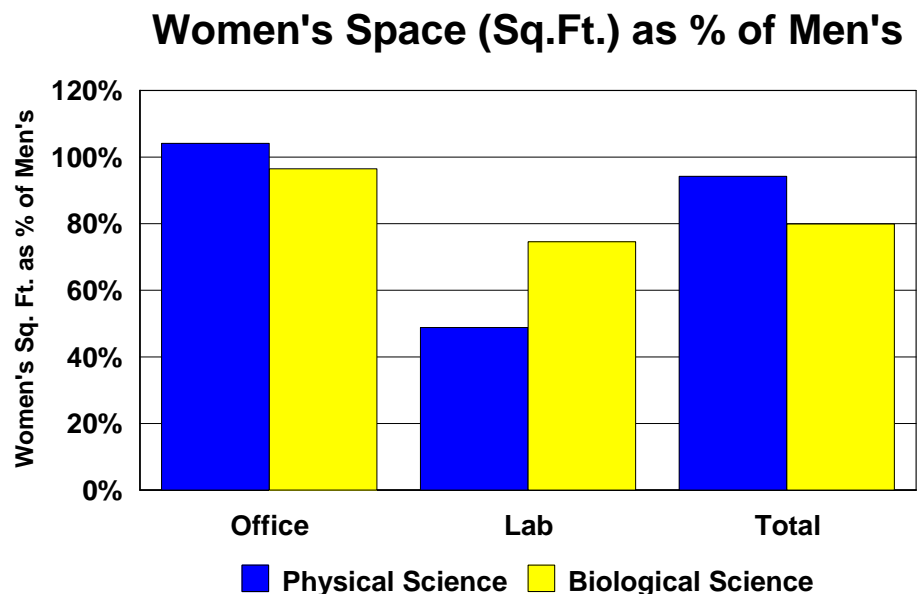


At the same time as we have recorded these gains for women faculty in the biological and physical sciences, there is still work to be done.

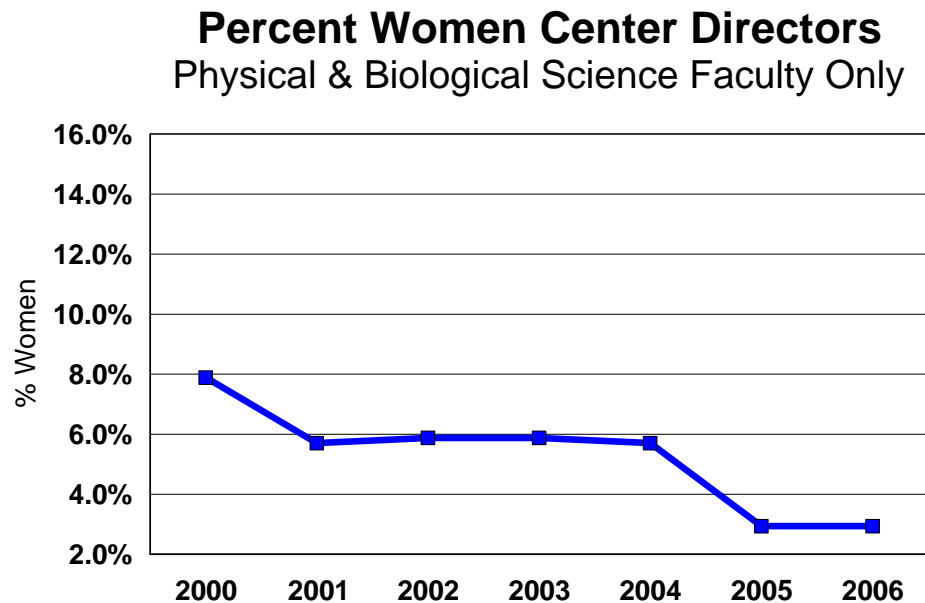
- Women still leave the UW-Madison at higher rates than men:



- Women faculty may have less lab space than their male peers:



- No change or negative change was observed in the numbers of women directing major centers and institutes in the biological and physical science departments:



In summary, some areas of gender equity are improving at UW-Madison, while other areas are in need of continued attention. 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.

ADVANCE Impact: Climate for Women

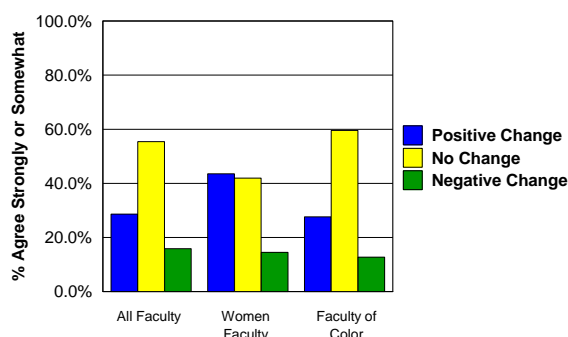
Improving the climate for women faculty in biological and physical sciences was a major goal of the UW-Madison ADVANCE program. We attempted to measure climate, and climate change, in a number of ways: campus-wide faculty surveys, within-department surveys taken as part of an *Enhancing Department Climate: A Chair's Role* workshop, and in-depth interviews with a stratified random sample of women faculty. In addition to the complicated problem of measuring a concept as diffuse as “climate”, we had an additional problem of measuring climate *change*, and theorizing about what a positive climate change might look like as measured in survey and interview data. Specifically, we suspected that a process of improving “climate” in the long run might actually manifest in decreased measures of climate in the short-run, as department members worked through the climate issues that had been unspoken for a long time. We therefore imagined the idea of “climate change” as occurring in a series of stages¹, and devised questions for our surveys and interviews accordingly.

¹ Carnes, Handelsman, and Sheridan. 2005. “Diversity in Academic Medicine: The Stages of Change Model.” *Journal of Women's Health*. 14(6):471-475.

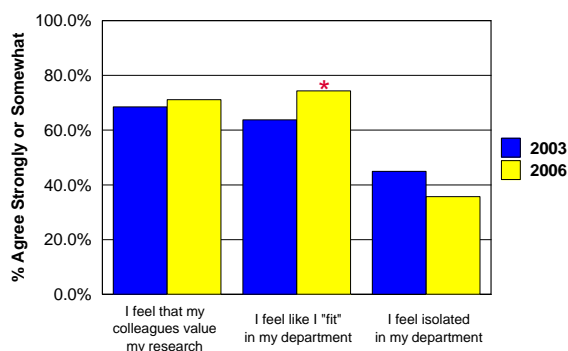
What we found was that climate is even more complicated than we imagined. Positive changes on one set of measures occurs simultaneously with negative changes in other measures. Overall, we summarize the changes we see in departmental climate for women faculty as follows:

- When you ask individual faculty how they, themselves, are experiencing the climate in their departments, we find that climate in 2006 generally is slightly more positive or shows no change from 2003. This seems to be true for both women and faculty of color in STEM departments. Both survey and interview data confirm that climate is slightly more positive in 2006 than it was when the ADVANCE project began.

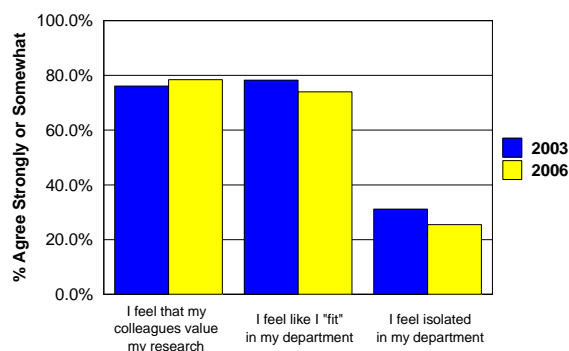
**Climate Change in Department
For Me Personally**



**Climate Change in Department
Selected Indicators/Women Faculty**



**Climate Change in Department
Selected Indicators/Faculty of Color**



Example of Positive Change (woman faculty interviewed):

“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.”

Appendix 2, Chapter III.

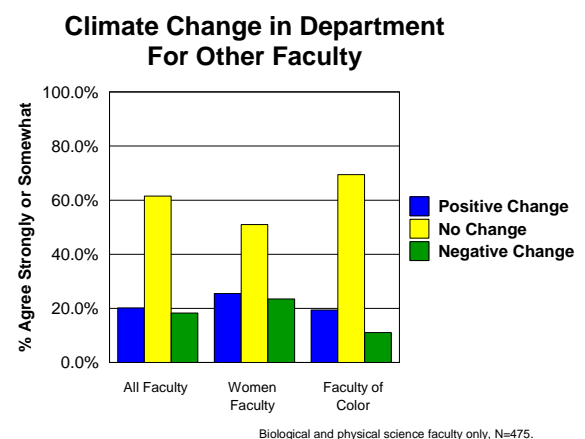
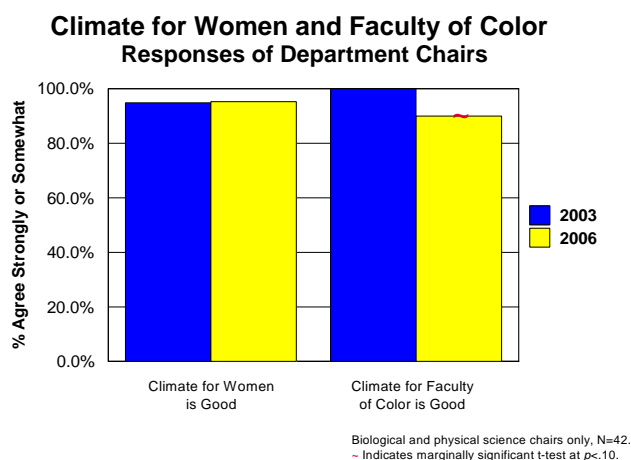
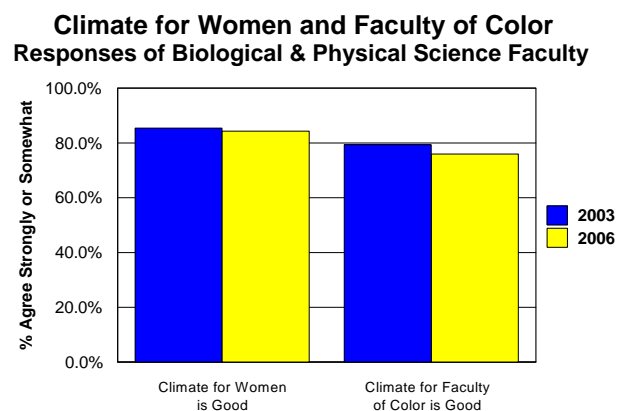
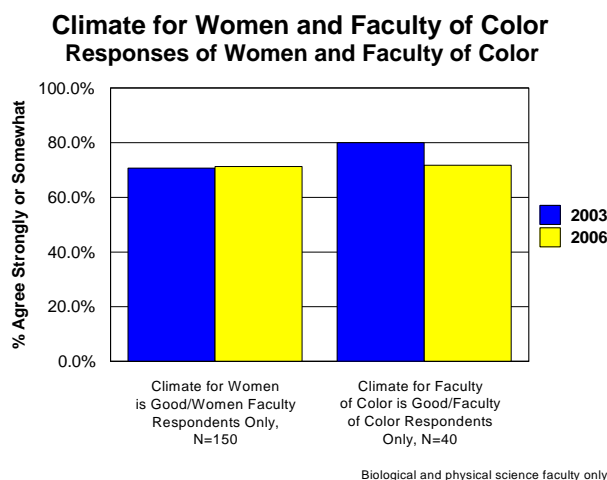
Example of No Change (woman faculty interviewed):

“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.” *Appendix 2, Chapter III.*

Example of Negative Change (woman faculty interviewed):

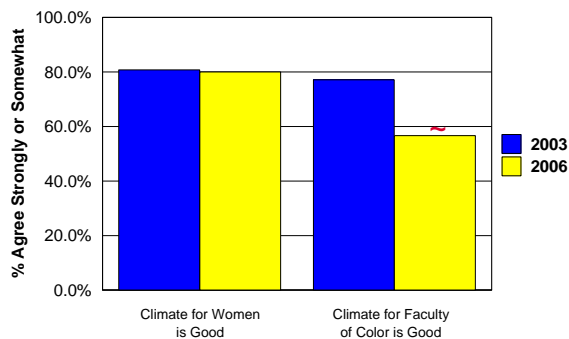
“I don’t know if it’s a crisis, but one of the women faculty did not get tenure. We did not vote to give her tenure the first time around. She appealed and then she got it but that generated big stress for everyone. That really did not help the atmosphere here... People were quite emotional about—we 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.” *Appendix 2, Chapter III.*

- At the same time, more negative changes are occurring when faculty are asked to report about the climate in their departments for other people, in particular women faculty and faculty of color. That is, when we ask faculty to report about the climate experienced by *others* in their units, the responses are more negative in 2006 than they were in 2003, or the numbers reporting negative change from 2003 to 2006 are almost the same as those reporting positive change.



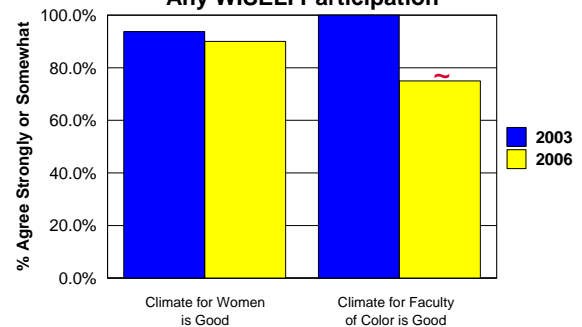
- We have some evidence that WISELI has had a direct impact on climate, as participation in WISELI events (especially the *Searching for Excellence & Diversity* workshops) is associated with a *more negative* view of climate for women and for faculty of color in 2006 compared to 2003.

**Climate for Women and Faculty of Color
Responses of Hiring Workshop Participants**



Biological and physical science chairs only, N=52.
- Indicates marginally significant t-test at $p < .10$.

**Climate for Women and Faculty of Color
Responses of Department Chairs With
Any WISELI Participation**



Biological and physical science chairs only, N=20.
- Indicates marginally significant t-test at $p < .10$.

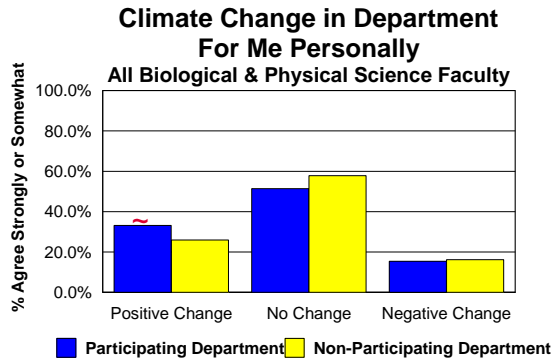
Positive WISELI Impact (woman faculty interviewed):

“I think it’s [the climate at UW-Madison] 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 this 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.” *Appendix 2, Chapter II.*

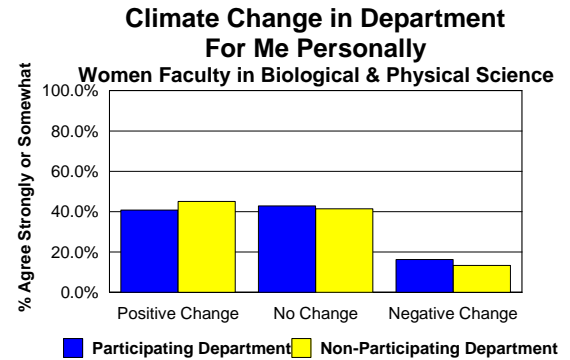
No WISELI Impact (woman faculty interviewed):

“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.” *Appendix 2, Chapter II.*

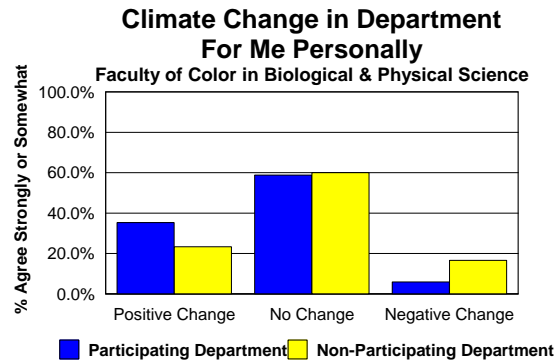
- Participation in the WISELI initiative that was designed to specifically affect departmental climate for women and minorities, the *Enhancing Department Climate: A Chair's Role* workshops, is associated with a slightly more negative sense of their own climate for women faculty in the departments participating in the program, and a slightly more positive sense of their own climate for faculty of color in those departments. Department chairs who participated in these climate workshops decreased their perceptions of the climate for women and minorities in their units.



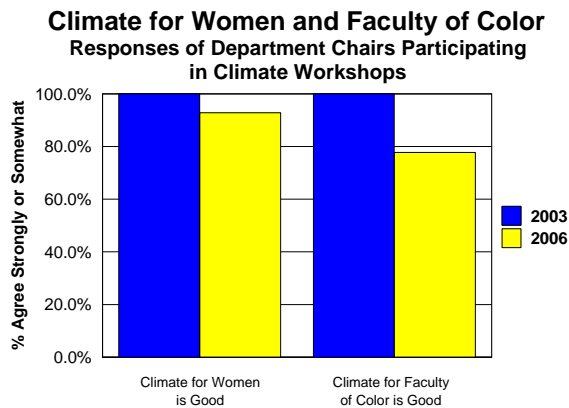
Departments participating in *Enhancing Department Climate: A Chair's Role* workshops, N=214. For non-participating departments, N=358.
- Indicates marginally significant t-test at $p < .10$.



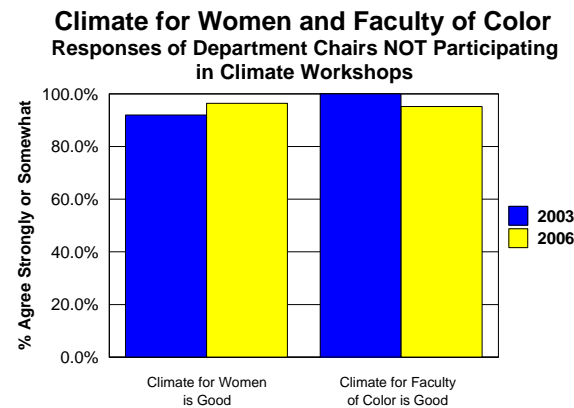
Departments participating in *Enhancing Department Climate: A Chair's Role* workshops, N=49. For non-participating departments, N=82.



Departments participating in *Enhancing Department Climate: A Chair's Role* workshops, N=30. For non-participating departments, N=17.



Biological and physical science chairs only, N=14.



Biological and physical science chairs only, N=28.

Taking all of these various findings together, we conclude that the climate is slowly improving for women, and also for faculty of color, in the STEM departments at UW-Madison. At the individual level, most faculty regardless of gender or race/ethnicity, report slightly better climate in 2006 than in 2003 for themselves. The one exception—women whose department chairs participated in our climate workshops—may indeed be experiencing a more negative climate as their department works through some of the issues brought to the surface as a result of workshop participation; it remains to be seen whether the long-term effects of participation do indeed result in climate improvements for those women faculty. The large negative change in perceptions of climate for women, or climate for faculty of color, we think is a result of increased awareness by all faculty about the real experiences of climate by these underrepresented groups. In 2003, we found an overwhelming tendency for majority groups (men, white faculty) and leaders (department chairs) to over-estimate the climate for women and minorities. In 2006, the responses of these majority groups and leaders is more similar to the actual responses of women and minorities themselves, indicating a better understanding of the climate issues in their units. We see this as a positive change—increased awareness of a problem is an important step towards making lasting change.

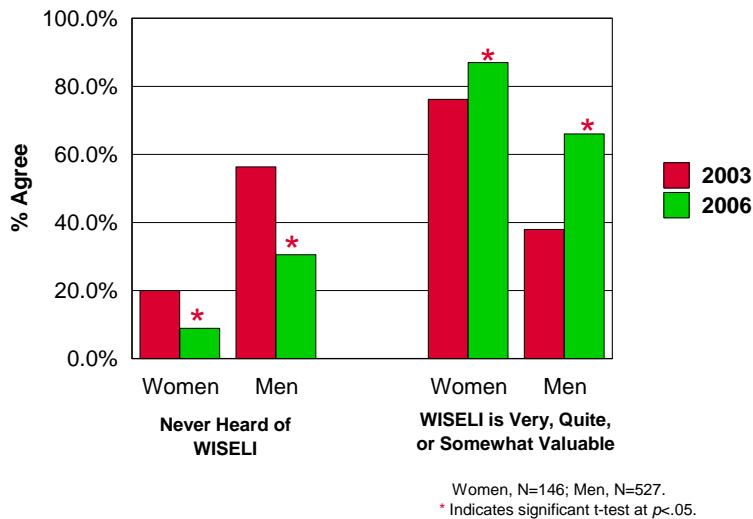
Summaries of both survey and interview data regarding changes in the climate for women faculty at UW-Madison can be found in the summative evaluation report (Appendix 2, see especially chapters II, III, and X), and the results from the *2006 Study of Faculty Worklife at UW-Madison* (<http://wiseli.engr.wisc.edu/initiatives/survey/results/facultypost/index.htm>).

ADVANCE Impact: Visibility of Women

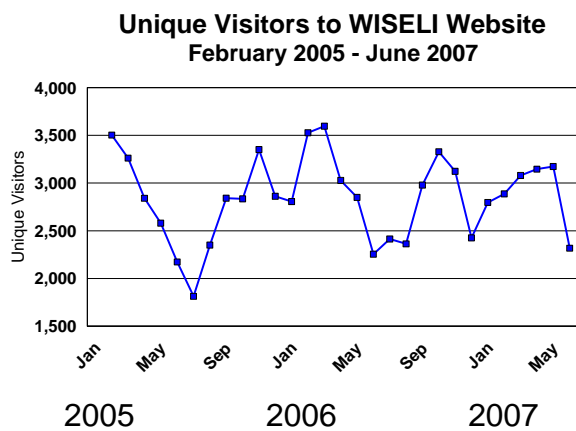
The final summative evaluation report (Appendix 2) documents the number of ways that WISELI promoted the visibility of women—including the visibility of WISELI itself. WISELI has been extremely successful at bringing the issues of women faculty to the forefront at UW-Madison. As one interviewee noted, “I think also 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 well they’re everyday issues that we need talk about.” (*Appendix 2, Chapter I*). See Chapters I and VI of the summative evaluation report (Appendix 2) for a full review.

To the extent that the visibility of WISELI enhances the visibility of women at UW-Madison, we can report a high name-recognition and value of WISELI as an organization on campus, by both men and women faculty in the biological and physical sciences.

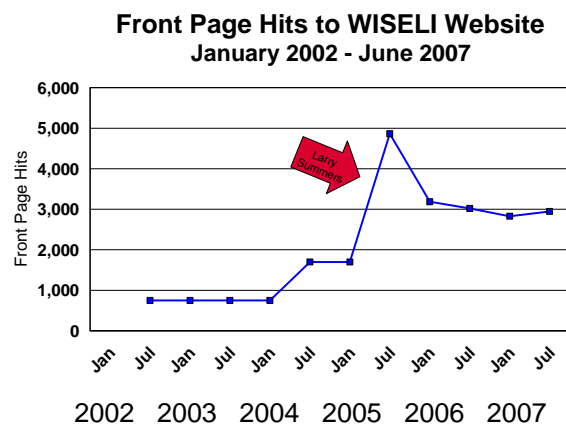
Visibility and Value of WISELI Biological & Physical Science Faculty



The WISELI website is a high-visibility method we use to communicate not only with women faculty on campus, but also with anyone interested in issues of gender equity for women faculty nationally. The pattern of visits to our website from 2005 to the present (AWStats statistics were not available until February 2005) show a very large peak at the beginning of 2005 (coinciding with the remarks made by Harvard President Larry Summers on 1/14/05), usage dropping off in the summer months and in December. This large increase in visibility is corroborated when looking at the WebCounter hits to the WISELI front page, from 2002 to 2007. The large increase in front page hits is noted in the period January- June 2005, with a higher average level of hits to the WISELI homepage after that high-usage period in early 2005.



Source: AWStats



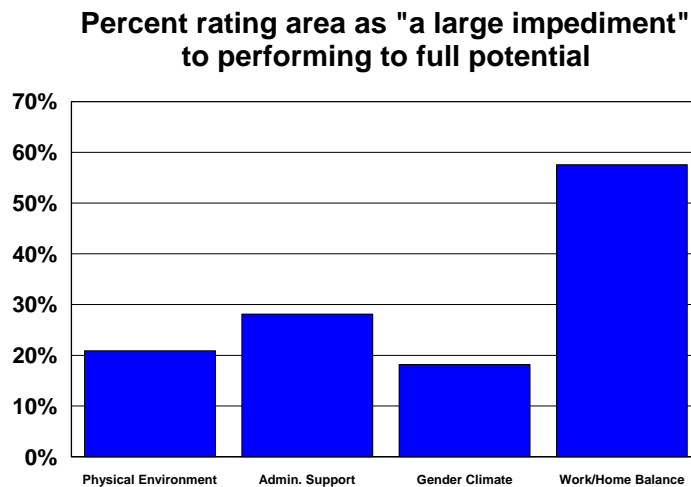
Source: WebCounter

Despite what we feel is our success at making women faculty issues visible, and WISELI visible, our in-depth interviews reveal that more work is to be done particularly in the SMPH:

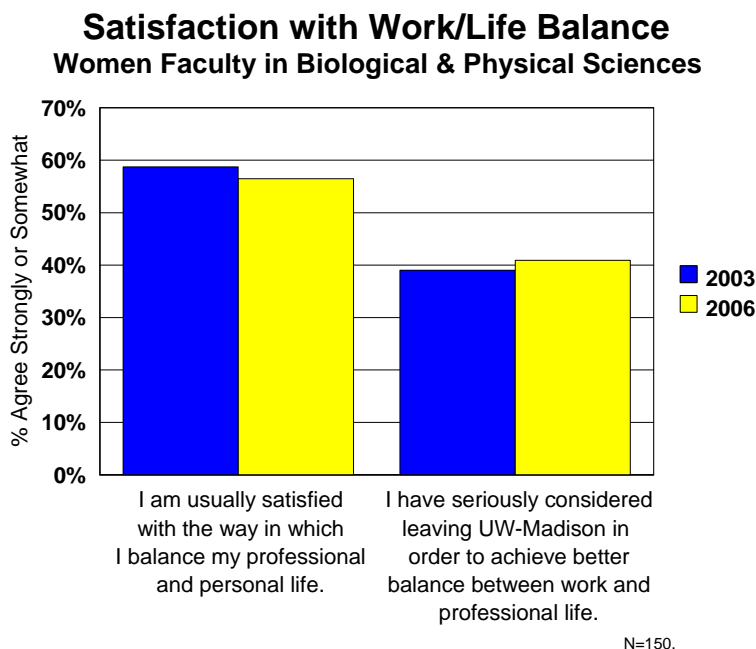
“I don’t see anybody from WISELI acting at the medical school on our behalf or mentoring us...I would like WISELI to get somebody who will do something for the women in the medical school.” *Appendix 2, Chapter II.*

ADVANCE Impact: Work/Life Balance

Work/life balance was identified at our early Town Hall Meetings as the number one issue of women faculty and staff.

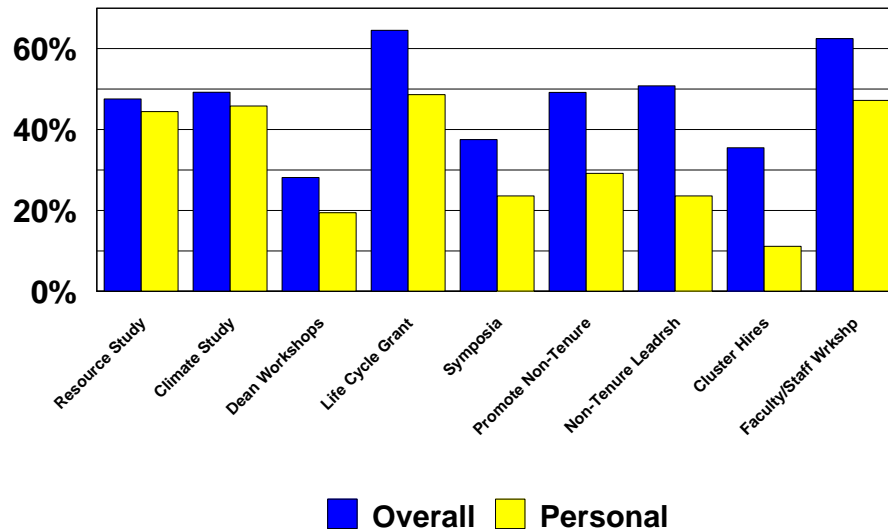


In 2006, our interview and survey data indicate that women at UW-Madison continue to be challenged by work/life balance issues, and that this has not much changed from 2003, or has even gotten a bit worse. Little change was observed in women’s responses to the specific elements contributing to a good work/life balance (e.g., colleagues support of family leave, early/late meetings, difficulty adjusting schedules.)

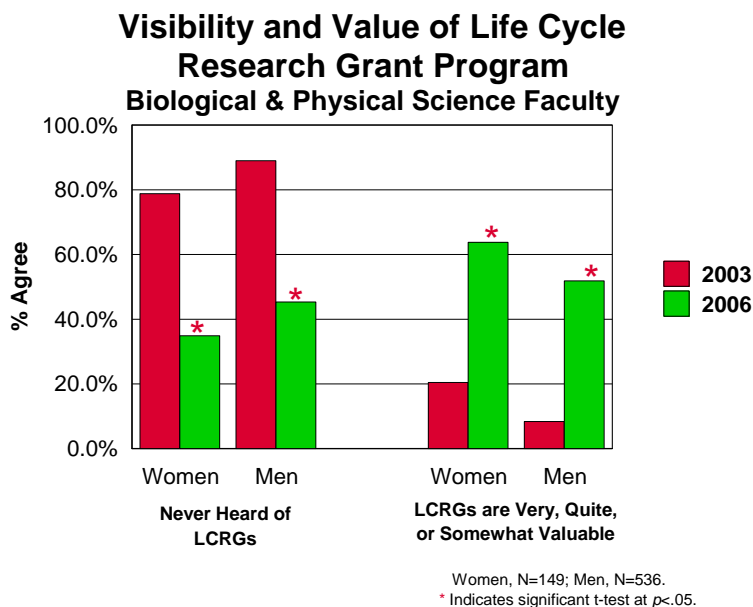


The one new program introduced by WISELI to help alleviate some stress caused by conflicts between work and family life, the Life Cycle Grants/Vilas Life Cycle Professorship program, has been a resounding success. This program was the most anticipated new program by the Town Hall meeting attendees, and thus one of WISELI's first programs to be implemented.

Highest Priority WISELI Initiatives: "Overall Importance to UW-Madison" and "Importance to Me Personally"



After the pilot period using NSF funding, the program became institutionalized through funding from a private trust, and extended to all faculty at UW-Madison. The program is loved by faculty and has been recognized nationally by the American Council on Education and the Sloan Foundation for being an “innovation in faculty work/life flexibility” (see Appendix 2, Chapter VIII for more details.)



While WISELI has added to the safety net for faculty attempting to better balance their personal and professional lives, there is much work to be done to improve the day-to-day work/life balance struggles faced by women faculty in the STEM fields.

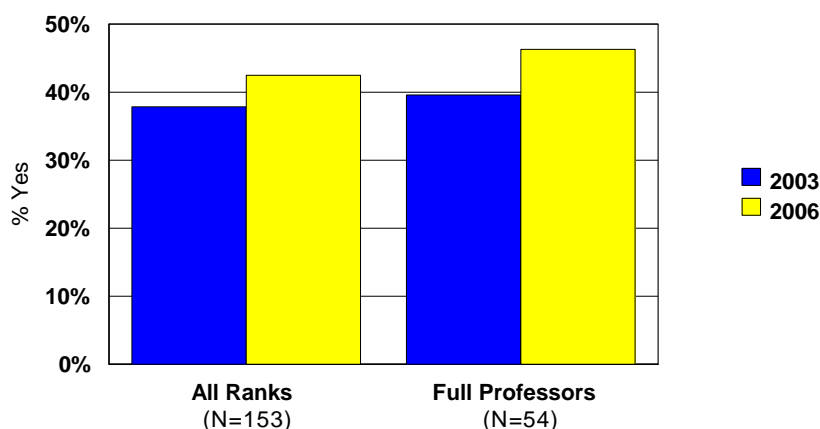
ADVANCE Impact: Leadership

The perception among some women faculty that WISELI has not “personally affected” them very likely stems in part from the decision early on to not spend a great deal of time and effort on the professional development of women faculty, despite an expressed desire for such education (see above, Town Hall meetings.) We surely did offer some professional development opportunities, either through offers to participate in professional development opportunities already occurring on campus or through events created through a Celebrating Women in Science & Engineering grant. Still, these efforts were haphazard and not always visible to *all* women; i.e., if a woman did not sign up for the WISELI listserv, she was unlikely to know about them. An effort of WISELI to affect the leadership development of women faculty more indirectly was the meetings with senior women faculty. The forty-two women we spoke to expressed a much broader vision of “leadership” than the narrow one measured by counting department heads and deans. This same theme emerged in the final evaluation report (Appendix 2, Chapter V.)

Despite this lack of direct focus and effort on developing the leadership skills of our women faculty in biological and physical sciences, we are pleased to report the remarkable changes in the gender composition of our department chairs and deans in biological and physical sciences from 2002 to 2006. As reported above (“By the Numbers”), we greatly increased our numbers of women department chairs in biological and physical science departments, from 2 women chairs (out of 68) in 2002, to 10 women chairs in 2006. In addition, of the six schools that house the biological and physical sciences, two are led by women in 2006 (Pharmacy and CALS), compared to none in 2002. Additionally, L&S is now headed by an American Indian man, adding some much-needed racial/ethnic diversity to the deans’ council as well. The number of women directors of the large research centers and institutes in the STEM fields has remained

very low, however. Interest in formal leadership positions at UW-Madison among the women faculty in STEM fields has increased from 2003 to 2006 (non-significant), with a slightly larger increase for senior women.

**Interest in Formal Leadership at UW-Madison
Women Faculty in Biological & Physical Sciences**



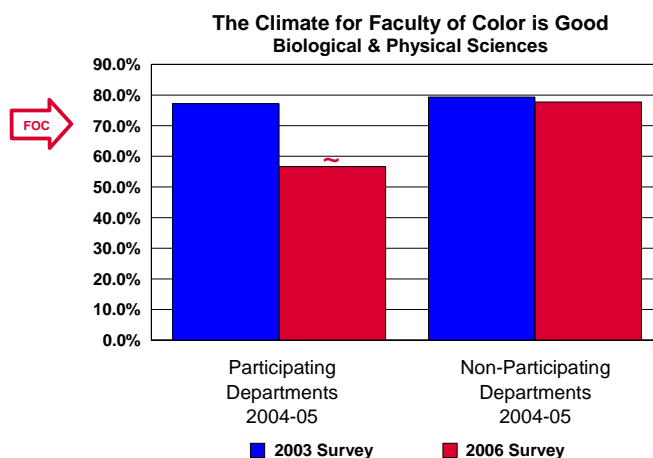
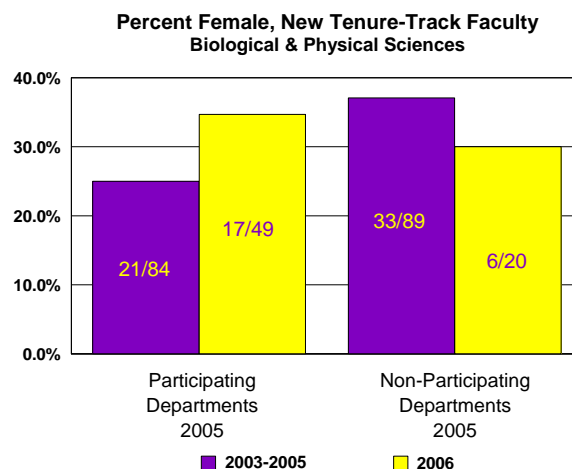
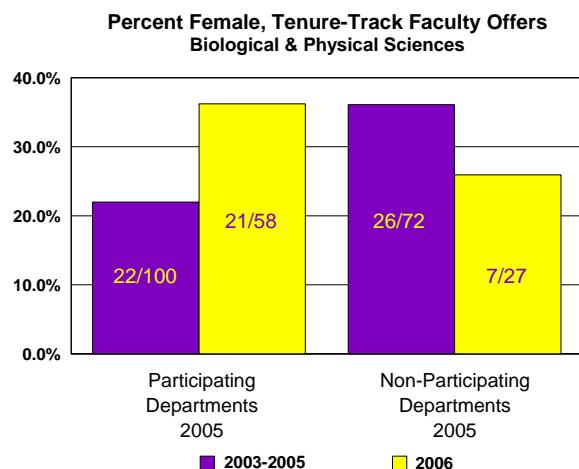
We therefore conclude that a concerted effort to provide individualized leadership development opportunities is not necessary to increase the number of visible women leaders in formal positions, nor is it necessary to increasing the *interest* of women faculty in taking on these formal positions. WISELI may have lost some of the support of women who may have felt we did not do enough at the individual level, but at the institutional level the goals of the ADVANCE grant—more women leaders—were met.

ADVANCE Impact: Hiring Practices and Policies

Perhaps one of the biggest areas of ADVANCE impact on the UW-Madison campus—and beyond—is our effects on hiring policies and practices within departments (Appendix 2, Chapter IV.) Through our *Searching for Excellence & Diversity* workshops for chairs of hiring committees, we have reached a large audience of primarily men faculty in the biological and physical sciences, and introduced them to best practices for faculty searches and interviews, as well as the research literature on the effects of unconscious biases and assumptions, and the potential effects of these biases on the evaluation of candidates. We have evidence that participation in these workshops is associated with increased numbers of offers to women candidates, increased hiring of women candidates overall, increased satisfaction of new hires in the departments who participated, and even increased awareness of climate issues overall (an unanticipated impact.) Many of these findings are reported in WEPAN² and ASEE³ conference proceedings, and include:

² Sheridan, Jennifer; Christine Maidl Pribbenow; Eve Fine; Jo Handelsman; and Molly Carnes. 2007. “Climate Change at the University of Wisconsin-Madison: What changed, and did ADVANCE have an impact?” Women in Engineering Programs & Advocates Network (WEPAN) 2007 Conference Proceedings (on CD-ROM). <http://www.wepan.org/storelistitem.cfm?itemnumber=14>, Paper #0045. June 2007.

³ Sheridan, Jennifer; Eve Fine; Jessica Winchell; Christine Maidl Pribbenow; Molly Carnes; and Jo Handelsman. 2007. “Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of



* Agree Strongly to the item "I was satisfied with the hiring process overall."

The elements of the *Searching for Excellence & Diversity* workshops that we feel contribute the most to their success 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 and 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.

Continuing to offer these *Searching for Excellence & Diversity* workshops on the UW-Madison campus, and extending them to non-STEM faculty as well as staff search committees, is a priority for WISELI. It is also a priority for WISELI to continue to offer the materials from

Women?" American Society for Engineering Education (ASEE) 2007 Conference Proceedings. <http://www.asee.org/conferences/v2search.cfm>, Paper #992. June 2007.

these workshops (the “Reviewing Applicants: Research on Bias and Assumptions” brochure and the “Searching for Excellence & Diversity” guidebook for search committee chairs) to campuses outside of UW-Madison who may be reforming their own faculty hiring practices, as well as a direct training experience towards replicating this effort at other colleges and universities. WISELI has hosted visitors who wanted to view a workshop “in action”, and we have also brought our *Implementing Workshops for Search Committees* “train-the-trainer”-style workshop to many university and technical college campuses both within Wisconsin, and outside the state.

ADVANCE Impact: Tenure Process and Policies

WISELI did not put a great deal of focus on the tenure and promotion processes at UW-Madison. Although we tracked tenure and promotion rates for women and men faculty in STEM, there was not an obvious reason from these rates to place a large amount of emphasis on the tenure process this early in our Institutional Transformation process. In the past, a large number of women faculty in physical science departments were leaving UW-Madison prior to tenure. For some cohorts, the rates were 40% or higher (compared to men’s rates of 20% or lower.) This did not appear to be an issue in the biological science departments, where both women and men faculty were leaving prior to tenure in approximately equal rates, around 25%. In the most recent cohorts (assistant professors who arrived on campus in 1999 or later), this differential attrition prior to tenure does not seem to be a problem; the attrition rates are approximately equal for men and women, and both genders have relatively low rates compared to past cohorts (see Appendix 1, pages 7-10.)

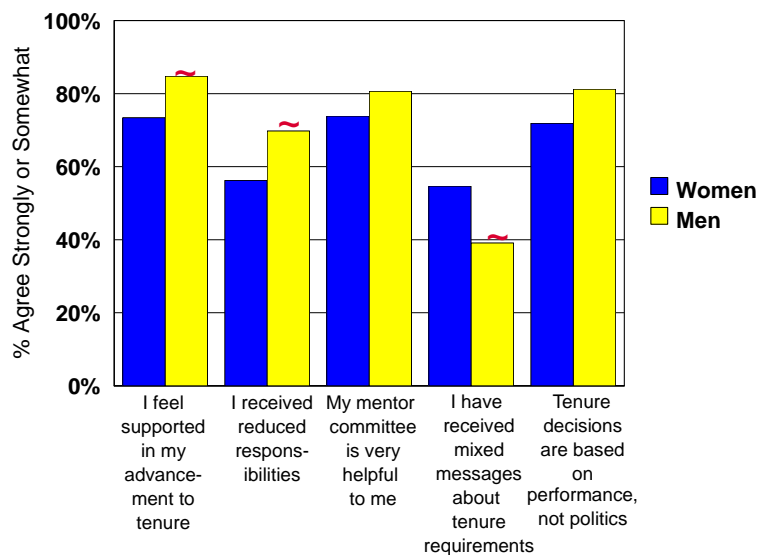
Although the numbers show approximate gender parity in tenure rates, more in-depth interviews with women faculty show that there are still gender differences in the experience of tenure for men and women faculty, differences that negatively impact women and their chances of moving forward. As reported in Appendix 2, Chapter VII, some of the common stories include:

“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.” *Appendix 2, Chapter VII.*

“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 to 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.” *Appendix 2, Chapter VII.*

These perceptions are somewhat verified in the climate survey. Although more women than men report these negative perceptions of the tenure process, the gender differences are not statistically significant (although some are marginally significant at $p < .10$.)

Differing Tenure Perceptions STEM Assistant Professors hired 2000-2003



Women, N=57; Men, N=82.

- Indicates marginally significant t-test at $p < .10$.

Thus, while outcomes may be equalized for tenure in the past several years, the experience of the process appears to be different for men and women faculty in biological and physical sciences. Future efforts of WISELI to promote gender equity on campus must address the tenure process.

Section VI: Overall Summary

WISELI's Most Successful Strategies

In the past five years, WISELI personnel did a number of things that were “right” in order to nudge our campus towards institutional change. Some of the things were just lucky; some were strategic approaches; some were approaches based on evidence from research. Not all of these approaches would be right for another campus. The one particular feature of the UW-Madison campus that might make some of our “most successful strategies” appropriate for us and not for others is our very strong tradition of faculty governance. Top-down approaches to change are more difficult at UW-Madison; change must have clear faculty leadership in addition to administrative support in order to manifest.

The “top 10” successful strategies include:

- 1. Use of data and excellent research to reach faculty and administrators.** The use of climate survey data, institutional data, evaluation data, and qualitative data (“the power of the quote”) was key to reaching our target audiences. Presenting our case with data and charts, and being able to switch to another format when needed (“these numbers are very nice; do you have an anecdote you could share that would illustrate what this means?”) helped us to make our points to numerous faculty and administrators in a very convincing way.
- 2. Using literature on unconscious biases and assumptions to approach the issue from a non-accusatory angle.** Using Valian’s *Why So Slow?*⁴ as the beginning point of our own education on the impact of unconscious biases and assumptions, performing our own literature search in the social psychological literature that Valian references, teaching ourselves to communicate these studies as Valian does so well, and incorporating these messages into our work with faculty and administrators (especially around the evaluation of candidates in the hiring process) has been a key element of change. Not only is the use of these messages correlated with more hiring of women, but departmental climate also improves when faculty are exposed to this literature.
- 3. Use of active learning & peer teaching strategies to deliver our messages.** Based on the literature for student learning, we realized that the best way to present our messages to our target audiences was not for us to tell people what they needed to do; they need to discover this for themselves. We are in the business of challenging habits, firmly held beliefs, and attitudes about women and minorities as somehow of less “quality” than majority persons. We used active learning (less presentation and more discussion) and peer teaching (ask participants to learn from each other; less reliance on an outside expert) techniques in our workshops.
- 4. Fearless intervention where required.** Just by virtue of putting up a sign that says “Women in Science & Engineering Leadership Institute” on the door, women faculty and staff quickly identified us as a resource to get their problems solved. What took more time was helping the administration to trust that the problems we brought to their attention were truly issues of injustice into which they needed to intervene. We did not

⁴ Valian, Virginia. 1999. *Why So Slow? The Advancement of Women*. MIT Press: Cambridge, MA.

bring every problem to them for intervention; we carefully investigated each case and made sure there was an underlying inequity before asking administrators to help. In the end, administrators came to see WISELI as a trusted ally not only in improving the campus climate, but also keeping the University out of lawsuits and negative media spotlight because serious issues were addressed internally rather than through litigation and newspaper editorials.

5. **Use of media (website, video) to reach audiences.** WISELI used the internet, electronic communication, and less-traditional media (i.e., video) to reach a wide audience. Our website became a highly visible and important tool for dissemination after January 2005, when we created a webpage to track the media surrounding the Larry Summers remarks about women in science. Our front page averaged 200 hits per month prior to that incident; after it, we consistently receive 300-500 hits per month on our front page. Even two and one half years after the Summers incident, the Larry Summers page remains the second most-visited page within our web domain. The documentary video provided us visibility in the Madison community, and also provided WISELI personnel a unique way to demonstrate our “institutional transformation” through the voices of faculty and administrators here on campus.
6. **Including both qualitative and quantitative social scientists on the ADVANCE team and using their research and findings to guide the process.** It might go without saying that women faculty in the biological and physical sciences need to be involved in order to make an ADVANCE effort succeed. It is less clear that social scientists must also be involved. From the beginning, WISELI’s co-PIs recognized that they needed expertise in social science data and analysis, and included both qualitative and quantitative researchers as an integral part of the WISELI team. This decision was key to providing the essential data needed for success (see #1 above.) The collection of excellent records of attendance and participation at WISELI events, and linking these data with administrative and survey data, was especially important to documenting our success, and is a direct result of hiring social scientists on the project.
7. **Placing WISELI outside of campus administration (an independent unit)—also having PIs who are respected faculty and not administrators.** UW-Madison is a highly decentralized campus with a long (and strong) history of faculty governance. Top-down approaches to institutional change are often met with strong resistance, and have little chance for succeeding if there is not a strong faculty voice to support them. For this reason, creating an independent, official UW-Madison research center that is outside central administration was one key to our success. Research and evaluation performed by WISELI was seen as “independent”, and helped us to gain support and response among faculty. Having two PIs who were successful and respected in their fields, active in their own research, and outside of the normal administrative hierarchy was extremely useful, and helped us to get our voices heard among faculty who are often distrustful of administrators.
8. **Having strong, supportive leadership.** As important as independence from UW-Madison administration was, it was equally important to our success that our Chancellor, Provost, Graduate School Dean, and the Deans of STEM colleges strongly supported our work. Some of the tangible ways that these high-level administrators assisted in our transformation efforts include: material support (funds, space, personnel); access to college-level data; invitations to speak at executive meetings (e.g., deans’ council,

department chair operations meetings); preliminary remarks at hiring workshops; interviews for documentary video; encouragement of faculty/chairs to participate in WISELI workshops (including one dean who mandated attendance at hiring committee workshops before releasing a faculty position!); highlighting WISELI's work beyond campus (e.g., the ADVANCE conference at Georgia Tech or the Engineering directorate summit at NSF); intervention in situations affecting women faculty; and more. Without their support and leadership, it would have been impossible to accomplish all we did.

9. **Having an external advisory team to make recommendations for increased campus resources.** Our external advisory team not only gave great advice for our programmatic elements, they helped us to secure more internal resources (specifically, campus support for clerical assistance) which made our WISELI team more productive. Not only did we ask our external advisors to meet with high-level administrators such as the Provost, we asked them to provide a written letter of recommendations which we then used to ask for resources.
10. **Refrain from producing any program that is gender-specific.** Although we are WISELI, and our mission is to promote the “participation and advancement of women in academic science and engineering,” we hope and expect that men are the most common participants in our programming. Our workshops for department chairs and for chairs of hiring committees are attended mostly by men. Men are frequent awardees of Celebrating Women in Science & Engineering grants (20%). Finally, our Life Cycle Grants/Vilas Life Cycle Professorship program has been open to men from the beginning, and 29% of all applicants are men (21% of awardees are men). As men are the majority of our science and engineering faculty, we cannot hope to engage in institutional transformation without their active participation in the process. Further, we have found that making the working environment better for women makes it better for men as well. Thus, we produced programs that both men and women faculty could embrace, enhancing the opportunity for true institutional transformation to occur.

WISELI's Least Successful Strategies

1. **Including too many leaders in project at beginning.** It seems that everybody has an idea of “what must be done” in order to improve gender equity on campus. Even our proposal was very ambitious, and attempted to address the issues for women faculty in biological and physical sciences from every angle. Going in too many directions at once, however, can dilute the effectiveness of any individual effort. Of course, it is important to have the input and support of many committed people; it just may not be the most effective strategy to have too many leaders.
2. **Employment track changes are not a way to increase the numbers of women faculty on a large scale.** Although anecdotally it seems there are many women “stuck” in staff positions who are currently performing in a faculty role and could be converted to faculty, in reality we found that most women in staff roles do not desire the faculty role (evidence from the academic staff climate survey.) We were successful in converting clinical academic staff in the SMPH to the tenure-track, but were not successful in converting staff in scientist and lecturer/faculty associate positions to the tenure track. Although we will continue to assist women who desire a track change, we no longer believe this is a viable way to increase the numbers of women faculty at UW-Madison.

- 3. Including faculty from all one unit in a small-group workshop (especially climate).** One of the strengths of our two workshop series is the inclusion of participants from many different departments and colleges, so that they may learn from each other various new strategies for hiring or for improving departmental climate (“peer learning.”) A tension arises, however, when we recruit faculty to participate in our workshops—a frequent complaint is that the unit to which a faculty member belongs is “so different” from the rest of campus that they would prefer to participate only in a group from their school, or from similar departments. We allowed one such group to take place. One session of our climate workshops for department chairs was arranged with only chairs from the SMPH. This workshop did not go well at all. The chairs came into the sessions believing they knew exactly what their problems were, and because all of the other participants operated in the same environment, they all reinforced their pre-existing beliefs. No other chairs from outside were available to challenge these beliefs, and we think that the workshop was less effective for this group than for all others who participated. We no longer allow the “we’re so different” rationale for determining who we ask to participate in our workshops.
- 4. Allowing institutionalization to occur too soon.** When we began developing the workshops for chairs of hiring committees, faculty and staff in the Office of the Provost became very enthusiastic about the trainings because they had identified a campus need for such training years before. They were so enthusiastic that they wanted us to expand the workshops beyond what we felt able to do, so they asked to administer the workshops from the Provost’s Office rather than WISELI. Unfortunately, attendance at these early efforts out of the Provost’s Office was sparse, and so we did not really begin our large-scale training of hiring committee chairs until 2004, a full year after we could have if we had retained control of the process and rolled it out as we had planned. We were grateful that the Provost’s Office was so enthusiastic, but have learned that ceding control over an initiative should happen when we feel it is ready to be institutionalized.
- 5. Expecting faculty to attend too many meetings.** Despite the stated desire of women faculty to get together, to meet, to attend professional development seminars, and to become less-isolated, in practice our faculty (especially women faculty, and especially women faculty with children) have little time to “add on” more meetings that don’t directly benefit their teaching or their scholarship. Attendance at our Leadership Team meetings (monthly) dwindled; attendance at our “WISELI Seminars” (2x/semester) dwindled; responses to invitations to attend professional development seminars or workshops were much more sparse than we expected. Although committed to the issues, people are just too busy to devote unpaid time to more meetings. Therefore, as WISELI moves forward, we will be moving to an approach that requires less meeting time. We will have ONE annual meeting for our “advisory committee”, and we will have ONE large gathering of women faculty per year. We may help sponsor smaller events (such as through the Celebrating grant), but in general we intend to ask for less of people’s time, and concentrate on a few, very high-quality experiences.

Future of ADVANCE at UW-Madison

We are fortunate that the UW-Madison campus has valued the work that WISELI has accomplished through the ADVANCE funding from the National Science Foundation, and has determined to follow-through on promises to support ADVANCE efforts at UW-Madison beyond the ADVANCE grant. WISELI will primarily be supported by various units on campus, including:

- Office of the Provost is contributing the salary and FTE for Executive and Research Director Jennifer Sheridan's position. This fulfills the commitment expressed in the original grant application in 2002.
- College of Engineering is contributing space and supplies for WISELI, in addition to supporting a grants administrator (.25 FTE) and supplying \$10,000/year in discretionary spending.
- School of Medicine and Public Health is contributing \$70,000/year (renewable) for WISELI in discretionary spending. These funds will primarily be used for faculty and staff salaries.
- College of Letters & Sciences, College of Agricultural & Life Sciences, School of Veterinary Medicine, and School of Pharmacy are each contributing \$2,000/year towards the Celebrating Women in Science & Engineering Grant program.

These contributions, combined with funds from an ADVANCE "Partnerships for Adaptation, Implementation, and Dissemination" (PAID) grant, will support WISELI's two faculty co-Directors, 3.5 FTE staff, and one graduate student, through 2009.

With the end of the ADVANCE Institutional Transformation award, some structures and programs within WISELI will change. While WISELI will become a campus-wide entity, and will continue to offer our hiring workshops and department chair workshops for units throughout campus, we have decided to retain our name, and our focus, on women in science and engineering. We will broaden our focus to the science and engineering pipeline, even while we retain the word "Leadership" in our name. Some of the anticipated changes include:

- WISELI co-Director Jo Handelsman will step down from the co-Director post, and Prof. Amy Wendt will join Molly Carnes in co-Directing the Institute.
- WISELI will represent sex and gender equity under one of three main "pillars" of diversity supported by a new overarching institute we are calling the Wisconsin Institute for Research and Evaluation on Diversity for STEM (WIRED for STEM). In addition to sex/gender, WIRED will include a pillar for race/ethnic equity (the WiscAMP program and GERS/AGEP program will be included in this pillar), and a pillar for diversity related to disability status (the *MIDWEST Alliance in STEM* program may be included in this pillar.) The WIRED Institute will bring these diversity-related programs together, utilizing shared space and resources to enhance the ability of each individual program to fulfill its diversity-related mission in STEM.
- WISELI will continue developing workshops for PIs of laboratories, and offering them campus-wide beginning as a pilot program in Fall 2007.
- WISELI has been selected to administer the campus-wide exit interview process for departing faculty. The campus-wide process implemented in 2003 was not as effective as the Provost's Office had hoped. WISELI's experience doing exit interviews as part of

our “Why Women Leave” study provided the impetus for campus to ask WISELI to pick up this work.

- With the addition of Amy Wendt to the WISELI co-Director team, WISELI will begin to work on pipeline issues for women in Engineering, a passion of Dr. Wendt’s. After studying the issues in the College of Engineering for one year, we will work with the College of Engineering administration to implement new policy or programmatic changes we think will improve the recruitment and retention of women students in Engineering.
- WISELI will work with the Committee Honoring Denice’s Memory to stage an annual Denice Denton Distinguished Lecture. This annual event will provide networking and mentoring opportunities for women faculty and staff in the sciences, using the event of a distinguished lecture to draw women together.
- The former Leadership Team will be reconfigured to an Advisory Committee, which we anticipate will consist of both internal and external members. An annual meeting will take place that will update the Advisory Committee on WISELI’s progress and the UW-Madison’s progress; this meeting will be scheduled around the Denice Denton Distinguished Lecture in order to capitalize on the excitement surrounding the event.

Conclusion

In five years, WISELI has worked tirelessly to promote the participation and advancement of women in academic science and engineering at the UW-Madison and beyond. We are very proud of what we have accomplished, but it is abundantly clear that there is more to do. We look forward to continuing our work with an ever-widening group of faculty, staff, and organizations committed to diversity in STEM at the UW-Madison and beyond. *FORWARD* with institutional transformation!

WISELI Research/Evaluation Report:

Sheridan, Jennifer; Molly Carnes, Jo Handelsman, and Amy Wendt. December 2007. “Partnerships for Adaptation, Implementation, and Dissemination Annual Report 2007.”

Partnerships for Adaptation, Implementation, and Dissemination (PAID)

Annual Report, 2007

PI: Jennifer Sheridan

Co-PIs: Molly Carnes, Jo Handelsman, and Amy Wendt

The UW-Madison *Partnerships for Adaptation, Implementation, and Dissemination* (PAID) grant will (1) continue and disseminate the current search committee training and department chair workshops; and (2) develop and disseminate ten evidence-based brochures and booklets addressing unconscious biases and assumptions in specific areas that impede the advancement of women in academic science and engineering. Specifically, we proposed to:

1. Continue *Searching for Excellence & Diversity* hiring workshops on the UW-Madison campus, with the ultimate goal of achieving 40% female new assistant profs in Biological and Physical sciences by 2009.
2. Continue offering *Enhancing Department Climate: A Chair's Role* workshops at UW-Madison, with the goal of reaching 70% of all Biological and Physical science departments by 2009 (i.e., an additional 29 department chairs from Biological and Physical Science departments participate in a workshop in 2007-2009.)
3. Continue disseminating our *Searching for Excellence & Diversity* workshops to campuses beyond UW-Madison.
4. Create a dissemination plan for the *Enhancing Department Climate: A Chair's Role* workshops.
5. Create new publications/brochures for distribution to UW-Madison and other campuses to use for their own ADVANCE-related efforts. The specific items to be produced are:
 - a. Reviewing Applicants: Research on Bias and Assumptions (Brochure)
 - b. Guidebook for Faculty Search Committees (Booklet)
 - c. Hiring Dual-Career Couples: Promises, Pitfalls, and Best Practices (Brochure)
 - d. Benefits and Challenges of Diversity (Brochure)
 - e. Best Practices: Tips for Chairs on Improving their Departmental Climate (Brochure)
 - f. Best Practices: Tips for Faculty on Improving their Departmental Climate (Brochure)
 - g. Ensuring Success of Women and Minority Faculty Members (Brochure)
 - h. Evaluating Candidates for Tenure: Research on Bias and Assumptions (Brochure)
 - i. Achieving Tenure: A guide for women and minorities (Brochure)
 - j. Nominations for Major Awards and Honors (Brochure)
6. Disseminate the new brochures and booklets to other campuses. We will attend at least one annual meeting where these materials can reach a wide audience each year, and from 2007-2009 we expect to reach 100 different universities with our materials. We will also upgrade our online distribution of these materials to make it easier and more user-friendly to order them (at printing cost.)

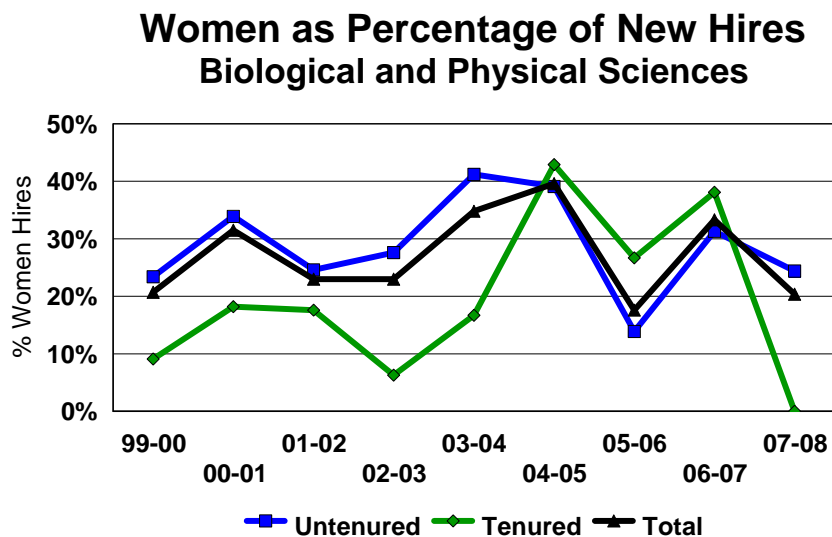
In the following sections we report our progress on these six main objectives (including our timeline for project completion through 2009). We also include a financial report.

Continue *Searching for Excellence & Diversity* hiring workshops on the UW-Madison campus.

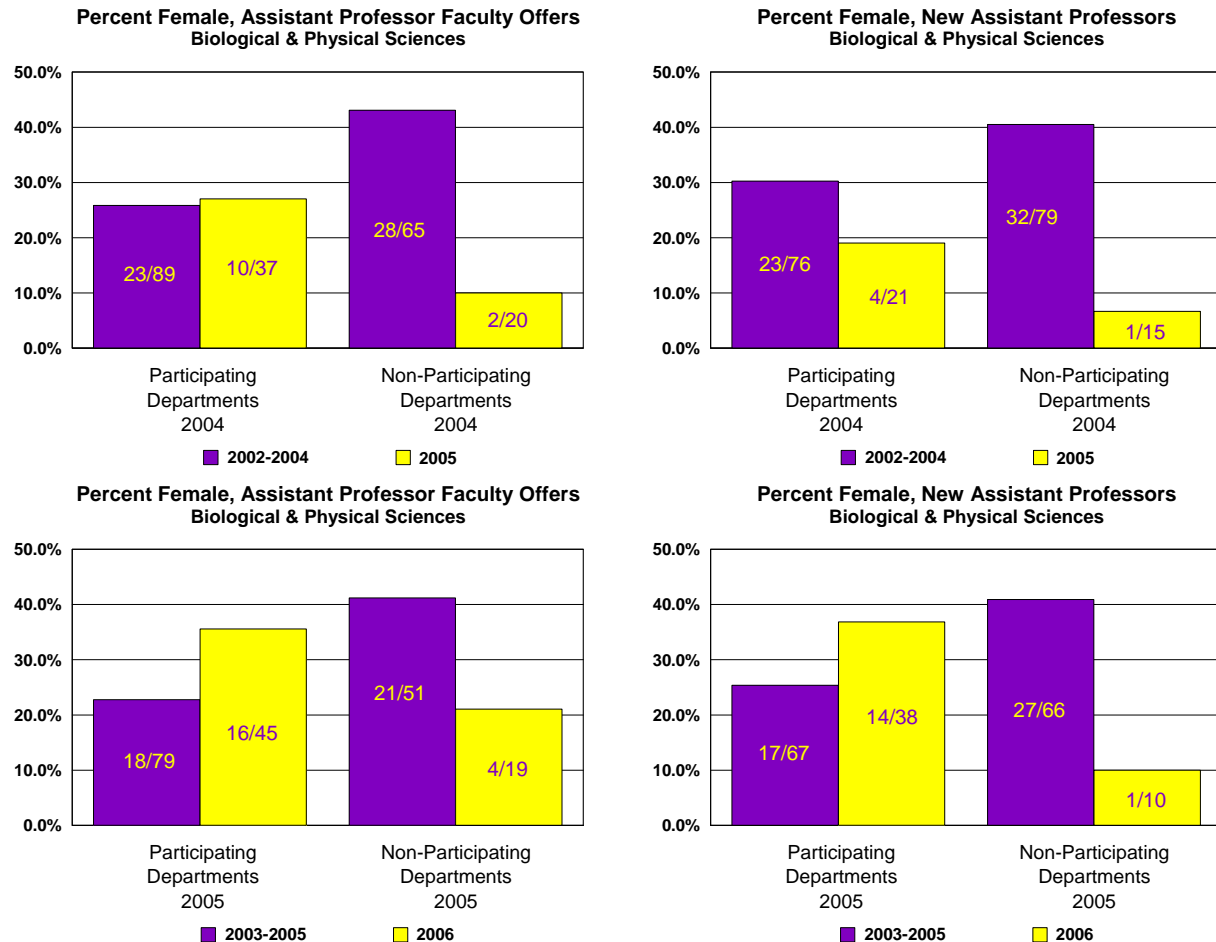
WISELI continued to offer *Searching for Excellence & Diversity* hiring workshops to the entire UW-Madison campus in 2007. Some workshops from 2006 carried over into early 2007 (Engineering, some School of Medicine and Public Health (SMPH) workshops). Due to the very late passage of the State of Wisconsin biennial budget, many departments did not know until October or November if they would be hiring at all; thus, the college-based workshops that we usually offer in the fall were not implemented this year. Rather, we ran campus-wide workshops that individual search committee chairs could attend on an as-needed basis. These workshops presented a new challenge to WISELI, as more academic and classified staff (who tend to search on a local or regional basis rather than national or international basis) attended. Another new challenge in 2007 was the request by two departments to perform our *Searching for Excellence & Diversity* workshops for all faculty within the department.

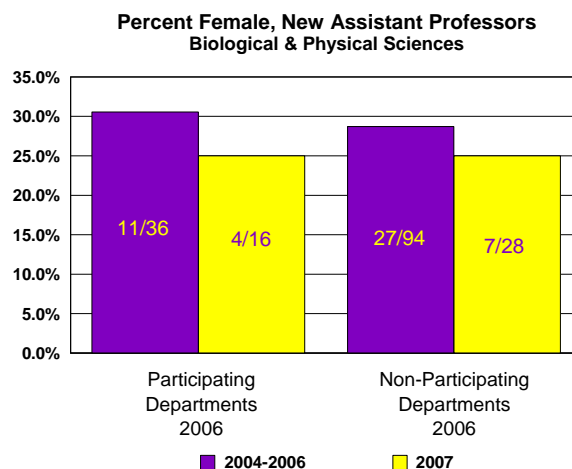
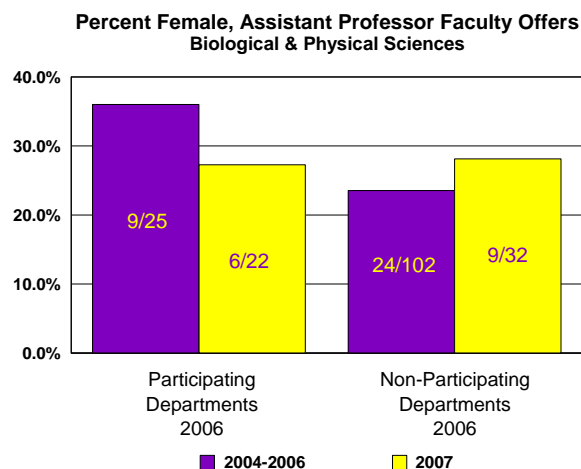
In total, WISELI ran 11 workshops in 2007. Four were college-based, four were open to any employee on campus, and three were department-based. Only one of these workshops (the department-based workshop in the Department of Chemistry) was run as our preferred 2-session model. Ninety-seven faculty and 56 staff attended at least one of these workshops in 2007 (or received an individual consultation with WISELI staff.) This level of activity is much higher than in 2006, when 64 faculty attended a *Searching for Excellence & Diversity* workshop.

In our proposal, we set as a goal for UW-Madison STEM departments a 40% female class of new hires by 2009. Based on preliminary data from 2007, we are far from reaching this goal. Of the 45 new assistant professors who joined the faculty in 2007, only 11 (24.4%) are women. This is a decline from 2006, when 31.3% were women. Of the 10 tenured faculty hired in biological or physical science departments, for the first time since we have been tracking new hires, not one is female. (We may see a revision of this when the final 2007 data are available, as we know of one senior woman who was hired in October but who has not yet appeared in our preliminary data.)

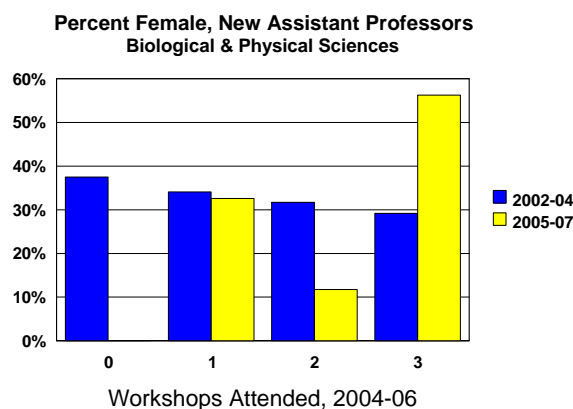
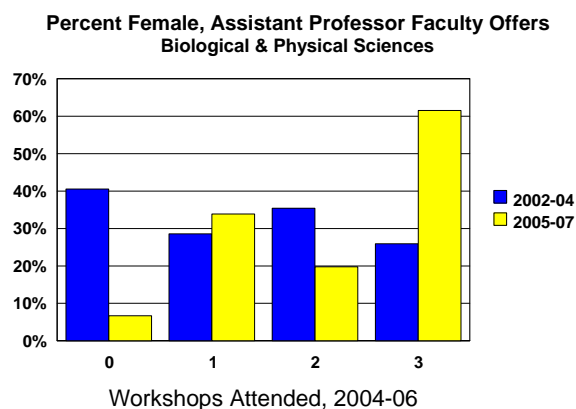


With an additional year of data, we can begin to refine our understanding of how the implementation of search committee workshops is affecting the hiring of women assistant professors in the sciences at UW-Madison. If we use the measures we have been using for two years—that is, we compare the percentage of women receiving offers and starting as assistant professors in the fall following a workshop for those departments who took the training and those who did not, we no longer see the correlation between attendance and increased percentages of women that we saw after the 2004 and 2005 workshops:



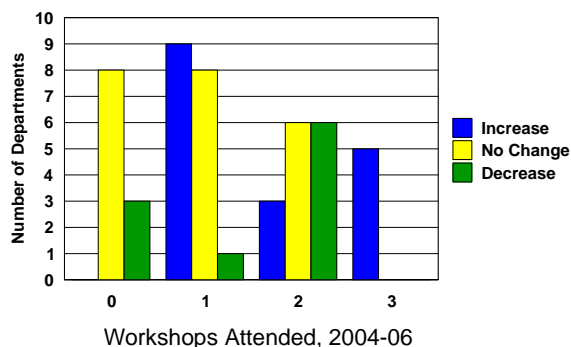


Because some departments have participated in the *Searching for Excellence & Diversity* workshops for three years, while others have not participated at all, we thought that perhaps the high-participation departments have raised their baseline to such a level that the “pre” measure is inflated. This does not appear to be the case, however. If we look at the departments that attended a hiring workshop zero, one, two, or three times since 2004, we see that departments who attended three times had large positive changes, and departments that attended zero times had large negative changes, but those who attended one time or two times had mixed results.

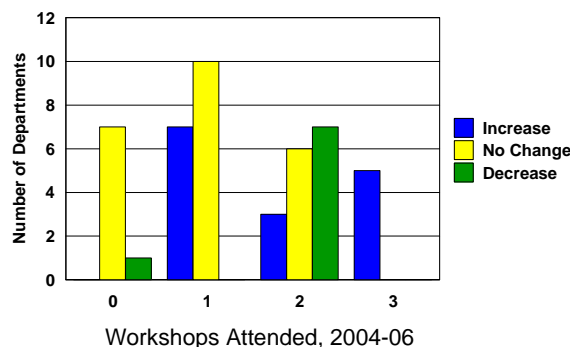


Another way to look at this is to ask if hiring of women improved for each individual department that attended a workshop zero, one, two, or three times. Removing those that did no hiring in the later period (2005-2007), we find:

**Changes in Offers Made to Women Assistant Professors
Biological & Physical Sciences**



**Changes in New Women Assistant Professors
Biological & Physical Sciences**



In both of these measures, it seems clear that it is the departments which have attended hiring workshops two out of the three years they have been offered that show the most problematic results. There are 19 departments in this category. Most of the departments attended in 2004 and 2005, and did not attend in 2006. Four departments in this category appear to be driving the negative results for this section, two in Engineering, and two in Letters & Science. These four departments are relatively large and did a great deal of hiring in both periods, but none of the four departments brought in a female assistant professor between 2005 and 2007. Interestingly, three of the four departments now have a female department chair; it will be interesting to see in future years whether their records improve.

Continue offering *Enhancing Department Climate: A Chair's Role* workshops at UW-Madison

The *Enhancing Department Climate: A Chair's Role* workshop was in transition in 2006 and 2007. As planned, previous WISELI co-Director Jo Handelsman stepped down from WISELI and from her role as facilitator for these workshops. Before she left, she trained a new cadre of workshop facilitators. In February through August of 2007, Jo Handelsman and Eve Fine created a workshop to train interested faculty to be facilitators of the *Enhancing Department Climate* workshops, and 6 UW-Madison faculty participated. In addition, Linda Siebert Rapoport from the University of Illinois-Chicago attended each of the three workshop meetings, in order to learn how to implement this type of workshop at her own campus.

Using one of the newly-trained faculty facilitators, WISELI offered the *Enhancing Department Climate* workshops to department chairs for Fall 2007. Response was somewhat lower than expected, with five departments participating in the fall session (3 in biological/physical science departments.) Unfortunately, two of the participating chairs (one in physical science, one in humanities) did not implement the survey portion of the workshop, so we cannot count their attendance at the meetings as full "participation" in the workshop. It may have been the long hiatus between workshop offerings, combined with an incomplete understanding of what was entailed in the workshops (i.e., departmental survey implementation), which depressed participation this fall. We stated a goal of reaching 29 new STEM department chairs in 2007-2009, and we only reached 2 of them in 2007 (we cannot count the one STEM chair who did not implement the survey.) It will be difficult to reach the goal by the end of 2009, but perhaps by

running two workshops each semester, we can make substantial inroads; we plan to offer two workshop series each semester beginning in January 2008.

Continue disseminating our *Searching for Excellence & Diversity* workshops to campuses beyond UW-Madison.

Interest in our *Implementing Workshops for Search Committees* workshop for campuses outside of UW-Madison is high, and is increasing over time. In 2007:

- We fielded 19 inquiries about the on-site workshop, either via phone or email:
 - Barnes Jewish Hospital
 - Community College of Spokane
 - Drexel University
 - Harper Community College
 - Harvey Mudd College
 - Marshall University
 - Massachusetts General Hospital
 - Skidmore College
 - Stanford University (Medical School)
 - SUNY-Stony Brook
 - Tulane University
 - University of Alabama-Birmingham
 - University of Connecticut
 - University of Delaware
 - University of West Georgia
 - University of Wisconsin-Eau Claire
 - University of Wisconsin-Stevens Point
 - Wayne State University
 - Western Michigan University
- We implemented the training at three universities:
 - University of Wisconsin-Stout (February 2007)
 - Washington University in St. Louis (March 2007). We implemented two workshops at Washington University, one for the Medical School, and one for the Danforth Campus
 - University of Wisconsin-Whitewater (September 2007)
- Representatives from 2 campuses visited WISELI to either observe a workshop or receive one-on-one coaching from WISELI staff to implement workshops:
 - Rutgers University (May 2007)
 - Tulane University (September 2007)
- We have already scheduled five workshops on other campuses in spring semester of 2008:
 - University of Wisconsin-Eau Claire (January 2008)
 - Wayne State University (January 2008)
 - Tulane University (March 2008)
 - University of Alabama at Birmingham (March 2008)
 - Stanford University Medical School (May 2008)

Our website, <http://wiseli.engr.wisc.edu/initiatives/hiring/OtherUniversities.htm>, continues to be our main recruiting tool. Most inquiries we receive mention the website as being exceedingly helpful.

Create a dissemination plan for the *Enhancing Department Climate: A Chair's Role* workshops.

The *Enhancing Department Climate: A Chair's Role* workshops are a relationship-intensive approach to positively affecting departmental climate through transformation of the chair. From development through early implementation, we have feared that it was the personality and skillful facilitation skills of WISELI co-director Jo Handelsman that made these workshops a success. Unlike the *Searching for Excellence & Diversity* workshops, which from the beginning incorporated a number of different presenters and facilitators, the *Enhancing Department Climate* workshops were heavily dependent on one person. This made thinking about dissemination more difficult.

When Jo Handelsman decided to accept the position of Department Chair in the Department of Bacteriology (and therefore step down as WISELI co-Director), this provided the ideal opportunity to discover whether we could find others who could replicate her magic. We developed a 3-session mock workshop and invited faculty we thought would make good facilitators for future chair climate workshops. As part of the mock workshop, we created a “climate survey” report that was a combination of many reports and included many of the common themes in the reports. In total, 6 UW-Madison faculty members went through the mock workshop series. In addition to training these 6 faculty members from our campus, Linda Seibert Rapoport from the University of Illinois-Chicago ADVANCE program came to Madison for each of the three workshop sessions, so that she might learn about our approach to enhancing department climate and implement a similar series on her campus. At UW-Madison, a new *Enhancing Department Climate* series began with one of the new facilitators in Fall 2007.

This approach showed us that (1) this workshop series is not dependent on the charismatic founder of the workshops; (2) that others could indeed be coached to take over the facilitator role; and (3) the mock-workshop format with the artificial survey results was an effective way to introduce the workshop implementation to new people. The remaining question, then, is how to disseminate this approach to a wider array of universities. Certainly, running three 2-hour meeting sessions over a series of months is not possible when working with faculty and staff from another campus. Our next challenge is to condense the mock-workshop into a shorter period of one day or less.

To that end, WISELI will work with the CIC Women in Science & Engineering (CIC-WISE) group (<http://www.cic.uiuc.edu/groups/WISEPanel/>) to submit a PAID proposal that would bring a number of ADVANCE “best practices” to the 13 institutions that comprise the CIC. The *Enhancing Department Climate: A Chair's Role* workshop series was selected as one of the 6 programs the CIC-WISE team would like to introduce to the CIC campuses. We plan to condense the three sessions into a one-day workshop, utilizing the 6 faculty we have trained as

facilitators for small groups of faculty from the other 12 CIC campuses. This will enable CIC institutions to begin these workshops on their own campuses. If the grant is funded, we will create this workshop for presentation to the CIC campuses. If not, we may look for another avenue to offer this kind of training to other campuses, either through campus visits, or by inviting interested campuses to observe workshops here at UW-Madison.

Create new publications/brochures for distribution to UW-Madison and other campuses to use for their own ADVANCE-related efforts.

The specific items to be produced are:

Reviewing Applicants: Research on Bias and Assumptions (Brochure)

This brochure, originally produced in 2003, was substantially revised in 2007 and is available at cost on our WISELI Online Bookstore (<https://wisccharge.wisc.edu/wiseli/items.asp>). We removed the UW-Madison logo to make the brochure more generic for use on other campuses. We replaced the stock-photo picture on the front cover with a photograph we commissioned. We chose a successful African American woman faculty member as our subject in order to provide counter-stereotyping (Dasgupta and Greenwald, 2001).

Guidebook for Faculty Search Committees (Booklet)

The *Searching for Excellence & Diversity Guide for Search Committee Chairs* is scheduled for revision in 2008. The revision will include an updated resources section, a combining of current chapters III and IV, and a new chapter we will call “closing the deal” or “maximizing the chances your chosen candidate will accept the position.” We will attempt to make the book less-specific to UW-Madison as well.

The current version of the book is available at cost on the WISELI Online Bookstore (<https://wisccharge.wisc.edu/wiseli/items.asp>).

Hiring Dual-Career Couples: Promises, Pitfalls, and Best Practices (Brochure)

This new brochure is scheduled to be completed in late 2008/2009.

Benefits and Challenges of Diversity (Brochure)

This essay will not become a brochure, but rather a short booklet. Revisions and updates to the literature have begun; we expect this new booklet to be available in 2008. The current version of the essay is available on the WISELI website at: http://wiseli.engr.wisc.edu/initiatives/climate/Benefits_Challenges.pdf.

Best Practices: Tips for Chairs on Improving their Departmental Climate (Brochure)

This new piece aimed at department chairs, tentatively titled “Enhancing Department Climate,” is based on research and advice literature, survey responses, and discussions from our *Enhancing Department Climate: A Chair’s Role* workshops, is currently in development. We also expect that this will be longer than a brochure, and instead will publish a small booklet containing information such as:

- What is climate?
- Common concerns revealed in campus climate surveys—and suggestions for addressing them
 - Enhance basic manners—respect, consideration, and politeness
 - Improve communication
 - Build a sense of community
 - Engage everyone in the life of the department
 - Promote professional development
 - Recognize and value the work of department members
 - Build sensitivity
 - Enhance work/life balance
 - Counter language and behaviors that are demeaning, sexualizing, condescending, and/or illegal

This new booklet is scheduled to be completed in 2008.

Best Practices: Tips for Faculty on Improving their Departmental Climate (Brochure)

This piece is based on the essay “Sex and Science” currently available on the WISELI website at: http://wiseli.engr.wisc.edu/Products/Sex_and_Science.pdf. We expect to condense the material in that essay to a smaller brochure format for faculty. This new brochure is scheduled to be completed in late 2008.

Ensuring Success of Women and Minority Faculty Members (Brochure)

This brochure is brand new, and is targeted to department chairs. The content will come from the *Enhancing Department Climate: A Chair’s Role* workshops, as well as current research and advice literature. Some of the material may also be based on the essay “Advice to the Top: Top 10 Tips for Academic Leaders to Accelerate the Advancement of Women in Science and Engineering” currently available on the WISELI website at: http://wiseli.engr.wisc.edu/Products/top_10_tips.pdf. We expect this brochure to be completed in 2008.

**Evaluating Candidates for Tenure: Research on Bias and Assumptions (Brochure)
and
Achieving Tenure: A guide for women and minorities (Brochure)**

These brochures will be new WISELI products, as we turn our attention to the promotion and tenure process at UW-Madison. We plan to consult with Sue Rosser and colleagues at Georgia Tech, learn about their ADEPT tool and the PTAC group they formed at Georgia Tech to review their tenure policies. The literature review that accompanies this work will form the basis of these brochures—one aimed at faculty and staff on review committees, and one aimed at underrepresented junior faculty. We expect this work to be completed in 2009, towards the end of the grant period.

Nominations for Major Awards and Honors (Brochure)

This brochure has been in distribution for several years; it just needs updating and generalizing beyond the UW-Madison campus. This updating began in 2007 and we expect the revised brochure to be available in 2008.

Disseminate the new brochures and booklets to other campuses.

In the proposal, we suggested several ways we would distribute the brochures we develop to campuses beyond UW-Madison. By 2009, our goal is to reach 100 different campuses with our materials; to date, we know of 33 individual colleges or universities who have received either our brochure or our hiring guidebook (see list below). More campuses than these have received our materials through distribution at meetings and conferences.

(1) Distribute brochures/publications at national conferences.

In 2007, Jennifer Sheridan attended two national conferences, and distributed the “Reviewing Applicants” brochures and the “Searching for Excellence & Diversity” guidebooks at the conference sessions in which she presented. Specifically, she attended the 2007 WEPAN conference in Orlando, FL and also the 2007 ASEE conference in Honolulu, HI. At least 20 copies of the brochure were distributed at each session; the individual campuses which received the materials are unknown. Finally, in collaboration with UC-Irvine, we sent 300 copies of the brochure to the SET-Routes conference in Heidelberg, Germany in May 2007. All 300 brochures were distributed there to institutions from around the world.

Molly Carnes distributed materials to attendees at the “Women’s Academic Advancement: The Influence of Language” session at the annual meetings of the American Association of Medical Colleges in November 2007, and attendees of the “National Leadership Workshop on Mentoring Women in Biomedical Careers” held at the National Institutes of Health in late November 2007. Approximately 50 brochures were distributed at these two venues to a variety of medical school faculty and administrators.

(2) Update the WISELI website to include a user-friendly online ordering system for the products.

The WISELI website is one of our primary dissemination tools, and it has a high number of visitors. Despite mostly positive feedback on the site, we have received messages indicating that it was unclear how exactly to order our brochures and guidebooks. Thus, in 2007 we developed the “WISELI Online Bookstore.” This secure website allows visitors to order our products either with a VISA or via an invoice. It is much clearer and also allows us to track with more precision exactly how many of our products are ordered by other campuses. This work was completed in 2007. The direct link to the “WISELI Online Bookstore” is <https://wisccharge.wisc.edu/wiseli/items.asp> , and a visitor can find it from the main WISELI website easily by clicking on this button:



(3) Work with the University of Michigan and the University of Washington to use the materials in their PAID-funded workshop activities.

Because we have not yet completed the brochures related to departmental climate, Michigan will not be using our materials for their STEP program in May 2008. If we complete one or more of the brochures by the end of spring, we may still be able to include them in the University of Washington LEAD workshop, scheduled for July 2008.

The list of campuses that we know have received at least one of these brochures/ guidebooks in 2007 include:

Allegheny College	Michigan State University	University of Illinois-Chicago
Boston University	Mississippi State University	University of Illinois-Urbana Champaign
Bristol Community College (MA)	Ohio State University	University of Iowa
Brown University	Onondaga Community College (NY)	University of Maryland-Baltimore County
Children’s Hospital Boston	Oregon Health and Science University	University of Minnesota
Community College of Spokane (WA)	Pennsylvania State University	University of Oklahoma
Drexel University	Purdue University	University of Texas-El Paso
Harper Community College (IL)	Rutgers University	University of Wisconsin-Eau Claire
Indiana University	Syracuse University	University of Wisconsin-Stout
Loyola Marymount University	Tulane University	Utah State University
Marshall University	University of Chicago	Washington University in St. Louis

2007 PAID Financial Report

2007 Financial Report, PAID (prepared 12/19/2007)

	Budget	Actual 2007*	Projected 2008	Projected 2009	Total
Income					
NSF PAID	\$499,991	\$499,991	\$0	\$0	\$499,991
Salaries and Fringes					
Directors	\$97,571	\$7,801	\$54,959	\$57,157	\$119,917
WISELI Staff	\$153,907	\$19,025	\$51,276	\$53,327	\$123,628
Fringe Benefits	\$85,502	\$10,060	\$39,838	\$41,984	\$91,882
Travel	\$3,150	\$860	\$1,050	\$1,100	\$3,010
Supplies and Equipment	\$0	\$143	\$0	\$0	\$143
Overhead	\$159,861	\$17,808	\$69,148	\$72,177	\$159,133
Total Income	\$499,991	\$499,991	\$0	\$0	\$499,991
Total Expenditures	\$499,991	\$55,697	\$216,271	\$225,745	\$497,713

* 2007 expenditures are actual through December 19 2007 and estimated from December 20-December 31, 2007.

Due to an extension from our ADVANCE: IT grant through June 30, 2007, major spending on the PAID funds did not begin until July 2007; thus, the personnel costs are lower than expected in 2007. We plan to increase personnel costs in 2008 and 2009 to expend the funds; specifically, increasing co-PI Amy Wendt from 1 month to 2.35 months (which should buy her out of one course per year.)

WISELI Publications 2007:

Handelsman, Jo and Robert Birgeneau. September 25, 2007. "Women Advancing Science: A Few Significant Changes in the Academic System Could Stem the Loss of Talented Women, Thereby Fortifying our Scientific Leadership." Technology Review.

<http://www.technologyreview.com/blog/guest/21855/>.

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Women Advancing Science

A few significant changes in the academic system could stem the loss of talented women, thereby fortifying our scientific leadership.

Tuesday, September 25, 2007

By Jo Handelsman and Robert Birgeneau

Jo Handelsman is a Howard Hughes Medical Institute Professor at the University of Wisconsin-Madison and Robert Birgeneau is the chancellor of the University of California, Berkeley.

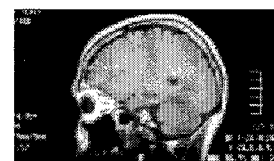
In his much-acclaimed best seller "The World is Flat" Thomas L. Friedman warned that America is slipping further behind China and India in producing scientists and engineers at the peril of the innovation and productivity of our nation. A recent report from the National Academies, "Beyond Bias and Barriers," provides a very direct solution to this conundrum. American science needs more talent and that talent is readily available in a legion of well-trained, but greatly underutilized scientists and engineers who happen to be women. The good news is that a few significant changes in the academic system could stem the loss of these women, thereby fortifying our scientific leadership.

The lack of women among the ranks of the country's university science professors is not due to biological differences between the sexes. There are many genetically determined differences

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between men and women, but differences in innate ability cannot explain women's low representation in the leadership of science. Women faculty continue to be outnumbered by men even in scientific disciplines in which women have received as many doctoral degrees as men for many years. In some other scientific disciplines, women's representation on the faculty has increased 30-fold in the last 25 years, a rate too rapid to be explained by changes in genetics of the population, illustrating that women have the ability to perform and capacity to endure the rigors of academic science as opportunities open to them. Collectively, the report's findings provide indisputable evidence that social factors, not aptitude or interest, are powerful drivers of the gender composition of the scientific leadership of the academy.

Why are there so many women who excel in science and choose to invest years of their lives in hard, frequently unrewarding work to attain advanced education in science, but so few in academic positions? The Academy committee concludes that a combination of unconscious biases held by both men and women as well as archaic university structures limits the participation of women in academic science.

Unconscious, inadvertent bias often clouds people's perceptions and judgment. Randomized, controlled studies show that when both male and female evaluators are asked to evaluate job applications, they will give the applicant a lower rating and be less likely to hire the person if they are told that the applicant is woman than if they are told the applicant is a man. Similar outcomes are evident when evaluators are asked to review candidates for raises, promotions, or leadership positions. The biases are most evident when the job under consideration is in a male-dominated field, which may explain the slower advancement of women in science than in other academic fields. Studies show the same type of prejudice toward members of certain racial minority groups, which likely contributes to the bleak picture for minority women. For example, in 2002 there were no African American, Hispanic or Native American women in faculty positions in the nation's top 50 computer science departments. Both unconscious and deliberate prejudice also contribute to a chilly climate in many science departments. Women, more often than men, feel excluded from decision-making in their departments and from scientific discourse with colleagues. The cumulative effect of repeated exclusion can reduce productivity and cause women to leave academic positions.

Institutional barriers, such as the tenure system, further augment the difference in men's and women's access to faculty positions. Candidates must establish well-funded innovative research programs, demonstrate their teaching abilities, and contribute to their universities through service, all within seven years. This is a tall order for all scientists, but it is a Promethean task for those who have young children or care of other family members during this same period of life. Since women continue to shoulder a disproportionate share of family responsibilities, the collision between the tenure system and family life affects women far more than men.

The Academy report's recommendations are simple. Educating the academic community about the insidious role of unconscious bias in decision-making could substantially reduce the application of that bias. Department chairs can be trained to improve the climate for women faculty, which may require simply using inclusive practices for decision-making and communicating. Lengthening the time to tenure, ensuring that research funding does not lapse because of child bearing, and making lactation rooms, child care, and flexible work schedules readily available will ensure that both men and women can meld careers with family life.

The report makes the straightforward but, nevertheless, bold assertion that the government should enforce equal protection laws such as Title IX as vigorously for science as it does for intercollegiate athletics. This is not a recommendation about special opportunities or treatment; it is an effort to level the playing field and give women the same access to positions in academic science that men have always enjoyed.

The simplicity of the message in the Academy report is both reassuring and inspiring. American science needs more brainpower and now we just have to make sure that we access that talent. Otherwise, Tom Friedman's ominous warning may well come true.

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WISELI Publications 2007:

Marchant, Angela; Abhik Bhattacharya; and Molly Carnes. 2007. "Can the Language of Tenure Criteria Influence Women's Academic Advancement?" *Journal of Women's Health*. 16(7): 998-1003.

Can the Language of Tenure Criteria Influence Women's Academic Advancement?

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and MOLLY CARNES, M.D., M.S.³

ABSTRACT

Background: Women are not advancing to leadership positions in academic medicine at rates predicted by their representation in medical school over the past 20 years. The prejudice persists, often as an unconscious mental model, that leaders should be men. We examined whether the presence of the word "leader" in written tenure criteria may have a differential impact on promotion of men and women in elite medical schools.

Methods: We used a retrospective, descriptive design to study 24 academic medical centers top-ranked in both NIH funding and Carnegie classification. The main outcome measure was the slope of regression fit to 7-year annual data on percent faculty who are tenured women (1998–2004) relative to the median slope of all 24 institutions.

Results: Medical schools with the word "leader" in tenure criteria were more likely to have slopes below the median slope than schools without the word "leader" (OR = 6.0; CI = 1.02, 35.37; $p = 0.04$).

Conclusions: Being a leader is associated with stereotypic male-gendered traits. Achieving tenure is a key gatekeeping point in advancement toward leadership in academic medicine. Our findings suggest that including the word "leader" in tenure criteria may promote activation and application of biases that disadvantage women's career advancement.

INTRODUCTION

THE CIVIL RIGHTS ACT WAS PASSED in 1964,¹ making discriminatory hiring practices based on sex illegal. Since then, women have entered nearly all fields traditionally held by men. Nevertheless, few women are represented in elite

leadership positions. Despite research demonstrating little difference in the effectiveness of male and female leaders,^{2,3} in experimental settings, both men and women continue to hold biases that high authority figures should be men.^{4,5} In 1985, 34.2% of first-year medical school students were women.⁶ More than two decades

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later, however, women comprise only 17% of tenured faculty in U.S. academic medical centers and only 10% of medical school deans.⁶ Multiple barriers to women's academic advancement have been identified.⁷⁻⁹ In examining the unexpectedly low rate of women leaders in academic medicine, it is particularly important to examine critical gatekeeping junctures in career advancement, such as achieving tenure, where preferential selection of men or exclusion of women or both might occur. Exposure of evaluators to language that carries implicit links to gender can activate gender-based stereotypes and influence the subsequent evaluation of individuals.¹⁰⁻¹³ To further explore the potential for the language used at gatekeeping junctures to create male mental models that might disadvantage women being evaluated, we examined documents describing tenure criteria. Given the persistent inability of women to gain access to top leadership within academic medicine, our specific interest was the relationship between the presence of the word "leader" in tenure criteria at elite academic medical schools and progress in increasing the percent tenured female faculty.

MATERIALS AND METHODS

We identified academic medical centers that were on both the Carnegie Foundation's classification system for very high research activity¹⁴ and the National Institutes of Health (NIH) list for top funding for fiscal year 2004.¹⁵ Of the 26 institutions on these lists, 1 does not provide tenure, and 1 university's tenure criteria could not be obtained, leaving 24 schools for analysis.

We gathered documents describing the criteria for tenure by searching the individual institution's public websites. When available, we used medical school-specific faculty policies. In some cases, the medical school policy was the same as that for all university faculties. When medical school policies were supplements to the general faculty policy, both documents were reviewed. We scanned only the tenure criteria sections. Thus, if a school had policies for nontenure track appointments, these policies were not reviewed.

Each document was electronically scanned by two reviewers for the word "leader." The documents were also scanned for male and female pronouns and 19 other male-associated, 20 female-associated, and 20 gender-neutral charac-

teristics adapted from the Bem Sex Role Inventory¹⁶ (Table 1). For each institution, we recorded the percent of the tenured faculty who are women as reported by the Association of American Medical Colleges in their annual benchmarking reports for each year, 1998-2004, the years for which these data are available.⁶ Regression lines were fit to these data points for each school. The beta coefficient (slope) of each regression represents the best-fit linear increase or decrease in percent of the tenured faculty who are women over the 7-year period. The resulting slopes were divided into two groups: above and below the median slope for all institutions. This binary categorization was used as the outcome variable. The word "leader" was categorized as present or absent in the tenure criteria documents. The odds ratio (OR) was calculated from the 2 × 2 contingency table formed by binary variables. We performed similar analyses for other male-gendered characteristics as well as for institutions with 10 or more such words vs. those with fewer.

RESULTS

The two raters had 100% agreement for all words. The word "leader" appeared in the tenure documents of 11 institutions (mean number of occurrences = 2.4, SD = 2.2, range 1-8). The median of the 24 different beta coefficients (slopes) of the regressions was 0.41 (minimum = 0.39, maximum = 1.57, range = 1.96) (Fig. 1). The OR from the "leader" binary and slope binary tables was 6.0 (95% CI = 1.02, 35.37; $p = 0.04$). Thus, for those medical schools where the word "leader" appears in tenure criteria, the odds of being below the median slope were six times that of medical schools where "leader" does not appear. The 95% CI at the lower end approached but did not cross unity, making this finding unlikely to occur by chance alone. At the upper end, institutions that contained the word "leader" could have 35 times greater odds of having a slope below the median than those without this word; 3 of these schools had negative slopes. The results are presented as a box and whisker plot (Fig. 1). Each box contains 50% of the data points. The whiskers represent 1.5 times the interquartile range; small circles indicate outlier data points beyond this range.¹⁷

No male or female pronouns stood alone in any of the documents. Pronouns consistently ap-

TABLE 1. PRESENCE IN TENURE CRITERIA OF WORDS ADAPTED FROM THE BEM SEX ROLE INVENTORY AND ODDS RATIO (OR) FOR LOW INCREMENTAL INCREASES IN TENURED FEMALE FACULTY

	Word	No. of institutions (of 24) with word in tenure criteria	Mean no. of occurrences (SD)	OR for slope below median (95% CI)
Male	Leader	11	2.4 (2.2)	6.00 (1.02, 35.37)*
	Analytical	4	2.5 (2.4)	—
	Competitive	5	2.0 (1.0)	—
	Defends (Bem: defends own beliefs)	2	1.0 (0.0)	—
	Independent	14	3.1 (2.6)	1.00 (0.20, 5.10)
	Individualistic	8	1.8 (1.5)	1.00 (0.20, 5.40)
	Leadership (Bem: has leadership abilities)	21	3.38 (5.2)	1.42 (0.27, 7.52)
	Risk (Bem: willing to take risks)	1	6 (0)	—
	10 or more male word occurrences	7	17.3 (12.0)	3.60 (0.50, 23.9)
	Total number of occurrences = 183			
Female	Sensitive	1	1	—
	Understanding	1	1	—
	Yielding	1	1	—
	Total number of occurrences = 3			
Gender neutral	Friendly	1	1	—
	Helpful	2	1 (0)	—
	Inefficient	1	1	—
	Truthful	1	1	—
	Total number of occurrences = 5			

* $p = 0.04$.

peared as, for example, “he/she” or “he or she,” with one institution reversing the order of the pronouns (i.e., “she or he”). Other male-gendered attributes mentioned were analytical, competitive, independent, defends, and leadership. We found no significant difference in slopes of the regressions for percent female tenured faculty over 7 years for schools with or without mention of any other individual male word, including “leadership,” where the OR = 1.42 (95% CI = 0.27, 7.52). Neither was there a significant difference for schools with ≥ 10 male words vs. < 10 ; the OR = 3.57 (95% CI = 0.53, 23.95). It was notable, however, how few female-gendered or gender neutral words occurred relative to the number of male-gendered words in criteria for tenure. All but 2 schools had at least one male-gendered word, a total of 183 occurrences (median = 5.5, range 2–50), whereas in total female-gendered words occurred only 3 times (once at 3 schools)

and gender neutral words occurred a total of 5 times (once at 3 schools and twice at 1 school).

No significant dose-response relationship existed between the number of times “leader” appeared and slope. Schools above or below the median slope were not different in NIH ranking, geographic location, or status as a public or private institution.

DISCUSSION

Our examination of documents describing the tenure criteria at 24 prestigious academic medical schools found that those containing the word “leader” appear to be making less progress in increasing the percent tenured female faculty than schools that do not include the word “leader” in their tenure criteria. This finding suggests a differential advantage for male faculty in achieving

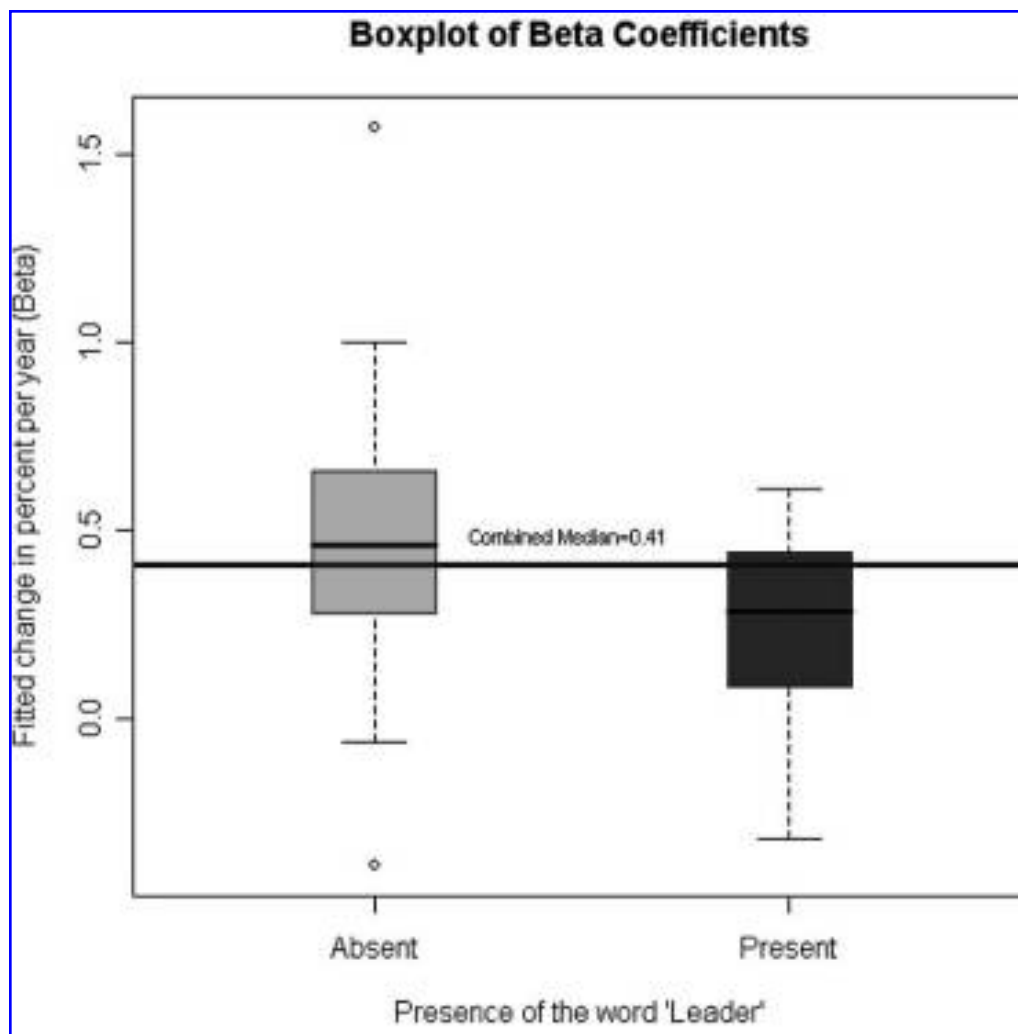


FIG. 1. Box plots of slopes for regression lines fitted to the annual change over 7 years in percent faculty who are tenured women. Schools with the word “leader” in tenure criteria have significantly higher odds of having a slope below the median slope for all institutions.

tenure, a nearly universal prerequisite for becoming a department chair, which is generally considered essential for further advancement to a dean. Although there have been tremendous changes in the accepted social roles of women over the past several decades, being a leader continues to be associated with being male.^{18–20} In many subtle, seemingly innocuous ways language continues to promote the assumption that men should lead. Even in ballroom dancing, for example, it is the man who leads and the woman partner who follows. Unconscious assumptions that men make superior leaders are easily activated and, once activated, readily applied.^{4,10,11,18–22} Studies of actual leaders in academic² and other settings³ find little difference between the effectiveness of male and female leaders. Nevertheless, the presumed assumption

of greater male leadership competence is so deeply embedded that even among men, those with a more typically masculine appearance in photographs were judged as more competent leaders than men with more feminine physical attributes.²²

Because the assumption, often unconscious, that men are more likely than women to fit the mental model of being a leader, anything that enhances activation of automatic gender stereotypes at a time when women are advancing toward a leader role would be predicted to favor men and disadvantage women. Exposing evaluators to gender-linked words (semantic priming) has been shown experimentally to influence the subsequent evaluation of an individual such that exposure to words linked to stereotypic masculine traits results in evaluators viewing a target

male as having more masculine characteristics.¹⁰ Our findings are in the predicted direction for the word "leader" read by those evaluating tenure candidates to function as a semantic prime predisposing to a more positive evaluation of men than women. The research of Wigboldus et al.¹¹ on automatic activation of gender stereotypes by language is also relevant to our finding. They found that participants used more abstract language to describe behaviors that were congruent with gender-based stereotypes and more concrete language to describe behaviors that were incongruent with gender stereotypes. Further, the use of abstract language predicted along gender lines the attribution of a behavior to intrinsic qualities of the target being evaluated rather than situational factors. The defining behaviors of effective leaders are almost wholly gender neutral.^{2,3} However, because the term "leader" itself is an abstract concept that strongly conjures a male mental model, use of this word in evaluating individuals would be predicted to result in more favorable ratings of men than women. Use of more specific, descriptive language for tenure criteria could reduce the reinforcement of the bias for male leaders. For example, language requiring the tenure candidate to act as an abstract "leader" could be replaced with specific actions, such as "served as chair of an NIH study section" or "published as first or senior author in peer-reviewed scientific journals."

Although women are still less likely than men to be viewed as leaders, they are increasingly acknowledged to have leadership abilities.²³ This may explain our finding that whereas "leader" did differentiate between institutions regarding their progress in increasing the percent of tenured female faculty, the presence of the word "leadership" did not. Other male-gendered words that appeared in tenure documents did not differentiate institutions, but these words are so ubiquitous in the academic environment that they may be experienced as relatively gender neutral, for example, a "competitive" grant and an "independent" investigator. Nevertheless, the overwhelming preponderance of male-gendered compared with female-gendered words starkly reinforces that the qualities most valued for achieving tenure at top medical schools are those aligning with the unconscious assumptions about the way men should behave rather than the unconscious assumptions about the way women should behave.²⁴ Given the social penalties paid

by those who violate prescriptive gender norms, advancing women in such a strongly male-gendered framework would be predicted to be more difficult than advancing men within the same framework^{4,19} and might also influence the timing of request for tenure so that women would be delayed relative to their male colleagues.

One limitation of our study is that we evaluated tenure criteria only at one point in time, and it is possible that the wording was changed during the 7 years of analysis. Another limitation is that we examined only 24 of 125 medical schools. However, we purposely focused on top-ranked, elite institutions where barriers to women's advancement may be greatest.²⁵ Finally, we are assuming that the annual percent faculty who are tenured women generally reflects the women who receive tenure at the institution. Recruitment and departure of tenured female faculty are not captured in this figure, nor do we know the number of faculty members who applied for tenure each year, which would allow us to examine the actual proportion of male and female faculty who were successful. However, because we examined 7 years of data during a time when the number of women eligible for tenure should be steadily increasing, it is reasonable to assume that the data reflect to a large extent internal promotions.

In conclusion, we recommend that all academic institutions examine the language in their tenure criteria and replace the word "leader" with the specific behaviors and attributes desired of a leader. We base this recommendation on the following: (1) the consistent finding in social psychology research of prejudice against women in the selection of leaders, (2) the ability of words affiliated with one gender to influence subsequent evaluation of an individual of that gender through semantic priming, and (3) our finding of an association between inclusion of the word "leader" in tenure criteria and decreases or slower increases in the percent faculty who are tenured women over 7 years.

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WISELI Publications 2007:

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“Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?”
American Society for Engineering Education (ASEE) 2007
Conference Proceedings.

<http://www.asee.org/acPapers/AC%202007Full992.pdf> .

June 2007.

Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?

ABSTRACT

With funding from the National Science Foundation's ADVANCE program, the University of Wisconsin-Madison designed and implemented training for chairs of faculty hiring committees. Training began in 2004 and continues to the present. The workshops are implemented using a variety of formats, but the common elements that make them successful 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 2004 and 2005, over half (61%) of departments in biological and physical sciences sent at least one faculty member to this training (usually the chair of the search committee). 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*. The linkage between participation in the hiring workshops and offers made to faculty of color is less clear, although it does appear to be positive, especially in 2004. 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.

INTRODUCTION

After years of attempting to increase the gender diversity of our academic science and engineering leadership through awards to individual women (e.g., Research Opportunities for Women, Visiting Professorships for Women, Career Advancement Awards, Faculty

Awards for Women, and Professional Opportunities for Women in Research and Education¹), the National Science Foundation (NSF) changed course in the early 21st century, choosing instead to focus on the institutions in which academic scientists and engineers are working rather than on the individuals within those institutions. In 2001, the ADVANCE program was announced with a new solicitation for proposals that would result in “institutional transformation.” The goal of the ADVANCE program overall is to increase the participation and advancement of women in academic science and engineering; as such, it is an effort focused primarily on transforming the policies, practices, and climates for faculty in U.S. research institutions^{1,2}.

The University of Wisconsin-Madison (UW-Madison) was awarded one of the first ADVANCE Institutional Transformation grants in January 2002. The ADVANCE team co-PIs formed a research center—the Women in Science & Engineering Leadership Institute (WISELI³)—to centralize all ADVANCE-related activities. WISELI focused immediately on the faculty hiring process as an essential element of success. The primary way to increase the numbers of women faculty in STEM disciplines is to hire more of them. The faculty hiring process of any university determines the demographic composition of the faculty for decades, as the faculty career can span twenty to forty years. Emphasizing the search and screen process and working to add more women to the faculty by reforming that process is an important place to begin if the goal is to increase both the proportion and numbers of women faculty. While retention, promotion, and other factors are certainly important as well, if you cannot get the women hired in the first place you have no hope of retaining them in the future.

CREATION OF THE *SEARCHING FOR EXCELLENCE & DIVERSITY* WORKSHOPS FOR SEARCH COMMITTEE CHAIRS

WISELI convened a design team consisting of faculty and staff from across the campus to assist in the creation of a workshop or 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 (search committee members, departmental administrators who assist with a search) are more than welcome to attend as well.

The content of the workshops revolves around the “5 Essential Elements of a Successful Search⁴.” The first element, *Run an effective and efficient search committee*, provides tips and techniques for organizing the search process, running committee meetings, and successfully utilizing the time and energy of *all* search committee members. The

importance of following state laws in the search process for a faculty member is impressed upon the search chairs in this section, and important selections from the university's *Search Handbook* are introduced. The workshop begins with this element not only because it comes "first" in the process of chairing a committee, but also because it provides new information to chairs that they did not have before and therefore find very useful; it also helps to alleviate any trepidation they have about being "trained" in something they've seen done many times before. Many search chairs are resistant to the idea that they might need some "training" to run their hiring committees. Usually once the first element of the workshop is completed, they see that we do have information to share that is very useful to them, and they are more open to the rest of the workshop material.

In the second workshop element, we discuss the importance of *Actively recruit[ing] an excellent and diverse pool of candidates*. We provide the search committee chair with the background and language needed to discuss diversity within his or her search committee; we provide tips and resources for building a large and diverse pool; and we introduce some of the myths that might limit the diversity of the applicant pool and counteract these myths with research findings and other arguments.

The third workshop element, *Raise awareness of unconscious assumptions and their influence on evaluation of candidates*, is the most innovative piece of this faculty training. In this section, we present the workshop participants with a brief introduction to the psychological, sociological, economics, and organizational research on unconscious biases and assumptions, and target our presentation of this research to its implications for the hiring process. The workshop participants discuss not only the research and its relevance to the hiring process, they also discuss how to make this research and its implications for the review of candidates known to the rest of their committees. We provide a brochure entitled "Reviewing Applicants: Research on Bias and Assumptions"⁵ that they can take back to their committees to aid them in having these conversations with their colleagues.

The fourth element of the workshop, *Ensure a fair and thorough review of candidates*, is short and, like the first element, is composed of concrete logistical advice for organizing the review of candidates. The fifth element, *Develop and implement an effective interview process*, provides advice and suggestions for the interviewing of candidates. A brief review of the bias and assumption literature is often included in this section as well, especially if the workshop is run in two or three separate sessions timed to the stages of the search.

The materials we have developed for the *Searching for Excellence & Diversity* workshops are flexible, and allow us to reach search committees in any number of ways to deliver our messages. Our preferred method is a two-session workshop that is timed to the stages of the search. This two-session workshop is usually implemented within a school or college at the request of the dean. In the first session (two hours) we meet before the closing date for the position. We work through the first three elements of the search, and invite campus representatives from areas such as Legal Services, the Office for Equity and Diversity (OED), and the Dean's Office, to answer questions the search chairs may have about writing the position announcement, searching for candidates and/or placing

advertisements in new places, or conforming to the state open meetings and open records laws. The session ends with the discussion of unconscious biases and assumptions, and the search chairs are asked to track the diversity of their pools so that they may report on their success when they return to the second session. The second two-hour meeting is held after the position closes, but before the interviews begin. In this session the chairs report on their success in diversifying their pools, and the rest of the session focuses on reviewing the applicants and providing an excellent interview experience. In this session, we often invite personnel from the Provost's Office (for questions on dual career hires), OED (for interviewing protocol and other advice), the College's Equity and Diversity committee, or Community Relations to assist with questions that often arise surrounding the interview process.

When college deans are unwilling to recommend four hours of training to their search committee chairs, we will instead do a two- or three-hour workshop in one session for that college, where all five elements are covered at one time. We also will hold smaller discussion groups (usually two hours) consisting of up to six search chairs from across campus to cover the material; usually the chairs who attend these were unable to attend their college's workshop for some reason. Finally, we often meet with entire search committees at the request of the search committee chair, or the department chair. This is an especially common way of reaching search committees for high-level administrative positions such as dean or provost.

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.

ELEMENTS OF WORKSHOP SUCCESS

We believe that the workshop series we have developed—especially the two-session model that we prefer—have four elements that make them successful. The first is the use of *peers* in the leading and facilitation of the workshops^{6,7}. Wherever we present these workshops, we rely on faculty leadership both for the short presentations and the facilitation of the small group discussions that occur in the workshops⁸. In the beginning, it was WISELI faculty and staff who led the workshops, but as we have run them for several years we have been able to incorporate additional faculty into their implementation. For the workshops that are college-based, we contact faculty in the school/college who have been through the workshop in the past who we believe would be supportive, and ask them to facilitate a small group discussion, or present some small sections of the workshop such as how to run an effective meeting, or how to bring up and discuss diversity with your search committee members. The presentation on biases and

assumptions—by far the longest of the presentations—is always done by a faculty member when we are working with faculty search committee chairs, and we have been recruiting faculty from each of our schools and colleges and training them to make these presentations^{9,10}. Similarly, when we present to units of academic staff (such as University Health Services), we enlist the help of academic staff to lead and facilitate those sessions.

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.

The second reason we believe these workshops have been successful at UW-Madison is the use of *active learning* techniques in their implementation^{11,12}. Whether among the young or old, students or faculty, the most effective way for a person to learn a new concept is to discover it for themselves, especially if the new concept (e.g., "we all have biases and assumptions that may affect evaluation of candidates") is in direct conflict with a deeply-held belief (e.g., "I am a fair person who evaluates each person on their merit alone.") We use as little lecture/presentation as possible in our workshops, relying instead on small- and large-group discussion and occasionally case studies to make our points. It is through the active discussions with other respected faculty colleagues around the table that the real learning can take place; the presentations are utilized only to get the conversation started. In this way, we do not present ourselves as the "experts" on hiring, and instead assume that the people seated around the room are the real experts and we encourage them to all learn from each other. Indeed, after three years of implementing these workshops all over campus for many different departments and units, we continue to learn new things ourselves.

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.

The third reason we believe that the workshops we have created have been successful is our employment of peer-reviewed research on *unconscious biases and assumptions*, and our very specific targeting of the implications of this literature for the search process. Our use of the literature to establish the pervasiveness of biases and assumptions coupled with the linkages we draw to the evaluation of candidates in the academic hiring process help to convince many faculty that these issues are relevant for all search committee members. Even those faculty who are aware of the research on biases and assumptions have often not taken the step to apply the research findings directly to their own work in the evaluation of candidates in the hiring process. Most faculty we have worked with are genuinely grateful to have the opportunity to learn about their own unconscious biases so that they might lessen their impact, as most faculty want to be fair in their reviews. They find the specific tips and advice we give, based on the research literature, to be especially helpful—especially the concise summary we provide to them in the form of our "Reviewing Applicants"⁵ brochure.

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 thorough 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).

Overall, the feedback we received clearly indicates that participants found this aspect of the workshop to be convincing and valuable. Many intended to implement both their new-found knowledge of the literature and our suggestions on how to reduce the effects of unconscious assumptions in their search committee role.

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.

Overall, the feedback from the post-workshop survey indicates that the two-session workshop was perceived as providing a useful element of accountability by at least some participants. It also suggests that ensuring that the workshops fit with the search cycles of different departments could strengthen the achievement of this aim.

EVIDENCE OF WORKSHOP SUCCESS

Though 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 others¹³, 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 our workshop series in creating a more diverse set of newly-hired faculty can be measured at many points along the hiring process. We might measure the diversity of applicant pools, short-lists, interviewees, offers made, offers accepted, and ultimately the diversity of the new hires who arrive on campus. We might measure the experiences of candidates within the hiring process. We might investigate the reasons why offers were refused. We might even uncover whether participation in the workshop resulted in other changes in faculty attitudes or behavior in areas besides the search process.

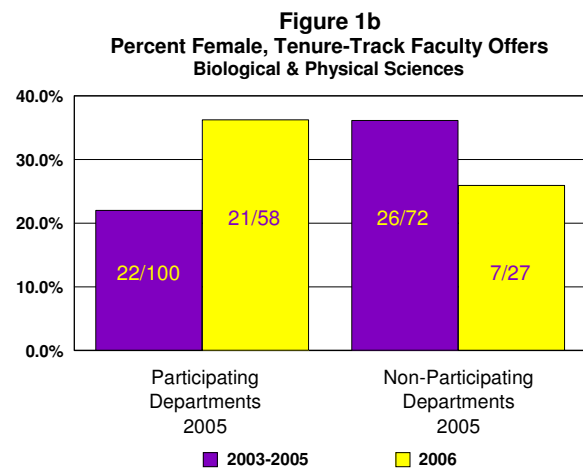
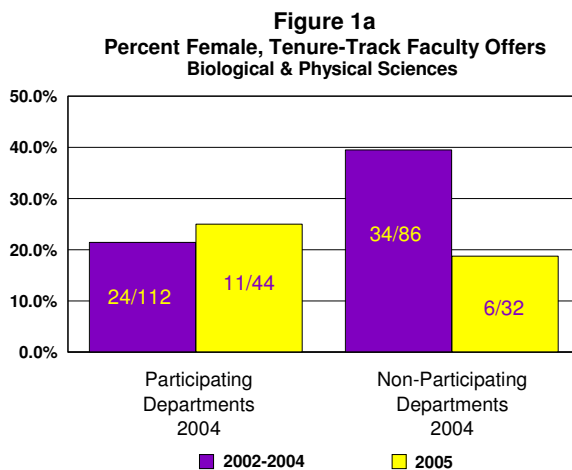
We are not able to utilize all of these measures in the evaluation of our *Searching for Excellence & Diversity* workshops; however, the measures we do have indicate that the goal of increasing the diversity of faculty new hires is being met, and some additional benefits of implementing the workshops are also accruing. We unfortunately do not have good data on the diversity of pools, short lists, or interviewees at this time, although as our federally-required EEO reporting moves to an online system we may have better access in the future. We also are not able to interview or contact those candidates who refused offers. The data we will utilize in our evaluation are generated later in the hiring process—offers made, offers accepted, and the diversity of new hires actually coming to campus. We can also use survey data to look at attitudes of both new hires on campus, and also attitude change in the faculty who attended the workshops.

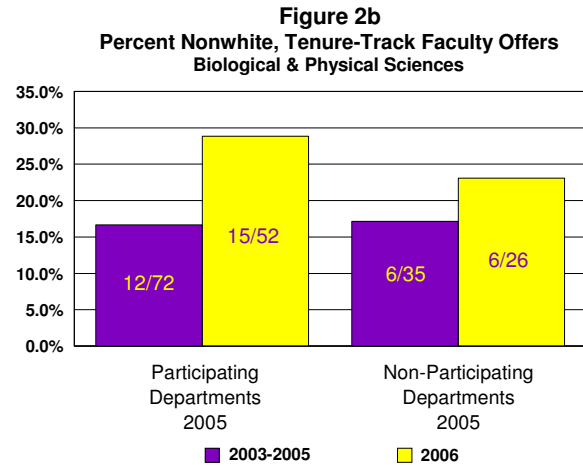
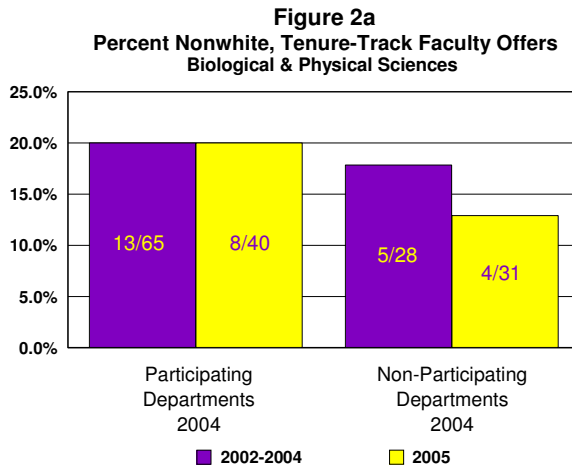
Hiring Outcomes

In the analyses that follow, we will restrict the data 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 reason that the participation year is included as a “pre” measure is because most of the workshop participants take the training in the fall; thus, participants in the 2004 workshops (for example) would not generally 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.

Hiring Outcomes: 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. Similarly, slight increases (or no change) were seen in the percentage of offers presented to nonwhites (African American, Hispanic, American Indian, and Asian) compared to whites for those departments attending the *Searching for Excellence & Diversity* workshops, while those who did not attend decreased among the 2004 participants. (It should be noted here that data on race/ethnicity of candidates receiving offers is incomplete prior to 2005; thus, some of the “pre” measures are unreliable.) Attendance at a 2005 workshop does not appear to be related to changes in the percentages of offers made to racial/ethnic minorities in 2006, as both the participation and non-participation groups increased the percentages of their offers to racial/ethnic minorities in the following year.





One might argue that the increase in offers to women for participating departments is due to an increase in the number of women in the available PhD pool. This may be the case; however, the *decrease* in offers to women in the non-participating departments, particularly in light of their previously very high levels of offers to women, casts some doubt on this as a primary explanation.

Hiring Outcomes: Offers Accepted

The same patterns of slightly improved outcomes for women and minority candidates appear when we examine the gender and racial proportions of offers accepted. In general, women and racial/ethnic minorities comprised greater proportions of the persons accepting offers in the departments who attended the training, while the proportion of accepted offers going to women or minority candidates tended to decrease over time for those departments who did not undergo the training. The exception again is for offers accepted by racial/ethnic minority candidates in 2006; training in 2005 appeared to have no effect on the future offers accepted by minority candidates.

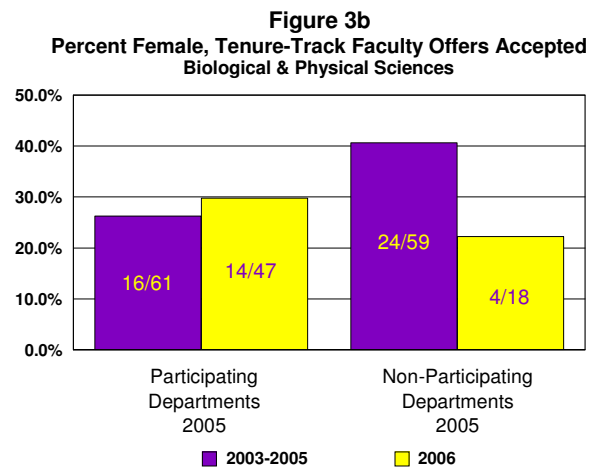
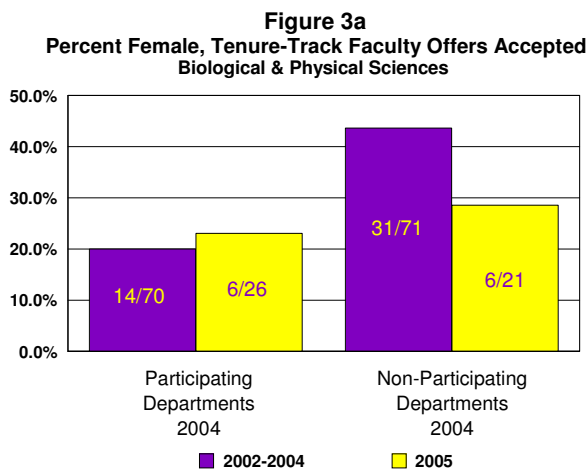


Figure 4a
Percent Nonwhite, Tenure-Track Faculty Offers Accepted
Biological & Physical Sciences

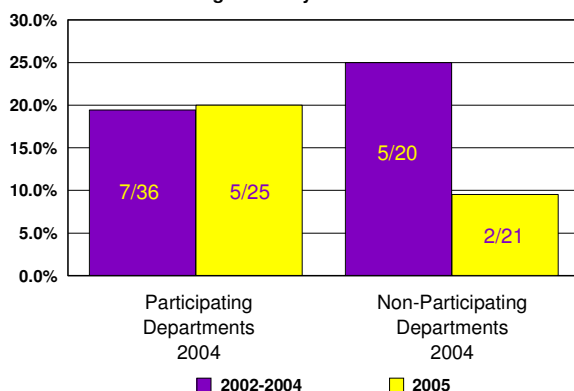
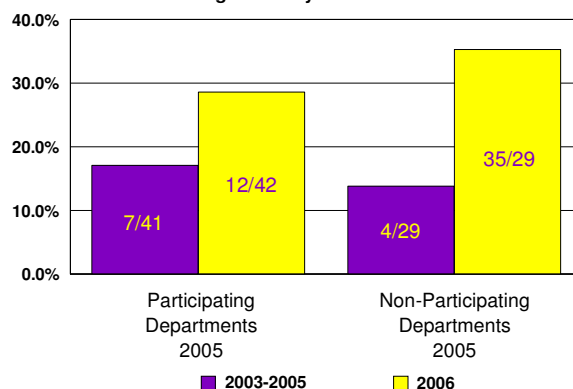


Figure 4b
Percent Nonwhite, Tenure-Track Faculty Offers Accepted
Biological & Physical Sciences



Another way to look at the offer acceptance data is to ask what happened to the acceptance *rates* for departments who participated in the workshops, compared to those who did not.

Table 1. Percentage of Tenure-Track Faculty Offers Accepted, by Sex*

Year	Participated in Workshop				No Workshop Participation			
	Women		Men		Women		Men	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
2004	58.3%	54.5%	63.6%	60.6%	91.2%	100.0%	76.9%	57.7%
2005	72.7%	66.7%	57.7%	89.2%	92.3%	57.1%	76.1%	70.0%

* Biological and Physical Science faculty only.

Table 2. Percentage of Tenure-Track Faculty Offers Accepted, by Race/Ethnicity*

Year	Participated in Workshop				No Workshop Participation			
	Nonwhite**		White		Nonwhite**		White	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
2004	53.8%	62.5%	55.8%	62.5%	100.0%	50.0%	65.2%	70.4%
2005	58.3%	80.0%	56.7%	81.1%	66.7%	100.0%	86.2%	55.0%

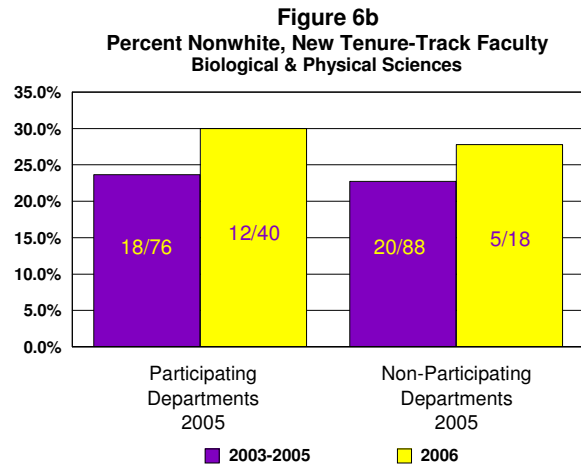
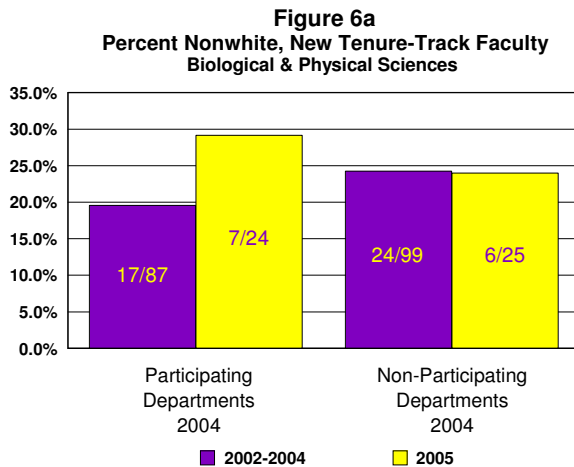
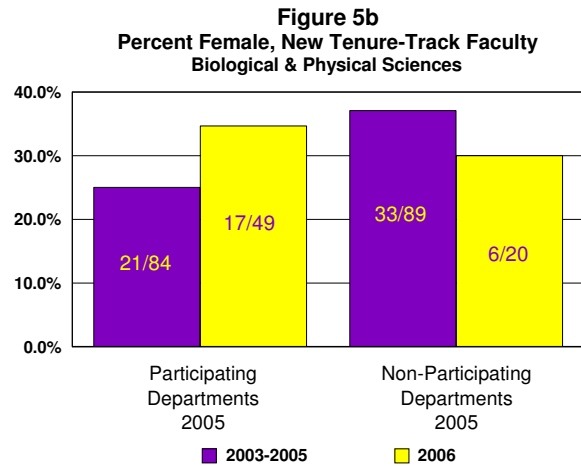
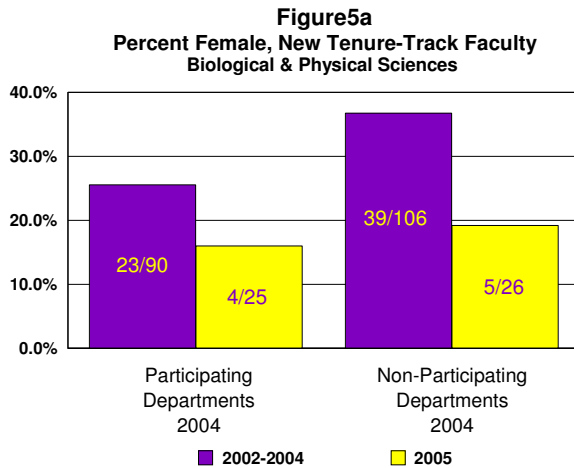
* Biological and Physical Science faculty only. Race/ethnicity missing for some colleges.

** African American, Asian American, American Indian, or Hispanic.

Participation in the hiring workshops does not appear to be associated with better acceptance rates for women and faculty of color. Either acceptance rates increased for hires across the board, or else they increased or decreased for some groups in ways not easily explained by the training status of the home departments.

Hiring Outcomes: 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 and/or members of racial and ethnic minority groups.



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 showed 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.

In terms of hiring faculty of color, we see that participation in the hiring workshops may have been associated with the increased presence of minority faculty members in 2005, but not in 2006, when the increase existed for all departments, not just those participating in the hiring workshops.

Hiring Outcomes: Summary

In summary, it does appear that participation in the Searching for Excellence & Diversity workshops is associated with increased offers made to women and minority 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 either women or minority candidates, and the evidence is less clear whether the increase in numbers of new faculty from racial/ethnic minority groups is related to workshop participation; if so, the relationship is weak.

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, much of the effects that we see 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.

To try and control for a variable such as “committed to diversity”, we compiled some additional evidence that compares data from the one college that mandated attendance in 2005 (the College of Letters & Sciences (L&S)) to other departments in the University. Because the Dean of L&S made attendance at the *Searching for Excellence & Diversity* workshops mandatory in 2005 before he would release a faculty position, for the first time we encountered workshop participants who were actively antagonistic to the messages and spirit of the workshop. Yet, even though some participants in L&S may not have been “committed to diversity”, L&S still showed increases in their offers to women and minorities, and the percentage of new hires who were women and minorities in 2006.

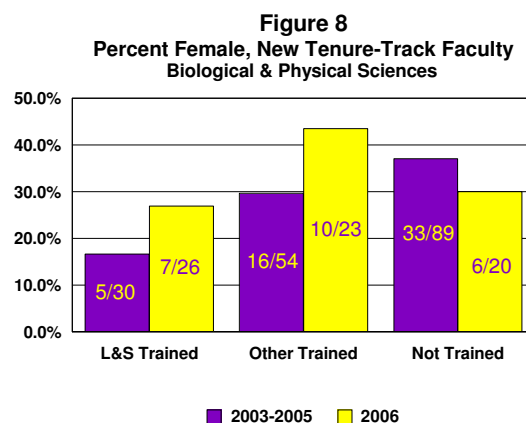
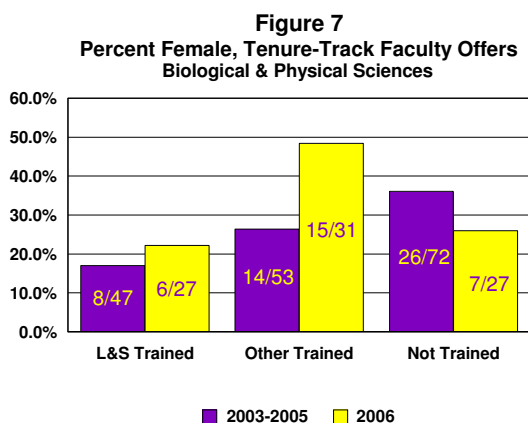


Figure 9
Percent Nonwhite, Tenure-Track Faculty Offers
Biological & Physical Sciences

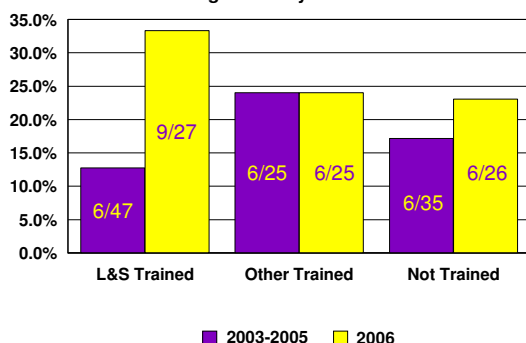
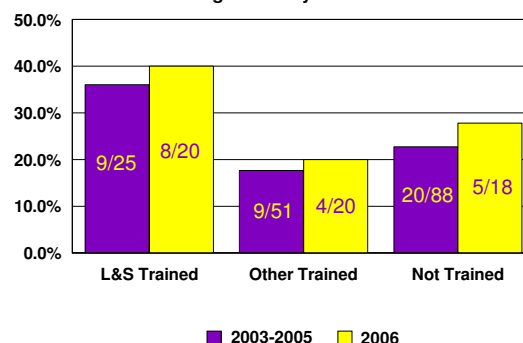


Figure 10
Percent Nonwhite, New Tenure-Track Faculty
Biological & Physical Sciences



Changes in Perceptions and Attitudes

By implementing the *Searching for Excellence & Diversity* workshops at UW-Madison, we are hoping to change both the attitudes and behaviors of faculty and staff. We have some evidence that behaviors are changing—more women and minorities are being hired—but evidence of attitude changes must come from another source, such as a survey.

The *Study of Faculty Worklife at UW-Madison* survey^{14,15} was conceived of in 2001, as an element of the proposed ADVANCE project at UW-Madison. Development of the survey instrument began in 2002 with in-depth interviews of 26 women faculty in the biological and physical sciences. Their comments formed the basis of an instrument designed to investigate gender differences in workplace experiences of men and women faculty in biological and physical sciences. In late 2003, just before the instrument was to be fielded, the Office of the Provost requested that the survey be sent to all faculty in all divisions, and funded the additional costs associated with the expansion of the survey. This survey was implemented from February through June of 2003, and received a 60.2% response rate.

In 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 nearly identical 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.

The two surveys in 2003 and 2006 now provide the UW-Madison campus with a rich source of faculty attitude data. The datasets are reasonably representative of the faculty at large, with some exceptions. As is common in most surveys, women tended to respond at higher rates than men, and response rates also varied quite widely across schools and colleges, with the Law School and School of Business showing the lowest response. In the 2003 survey, women faculty of color responded at the same or higher rates as majority faculty women, and men faculty of color tended to respond at lower rates, particularly Asian males. In 2006, all faculty of color (men and women, all racial/ethnic groups) tended to respond at lower rates than their majority counterparts, and in contrast to their

high participation in the 2003 survey. Aside from these differences, response was quite consistent across measurable demographic characteristics of the faculty.

Satisfaction of New Faculty with the Hiring Process

Because the *Searching for Excellence & Diversity* workshops place a great deal of emphasis on the interview process, we might expect that newly-recruited faculty to the University are having a better experience with the hiring process than was previously the case, before the University invested time and resources in training search committee chairs to run effective interview processes. Fortunately, we can test this hypothesis using the climate survey data described above. We hoped to make an impact in the percentage of new faculty who “agree strongly” to three items in particular:

I was satisfied with the hiring process overall

Faculty in the department made an effort to meet me

My interactions with the search committee were positive

In the table below, we compare new faculty in 2003 (hired between 2000 and 2002) to new faculty in 2006 (hired between 2003 and 2005). We restrict the sample to faculty in biological and physical science departments only (this eliminates the low-response schools such as Law and Business.) In these analyses, we are looking to see whether departments that sent at least one faculty member to a *Searching for Excellence & Diversity* workshop in 2004 have differential response of new faculty to these three items.

Table 3. Changes in Percentages of New Faculty Strongly Agreeing to Hiring Items, 2003-2006

	Department Attended Hiring Workshop in 2004			Department Did NOT Attend Hiring Workshop in 2004		
	Total	Women	Men	Total	Women	Men
I was satisfied with the hiring process overall	+ 7.5%	+ 18.8%	+ 4.2%	- 24.1%	- 14.7%	- 30.8%
Faculty in the department made an effort to meet me	- 16.3%	- 0.8%	- 22.2%	- 14.2%	- 14.7%	- 12.4%
My interactions with the search committee were positive	- 18.7%	+ 14.4%	- 28.6%	- 7.5%	+ 0.7%	- 16.6%

Italics indicate significant t-test at $p < .10$ level; **Bold** indicates significant t-test at $p < .05$ level.

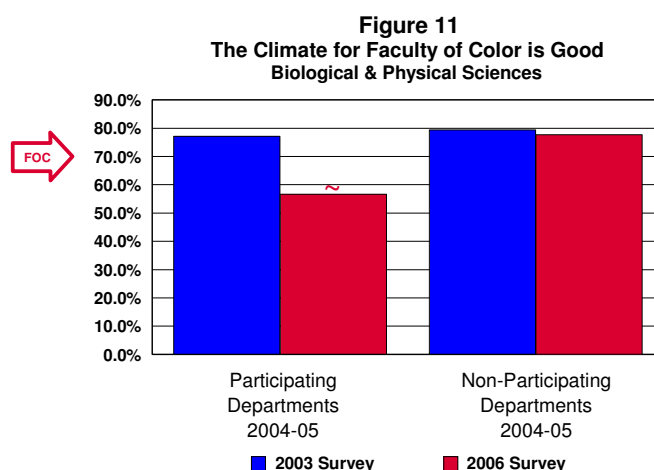
* Positive values indicate strong agreement to the item increased between 2003 and 2006; negative values indicate a decline.

Only 2004 attendance is used for this analysis because the faculty who participated only in 2005 would not have had the opportunity to improve the hiring process for those new faculty who arrived 2003-2005. New faculty in departments who participated in the hiring workshops increased their satisfaction with the hiring process overall (non-significant), while new faculty in those departments that did not participate actually showed significantly decreased satisfaction with the hiring process compared to their peers hired in 2000-02. Interactions with the search committee showed a positive increase for women faculty in those departments who participated, but men in any department decreased their strong agreement that their interactions with the search committee were positive. Most faculty were less likely to agree strongly in 2006 that the faculty in their departments made

an effort to meet them than the new faculty in the 2003 survey; however, this decline was not nearly as sharp for women in departments that attended the hiring workshops, and was most pronounced for the new male faculty. In general, we conclude that participation in the *Searching for Excellence & Diversity* workshops is associated with a more positive search process experience for women, but not necessarily for men. It is important to note that satisfaction with the search process overall is strongly correlated with not only the interactions with search committee members and other faculty in the department, but also with the securing of resources (i.e., a good start up package.) Many new hires in 2006, particularly men, indicated dissatisfaction with their startup packages and other resources, and the more negative ratings of the entire search process in 2006 is related to this. Conversely, the item “My interactions with the search committee were positive” is not related to the securing of resources. That new male faculty (regardless of whether their departments participated in our workshops) are reporting significantly less satisfaction with their interactions with the search committees is a phenomenon that requires further investigation on our campus.

Other Attitude Changes

Participation in the *Searching for Excellence & Diversity* workshops at the UW-Madison appears to be correlated to other changes we are observing on campus—a wholly unintended yet welcome effect. Specifically, we find that participants in our hiring workshops are revising their attitudes about the climate that faculty of color are experiencing in their departments. In 2003 (prior to workshop participation) there was little difference in the percentages of faculty who indicate that the climate for faculty of color in their departments is good, yet by 2006, those faculty who participated in the *Searching for Excellence & Diversity* workshops in either 2004 or 2005 had revised their opinions about the climate experienced by their colleagues of color:



We do not interpret the change in perception of the climate for others as a negative change in climate overall. In fact, about 70% of faculty of color themselves report that climate in their departments is good (see “FOC” arrow above). Rather, we are surprised to find that the estimation of “good” climate for faculty of color is revised downwards only for those

faculty who participated in the hiring workshops and were exposed to the literature on unconscious biases and assumptions.

Conclusion

The UW-Madison has been extremely pleased with the reception of faculty to the *Searching for Excellence & Diversity* workshops, and also with the results. The period of funding from the original ADVANCE grant has ended, but UW-Madison has committed resources to continuing the workshops in order to continue building a more diverse faculty. In 2006 we trained even more faculty than we had in the past as new schools and colleges (non-STEM) have requested the workshops in their colleges, and we continue to monitor the diversity of hires across the University.

Implementing the workshops is not cost-free. Staff time and some materials are needed. However, many campuses are beginning to look at their search processes with a critical eye and are beginning to make these investments and implement training for their search committees on their own campuses. WISELI has been helping disseminate the *Searching for Excellence & Diversity* workshop content and materials to requesting campuses. We can send our brochures and booklets at cost, or even come to a campus or group of campuses to administer our “train the trainers” workshop we call *Implementing Training for Search Committees*⁹. Regardless of how a campus chooses to implement reform of their faculty hiring processes, the experience at UW-Madison shows that the hiring process can be successfully altered such that women and minorities are more often offered positions, and more often join the faculty. We recommend an approach that is led by faculty in an active learning environment, incorporates empirical research findings on unconscious biases and assumptions, and is implemented in a way that encourages accountability. Increased offers to and hiring of women and minorities in STEM fields is one reward for these efforts, and changes in attitudes in the faculty overall is a side effect that will enable the retention of these new faculty for years to come.

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WISELI Publications 2007:

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Climate Change at the University of Wisconsin-Madison: What changed, and did ADVANCE have an impact?

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Abstract—The University of Wisconsin-Madison received an NSF ADVANCE Institutional Transformation award in 2002. One goal of this grant was to improve departmental climate for women faculty in the sciences and engineering. Between 2003 and 2005, the ADVANCE program implemented a number of new initiatives on campus. In 2006, we repeated our faculty climate study, and can reassess the climate for women and faculty of color in science and engineering departments. Between 2003 and 2006, we have documented a change in the majority groups' perceptions of the climate experienced by underrepresented groups. Specifically, men faculty and white/majority faculty perceive the climate for women and faculty of color more similarly to the actual climate reported by the individuals in these underrepresented groups in 2006. The attitude shift is correlated with participation in ADVANCE activities, especially attendance at the *Searching for Excellence & Diversity* hiring workshops, where research on unconscious biases and assumptions is presented and discussed. These findings provide some evidence that the ADVANCE program at the UW-Madison has contributed to the climate change we are seeing on campus.

Introduction

Much of the literature surrounding the issues for women faculty in academic science and engineering contain some mention of a “chilly climate” for women in these disciplines (Aguirre, 2000; Bronstein, Drew & Work, 1998; Ginorio, 1995; Sandler & Hall, 1986.) According to this literature, the climate for women in academia is at least partially responsible for disadvantages for women in hiring, promotion, productivity, tenure, access to resources, salary and benefits, and other elements of the faculty job in which women are disadvantaged. Although very little evidence exists that directly links unfavorable outcomes to women in the academy (e.g., lower tenure rates, less lab space, higher attrition, lower salaries, etc.) with the particular “climate” they experience in their departments and universities, the preponderance of evidence—both qualitative and quantitative—that women do experience a more negative “climate” than their male peers has sufficed to generate concern about the climate in departments and universities, and prompt major efforts to improve that climate for women faculty.

For purposes of this paper, we define “climate” as follows:

The atmosphere or ambience of an organization as perceived by its members. An organization's climate is reflected in its structures, policies, and practices; the demographics of its membership; the attitudes and values of its members and leaders; and the quality of personal interactions. (UW-Madison, 2002).

Using this definition, we see that some elements of climate might be easier to change and improve than others. The “structures, policies, and practices” can be altered by institutional leaders to improve the working experiences of women faculty. Increasing the numbers of women faculty can address the “demographics of its membership.” However, it is the element of climate described as “attitudes and values of members” and the “quality of personal interactions” that is the commonly-understood meaning of “climate.” It is these vague, interpersonal elements of climate that may be the most difficult to change, because it requires the changing of individual attitudes and behaviors.

How might one think about improving climate in an academic setting? Carnes, Handelsman, Sheridan, and Fine (2005) proposed thinking about changes in attitude related to an increasing acceptance of diversity in the academic workplace as occurring in a series of stages. In the first stage (precontemplation), faculty members are unaware that a climate “problem” exists. They do not realize that women and other underrepresented groups in their departments do not feel welcome, and when presented with evidence of such differential experiences, they often blame the women or the underrepresented persons as simply “not fitting in.” In the second stage (contemplation), faculty members begin to understand that women and other underrepresented faculty members are experiencing a “chilly climate” and see this as problematic. The third stage (preparation) is a period when faculty prepare to make some change, such as taking a personal inventory of their own behaviors, or seeking out workshops, books, or references for advice. During the fourth stage (action), faculty members actually change their attitudes and behaviors, creating a warm and welcoming climate for all faculty. Finally, the fifth stage (maintenance) describes the process of examining behaviors and making adjustments to continually ensure that climate remains positive for all. Using this framework, Carnes and her colleagues theorized that improving campus climate means moving the attitudes and behaviors of faculty member from the “precontemplation” stage through to the “maintenance” stage, and they designed survey items to measure this change on one campus as part of a project funded by the National Science Foundation (NSF).

The NSF’s ADVANCE program was implemented in 2001 to address the institutional-level issues that are impeding women’s full participation and advancement in academic science and engineering (National Science Foundation, 2001). Previous years of funding individual women faculty had made very little impact on the percentages of women at the highest ranks of academia (Rosser, 2004); thus, a new program was designed to promote “institutional transformation” to create the change that NSF was hoping for in scientific and engineering leadership in the United States. By making awards at the institutional level, the ADVANCE program was attempting to affect all areas of climate noted above—policies and procedures, increases in women faculty, and changes in attitudes and behaviors—in order to ultimately increase the promotion and advancement of women in academic science and engineering. By making very large awards (\$3.75 million over 5 years) to campuses, the NSF hoped to generate a series of proven approaches to making our academic institutions more hospitable to women faculty. The University of Wisconsin-Madison was a first-round recipient of an ADVANCE Institutional

Transformation Award, naming its project the “Women in Science & Engineering Leadership Institute (WISELI).”

WISELI Interventions

To address the issues for women faculty in the biological and physical sciences at UW-Madison, WISELI addressed “climate” from all angles. University policies and procedures were examined, especially as they related to distribution of resources between women and men faculty. Emphasis was placed on the hiring of women faculty in biological and physical science departments, and a new workshop was developed to train chairs of faculty hiring committees to perform more broad and inclusive searches and more fairly evaluate each applicant for the position, especially those from underrepresented groups. Finally, the “chilly climate” at the departmental level was specifically addressed with the creation of the *Climate Workshops for Department Chairs*.

Each of the two main workshop series designed and implemented by WISELI attempted to alter the attitudes and behaviors of faculty. In the *Searching for Excellence & Diversity* hiring workshops (WISELI, 2002a), we work primarily with the chairs of faculty hiring committees in a workshop that lasts from two to four hours. In 2004 and 2005, around 100 faculty in biological and physical science departments participated in the training (some of them involuntarily, as one dean required attendance at the workshops before releasing a position to the department.) In these workshops, we use active learning and peer teaching techniques to teach search committee chairs about the “5 essential elements of a successful search” (WISELI, 2003a). We cover: running effective meetings; active recruitment; the effects of unconscious biases and assumptions on the search process; ensuring a fair and thorough review of candidates; and interviewing. The innovative element in this training is the approximately 25% of the workshop time devoted to a presentation and discussion of the research literature on the presence of unconscious biases and assumptions (WISELI, 2003b) and the specific ways that women and minorities are disadvantaged in the hiring process due to these unconscious tendencies. It is this element that we believe changes attitudes and behaviors with regard to departmental climate.

In the *Climate Workshops for Department Chairs* (WISELI, 2002b), we work with small (6-8) groups of department chairs to explore and change the climate in their departments. We work with the chairs in three, two-hour workshop meetings. As with the hiring workshops, the *Climate Workshops* are predicated on the concepts of active learning, and peer teaching; WISELI facilitators do very little talking in these sessions, they mostly facilitate discussion among the chairs. The first session (of three) is used to help chairs understand that the experiences of underrepresented groups in their departments might not be as positive as they might assume, and to convince the chairs that they have the power to improve the climate for those groups in the department. Between the first and second meetings, a small web-based climate survey is implemented within the chair’s department, and a confidential report of results is prepared for the chair. In the second session, the chair receives his/her report, and by the end of the session and with the assistance of the other chairs and the workshop facilitator, creates a plan for addressing

any issues that have arisen in their report. Between the second and third session the chair returns to his/her department to implement changes, and comes back for a third and final meeting where they discuss results and strategize about additional avenues for positive change. These workshops are designed to improve departmental climate through the concrete actions of chairs; however, only the attitudes of chairs (as opposed to other faculty in the department) can be directly affected through these workshops, as the chair is the only department member with which we meet.

Through these and several other interventions, WISELI hoped to create a positive climate change for women faculty in UW-Madison biological and physical science departments. The focus on departmental climate is important, for it is in these smaller units (the department) where feelings of disrespect, isolation, and lack of connectedness are felt most keenly. For the survey analyses that follow, we will focus exclusively on experiences of climate within a department (rather than on campus as a whole.)

Climate Survey Results

To measure change in the attitudes and perceptions of faculty surrounding their interpersonal interactions within their departments and on campus as a whole, WISELI designed a survey instrument, administered at the beginning of the ADVANCE project (2003), and again at the end (2006). In 2003, twenty-four different items were used to measure “climate” broadly (including within a department, and on campus as a whole), and in 2006 thirteen additional items were added. Some of these items measured climate as experienced by the individual (e.g., “I feel respected”, “I feel isolated”), and some of the items measured the respondent’s perceptions of climate overall for various groups (“Climate for women in my department is good”, “Climate for faculty of color in my department is good.”) Using a subset of these items that pertain directly to department climate, we investigated changes from 2003 to 2006 and correlated any observed changes with a number of variables, including participation in WISELI workshops and events.

The Study of Faculty Worklife at the University of Wisconsin-Madison

Development of the *Study of Faculty Worklife at UW-Madison* survey began in 2002 with in-depth interviews of 26 women faculty in the biological and physical sciences. Their comments and stories formed the basis of an instrument designed to investigate gender differences in workplace experiences of men and women faculty in biological and physical sciences. In late 2003, just before the instrument was to be fielded, the Office of the Provost requested that the survey be sent to all faculty in all divisions, and funded the additional costs associated with the expansion of the survey. This survey was implemented from February through June of 2003, and received a 60.2% response rate for all faculty, and a 59.1% response rate for biological and physical science faculty (WISELI, 2003c).

In 2006, WISELI re-surveyed the faculty in order to evaluate the impact of the ADVANCE grant on campus, and document any changes that occurred between 2003 and 2006. 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% overall response rate, and a 54.4% response rate for biological and physical science faculty (WISELI, 2006).

The two surveys in 2003 and 2006 now provide the UW-Madison campus with a rich source of faculty attitude data. The datasets are reasonably representative of the faculty at large, with some exceptions. As is common in most surveys, women tended to respond at higher rates than men, and response rates also varied quite widely across schools and colleges, with the Law School and School of Business showing the lowest response. In the 2003 survey, women faculty of color¹ responded at the same or higher rates as majority faculty women, and men faculty of color tended to respond at lower rates, particularly Asian males. In 2006, all faculty of color (men and women, all racial/ethnic groups) tended to respond at lower rates than their majority counterparts, and in contrast to their high participation in the 2003 survey. Aside from these differences, response was quite consistent across measurable demographic characteristics of the faculty. Analysis of the 2003 and 2006 survey data in this study will be limited to the faculty whose primary departmental affiliation is a biological or physical science department (approximately 1,250 faculty in 70 departments comprise the population in which we are interested.)

Table 1. Response Rates* for Study of Faculty Worklife Surveys, 2003 and 2006

	2003			2006		
	Men	Women	Total***	Men	Women	Total
Surveys Mailed**	1,008	228	1,236	999	251	1,250
Completed Surveys Returned	576	152	730	511	167	680
Response Rate	57.1%	66.7%	59.1%	51.2%	66.5%	54.4%

* Biological and physical science departments only.

** Ineligible respondents removed from "surveys mailed" headcounts.

*** Total may be higher than the sum of men and women headcounts due to missing data on gender.

Baseline Data: Results from 2003

As is found in most climate surveys, women faculty report more negative departmental climate on almost all of the 11 departmental climate indicators we selected in the 2003 survey. They feel less respected, more isolated, less "fit", more exclusion from informal networks, and report feeling less involved with departmental decision-making processes. Most of the differences between women and men faculty were statistically significant at the $p < .05$ level. The results for faculty of color were not significant; however many of the indicators are in the direction of a worse departmental climate experience.

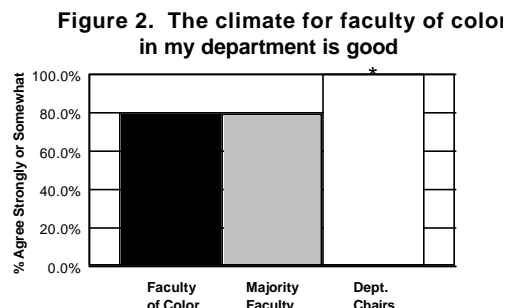
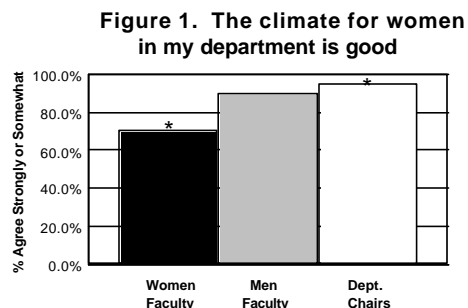
¹ "Faculty of color" is defined in this study as those faculty who self-identify as African American, Asian American, American Indian, and/or Hispanic. Faculty who are not U.S. Citizens are removed from the "faculty of color" designation even if they choose one of these non-white categories.

Table 2. Climate for Women and Faculty of Color, 2003

Item	Women (N=137)	Men (N=534)		Faculty of Color (N=47)	Majority Faculty (N=625)
I am treated with respect by colleagues	89.1%	93.1%		93.5%	92.2%
I am treated with respect by students	91.2%	97.7%	*	95.7%	96.5%
I am treated with respect by staff	96.4%	97.0%		97.9%	96.8%
I am treated with respect by my department chair	84.7%	91.4%	*	89.1%	90.1%
I feel excluded from an informal network in my department	46.7%	24.3%	*	37.0%	28.3%
I encounter unwritten rules concerning how one is expected to interact with	41.9%	26.4%	*	31.8%	29.4%
Colleagues in my department solicit my opinion about work-related matters	69.9%	85.4%	*	87.2%	81.8%
I feel that my colleagues value my research	68.5%	82.4%	*	76.1%	79.9%
I do a great deal of work that is not formally recognized by my department	59.0%	60.1%		58.7%	60.0%
I feel like I "fit" in my department	63.2%	78.1%	*	78.3%	74.8%
I feel isolated in my department	44.9%	22.5%	*	31.1%	26.8%

* Indicates significant difference at $p < .05$ level.

While these findings were disappointing, they were not surprising, as most campuses report similar discrepancies between these groups (MIT, 1999; University of Michigan 2002; University of Wisconsin-Madison Medical School, 1997; Johns Hopkins University, 1999). What we did find that was surprising in this survey was a large gap between women and men in the perception of the climate for women in the department. Specifically, men faculty overestimated the climate for women faculty by a significant percentage. Finally, we were most surprised to find that department chairs (who are primarily men in the 2003 sample) overestimated the quality of departmental climate for the women and faculty of color in their departments the most (Pribbenow et al., 1997). For all figures that follow, an asterisk (*) indicates a significant t-test at the $p < .05$ level; a tilde (~) indicates a marginally-significant t-test at the $p < .10$ level.



These results suggest that the UW-Madison faculty was in the “precontemplation” stage with respect to departmental climate in 2003, at the beginning of the ADVANCE work on campus. Most faculty, especially those in the majority (men, whites) and those in leadership positions, overestimated the actual climate for the underrepresented persons (women, faculty of color) in their midst. In the “precontemplation” stage there is no awareness that climate is an issue for women or minorities, and our data seemed to indicate that this was indeed the case in the biological and physical science departments at the UW-Madison.

Climate Change: Comparing Results from 2003 and 2006

Ultimately, we would like to know if women and faculty of color reported improved climate between 2003 and 2006. If so, we would like to know if we can attribute these changes to anything in particular—especially to the interventions that WISELI initiated on campus. First, we report on changes in the personal experience of climate for women and faculty of color at UW-Madison; next, we report the responses of men and of majority faculty with regards to their perceptions of climate for women and faculty of color. Finally, we then turn to the question of what might account for any observed changes.

Self-Reported Experiences of Climate for Women and Faculty of Color

Only a few of the specific climate items that were asked in both 2003 and 2006 showed a significant change over time for women, or for faculty of color. For women faculty in the biological and physical sciences, 5 of the 11 climate indicators were more positive in 2006 than in 2003, including the item “I feel I ‘fit’ in my department,” to which women faculty agreed significantly more often in 2006 than they did in 2003. Four of the 11 items showed no change at all between 2003 and 2006, and two of the items showed slightly worse experiences for women in 2006. Faculty of color also showed climate improvements for 4 of the 11 items on our instrument. Of note, we see a decrease in the percentage of faculty of color who report that they “feel excluded from an informal network in my department.” Six the 11 items showed no change for faculty of color, and one item showed a slight decline between 2003 and 2006.

Table 3. Climate for Women and Faculty of Color, 2006

Item	Women (N=156)	Men (N=495)		Faculty of Color (N=51)	Majority Faculty (N=599)
I am treated with respect by colleagues	89.0%	95.0%	*	94.1%	93.5%
I am treated with respect by students	93.0%	97.2%		94.1%	96.3%
I am treated with respect by staff	95.5%	98.0%		98.0%	97.3%
I am treated with respect by my department chair	88.1%	92.4%		87.2%	91.7%
I feel excluded from an informal network in my department	51.9%	21.6%	*	<u>21.6%</u>	29.6%
I encounter unwritten rules concerning how one is expected to interact with	46.8%	26.1%	*	27.5%	31.3%
Colleagues in my department solicit my opinion about work-related matters	77.1%	89.4%	*	86.0%	86.5%
I feel that my colleagues value my research	71.1%	81.0%	*	78.4%	63.3%
I do a great deal of work that is not formally recognized by my department	60.8%	59.3%		59.2%	59.7%
I feel like I "fit" in my department	74.3%	83.1%	*	74.0%	81.6%
I feel isolated in my department	35.7%	21.3%	*	25.5%	24.7%

* Indicates significant difference at $p < .05$ level.

Significantly HIGHER than 2003, $p < .05$.

Significantly HIGHER than 2003, $p < .10$.

Significantly LOWER than 2003, $p < .05$.

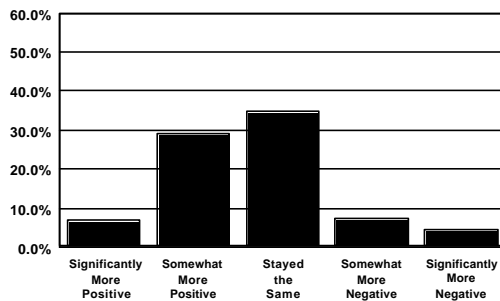
Significantly LOWER than 2003, $p < .10$.

The overall impression from these 11 indicators is that of a slightly improved departmental climate for both women, and faculty of color. The statistically significant improvement in the item "I feel like I 'fit' in my department" for women faculty (and others as well) is especially encouraging, as it is this one item that is perhaps the "best measure" of climate, because it is the most highly correlated with all of the other items (analysis not shown.) Significantly higher feelings of fit for women faculty in 2006 are a welcome change from 2003.

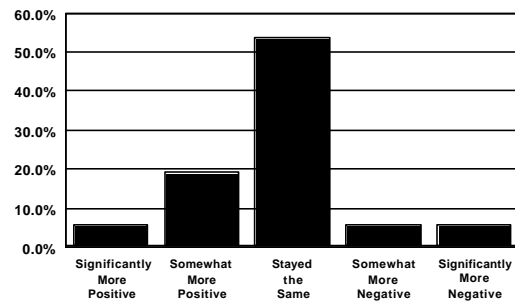
In 2006, we also asked faculty to report their own perceptions of climate *change* between 2003 and 2006. Women faculty in the biological and physical sciences reported positive change more often than they did negative change, as did faculty of color (although not as

strongly.) Three times as many women faculty indicated climate for themselves in their departments had improved rather than declined, and two times as many faculty of color reported a climate improvement for themselves rather than deteriorating climate.

**Figure 3. How Has Climate Changed for Me Personally
Responses of Women Faculty**



**Figure 4. How Has Climate Changed for Me Personally
Responses of Faculty of Color**

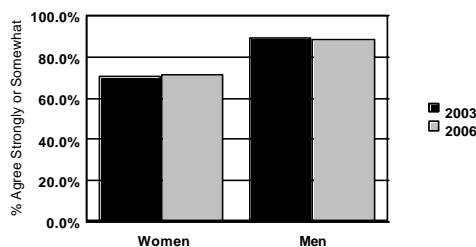


When measured from an individual perspective, one could say that climate is either the same or slightly improved between 2003 to 2006 for both women faculty and faculty of color in the biological and physical sciences at UW-Madison.

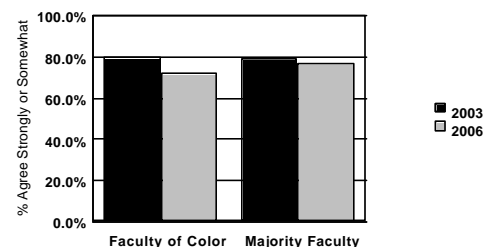
Perceptions of Climate Experienced by Others

How do women faculty and faculty of color perceive the climate for others like themselves in their departments? How to the majority faculty (male, and white) perceive the climate for their colleague who are women and members of racial/ethnic minority groups? Women faculty have not appreciably changed their opinion about whether climate for women in their departments is “good” between 2003 and 2006, while faculty of color are reporting less often in 2006 that climate for faculty of color in their departments is “good.” For faculty of color, this is in contrast to their self-reports about climate change over time for themselves; they are reporting that climate is improving in their departments even while they are less often in agreement that the climate is “good.”

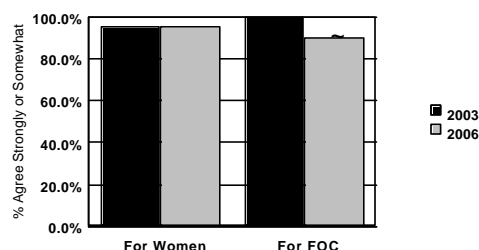
**Figure 5. The Climate for Women in
My Department is Good**



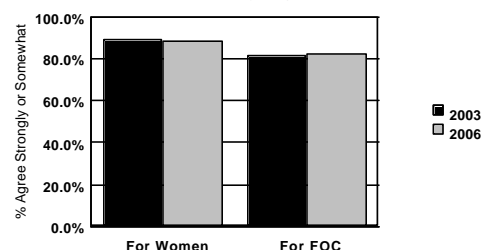
**Figure 6. The Climate for Faculty of
Color in My Department is Good**



**Figure 7. The Climate is Good in My Department
Responses of Department Chairs**

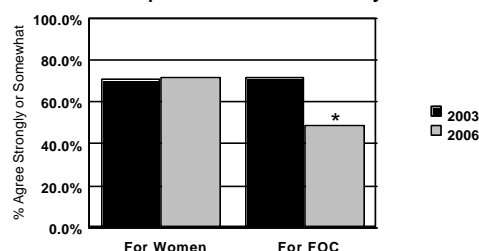


**Figure 8. The Climate is Good in My Department
Responses of Majority (White) Men**



These measures—of how women perceive the climate for women, and how faculty of color perceive the climate for faculty of color—can be used as an estimate of the “true” climate for women and for faculty of color in biological and physical science departments, if we make the assumption that women and faculty of color themselves are the most sensitive to the climate for others like themselves in a department. We then ask how well the majority group—men, and white faculty—view the climate in their department for women and for faculty of color, and also ask whether department chairs changed their views over this time period. As we saw in the 2003 data, there is a large gap between the perceptions of majority groups (men, white faculty) and leaders (department chairs) in a department, and the minority group (women, faculty of color) members’ own perceptions; we would like to know if this gap decreased in 2006.

**Figure 9. The Climate is Good in My Department
Responses of Women Faculty**



Overall, between 2003 and 2006, men faculty did not appreciably change their agreement to the item asking whether climate for women in their departments is good, and department chairs also saw little change on this measure; the gaps in perceptions did not decrease appreciably regarding the climate for women faculty. White faculty did slightly decrease their level of agreement to the question of whether the climate for faculty of color in their departments is “good”, although most of this change is due to the changing opinions of women on this item, as white male faculty actually increased their agreement to this item between 2003 and 2006. Department chairs showed a marginally significant decrease in the percent agreeing that climate for faculty of color in their departments is “good”, even though 90% of biological and physical science department chairs still agree in 2006 that climate for faculty of color in their departments is “good” (in contrast to the 72% of faculty of color who agree to the item.)

As mentioned briefly above, women faculty in the biological and physical science markedly decreased their agreement to the item “the climate for faculty of color in my

department is good” between 2003 and 2006. In 2003, approximately 71% of women faculty agreed that the climate for faculty of color in their departments was good, and in 2006, less than half (48.6%) agreed. Note that this is a much lower level of agreement than faculty of color themselves report.

Using data for all biological and physical science faculty overall, we report the same or slightly improved climate for women and faculty of color when they are asked to report on the specific elements of departmental climate that they themselves experience. When asked to report about the climate for other women and other faculty of color, however, a slightly more negative picture emerges. Overall, we see little change in how majority groups (men, whites) view the climate for women and faculty of color, although we have some evidence that department chairs are developing a more realistic assessment of the climate for the faculty of color in their departments, as are women faculty in the biological and physical sciences.

Participation in WISELI Workshops and Attitude Change

Although some change is observed in the aggregate for both individual experiences of departmental climate, and perceptions of climate for others, when we disaggregate our data by gender, race/ethnicity, and whether a faculty member and/or department member participated in a WISELI workshop, we begin to see more evidence of change occurring. In this section, we will focus on participation in two WISELI initiatives in particular—the *Searching for Excellence & Diversity* workshops for chairs of hiring committees, and the *Climate Workshops for Department Chairs*.

First, we investigated whether there is a relationship between self-reported climate change for women faculty and faculty of color and participation in WISELI workshops. For a women faculty member, having her chair participate in the *Climate Workshop for Department Chairs* did not appear to be correlated with a positive change over time (in fact, it may be more negative), whereas for faculty of color there does seem to be a positive relationship.

Figure 10. How Has Climate Changed for Me Personally
Responses of Women Faculty

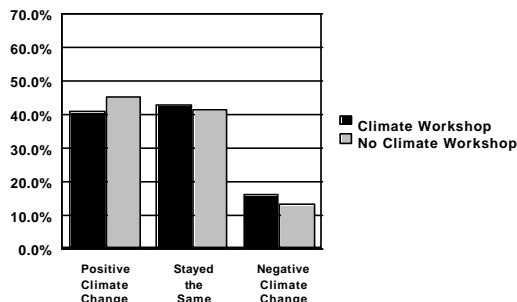
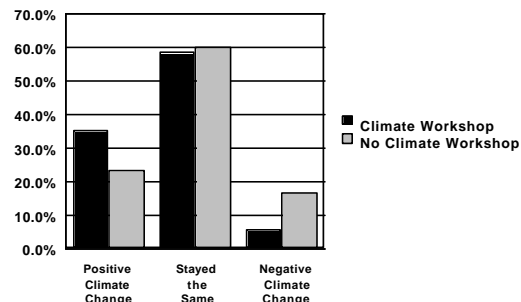


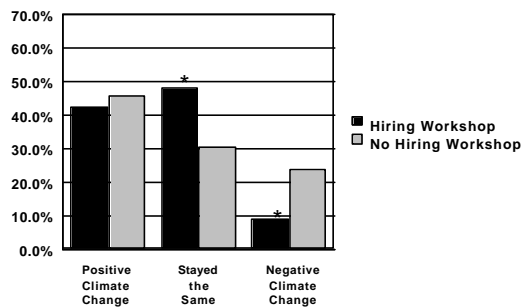
Figure 11. How Has Climate Changed for Me Personally
Responses of Faculty of Color



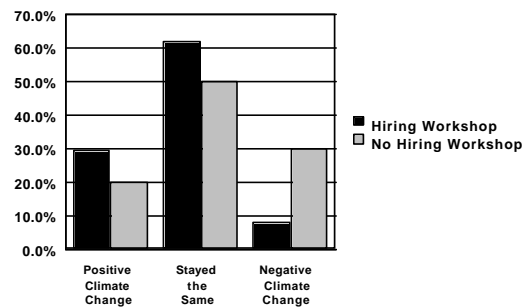
More change for women faculty is observed when at least one faculty member in a department participates in the *Searching for Excellence & Diversity* hiring workshops. Women who had a department member participate in the hiring workshops reported a negative climate change significantly less often than their female colleagues in

departments who did not send a faculty member to the workshops. Having at least one faculty member from a department participate in the hiring workshop is correlated with a report of positive climate change for faculty of color.

**Figure 12. How Has Climate Changed for Me Personally
Responses of Women Faculty**

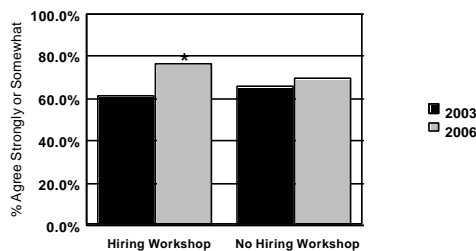


**Figure 13. How Has Climate Changed for Me Personally
Responses of Faculty of Color**

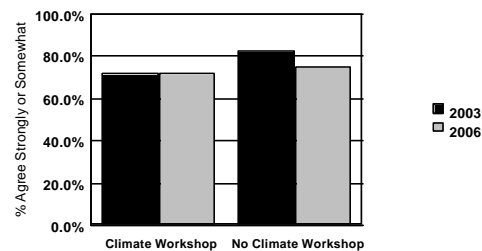


On the important measure of a feeling of “fit” in the department, we did see a relationship between having a department member participate in a hiring workshop for women (but not for faculty of color). Women faculty in the biological and physical sciences overall increased their feelings of departmental “fit” between 2003 and 2006, and this happened significantly more often for women in departments that participated in hiring workshops, compared to those which did not. For faculty of color, it was departmental participation in the climate workshops that was most highly correlated with feelings of “fit”—faculty of color whose chairs participated did not experience the decline in feelings of fit that other faculty of color experienced.

**Figure 14. I Feel Like I "Fit" in My Department
Responses of Women Faculty**



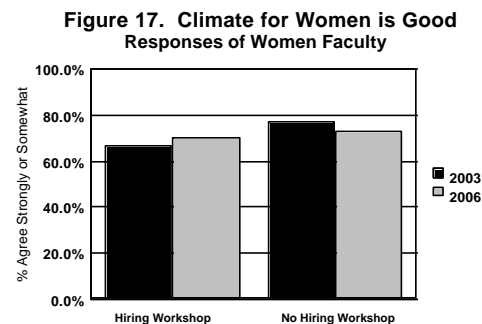
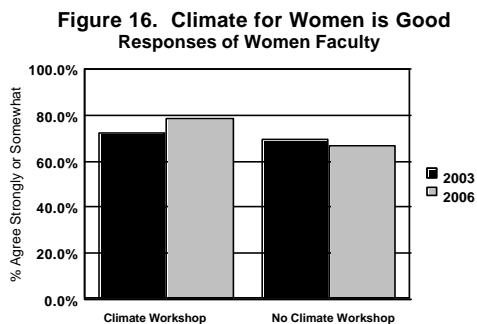
**Figure 15. I Feel Like I "Fit" in My Department
Responses of Faculty of Color**



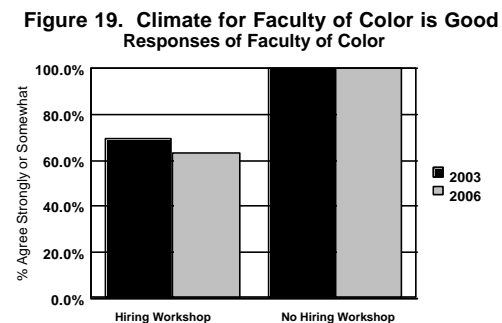
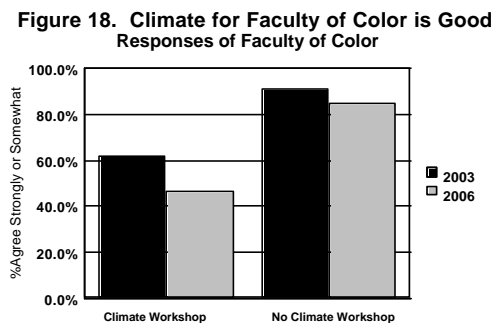
Thus, the two workshops appear to be related to perceptions of positive climate change between 2003 and 2006 for faculty of color, while only the hiring workshops are correlated with change for women faculty.

Is having a department chair or other faculty member who participated in one of WISELI’s workshops correlated with changes in agreement that climate is “good” for women and minorities? That is, are faculty who have been “trained” revising their views on how women and faculty of color are experiencing climate in their departments? Perceptions of the climate for women do appear to change for faculty who attended WISELI workshops, although the results are not statistically significant. Women in departments that participated in the *Department Chair Climate Workshops*, or sent a

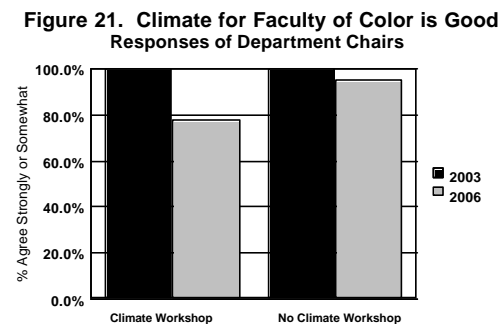
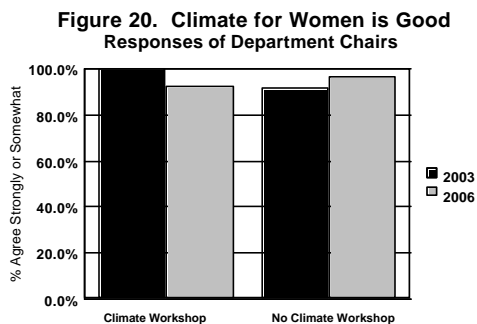
faculty member to the *Searching for Excellence & Diversity* hiring workshops, reported more often in 2006 that climate for women in their departments was “good.”



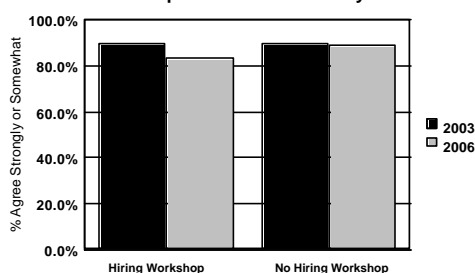
Interestingly, and in contrast to the self-reported climate change results above, faculty of color were not more inclined to agree that climate for faculty of color in their departments was good in 2006 if there was participation by their department in WISELI’s workshops. Again, these results are not even marginally significant, yet they are in a direction which is troubling.



Finally, we ask whether participation in either WISELI’s *Searching for Excellence & Diversity* workshops, or a department chair’s participation in the *Climate Workshops for Department Chairs*, is related to change in attitudes about the climate for women and minority faculty in the department. We find that participation in these workshops does appear to be related to a decrease in agreement that climate for women, and especially for faculty of color, in one’s department is “good.”



**Figure 22. Climate for Women is Good
Responses of Men Faculty**



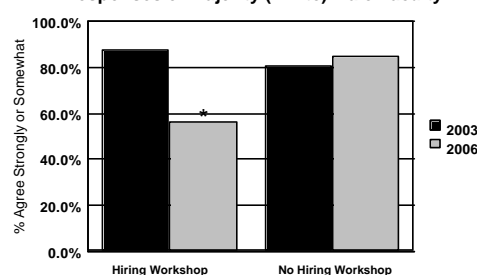
**Figure 23. Climate for Faculty of Color is Good
Responses of Majority (White) Faculty**



**Figure 24. Climate for Women is Good
Responses of Majority (White) Male Faculty**



**Figure 25. Climate for Faculty of Color is Good
Responses of Majority (White) Male Faculty**



Discussion and Conclusions

To return to the title of this paper, we find that there has been some climate change at the UW-Madison, and that the interventions created by WISELI likely are related to that change. The climate for women and minorities has improved slightly between 2003 and 2006, when we ask faculty about their personal experiences on a number of dimensions of departmental climate. It is less clear that faculty of color overall feel that climate has improved for all faculty of color, but women do report that climate has at least stayed the same between 2003 and 2006 for all women faculty. Perceptions of the climate experienced by women and faculty of color by the majority and leadership groups (men, whites, department chairs) have changed between 2003 and 2006; those faculty who are in the majority do seem to be revising downward their agreement that things are “good” in their departments for women and for faculty of color. This change appears to be most strongly related to participation in our *Searching for Excellence & Diversity* workshops for chairs of hiring committees.

As we show in Figures 24 and 25, white male faculty who participated in our hiring workshops were slightly more likely to disagree that climate for women faculty in their departments was “good” in 2006, and significantly more likely to disagree that climate for faculty of color in their departments was “good” in 2006, compared to 2003. Although one might argue that this indicates actual worse climates for women and for faculty of color, we believe that this revision downward actually reveals a positive change—from the former stage of “precontemplation” to “contemplation” and perhaps even “action.” Faculty who participated in our hiring workshops were exposed to the literature on unconscious biases and assumptions, and were provided with specific tips on how to reduce their impact in the hiring process (WISELI, 2003b). It is possible that creating this awareness for the hiring process may have also raised the awareness more generally, and we are seeing the positive effects on climate in three years. The extension of these individual attitude changes to changes experienced department-wide by women

faculty especially (see Figures 12 and 14) may stem from our choice to train primarily chairs of hiring committees in these workshops. Faculty members who are chosen to chair a faculty search are usually senior level male faculty members who get along well with others in the department; as such, they are particularly influential in their departments.

Of course, we are mindful that most of the faculty who participated in our workshops—department chairs and chairs of hiring committees—did so voluntarily. It is very possible that the correlations with changes in attitude that we observe in our faculty surveys are actually related to the participating faculty members' willingness to investigate issues of bias and climate in the first place. That may be true; however, the faculty members who participated in our workshops exhibited attitudes in 2003 that were not significantly different than their colleagues who did not participate. That these faculty sought the training that we provided and then revised their attitudes accordingly probably indicates that a core group of senior faculty members have made the transition through the stages of change.

We are also mindful that very few of the changes we have reported in these analyses are statistically significant at the conventional $p < .05$ level. The significant relationships we report are those we highlight most, but we think that the general *patterns* of findings are important as well—they tell a coherent story about climate change for underrepresented groups at UW-Madison. It is difficult to imagine that major significant changes could occur on a campus as large and decentralized as the UW-Madison in just three years (the time gap between surveys); thus, we do feel it is appropriate to analyze the patterns of difference rather than to narrowly focus only on those few changes that were statistically significant.

Departmental climate change at UW-Madison does appear to be slowly occurring. It is different for women faculty and faculty of color, and yet both of WISELI's interventions appear to be making a difference. WISELI's *Searching for Excellence & Diversity* workshops for chairs of hiring committees appears to be making great strides at changing the attitudes of individual faculty members, and some of these faculty take these changes back to their departments with them to improve climate there, especially for women faculty. The *Climate Workshops for Department Chairs* appear to be changing the attitudes of chairs, but this does not always translate into a better climate experience for women faculty. The workshops do seem to be having a greater impact on the experiences of faculty of color. Perhaps the chair's participation in the workshop, and the departmental climate survey, creates a backlash against women faculty in those departments who participate, because the chair's participation is mostly seen as an intervention aimed at the women (our name, Women in Science & Engineering Leadership Institute, has that effect on people.) Future iterations of these workshops may have to address the backlash issue more directly. Overall, however, we are heartened to see that our workshops are having positive effects on the experiences of women and minority faculty in the biological and physical sciences, and plan to continue this work until our entire campus has entered the "maintenance" stage of change.

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Editorial

Jennifer Fever in Academic Medicine

MOLLY CARNES, M.D., M.S.¹ and JUDYANN BIGBY, M.D.²

IN 1988, BARBARA GORDON WROTE a book entitled *Jennifer Fever: Older Men/Younger Women*.¹ Jennifer was the most popular girl's name at that time, and Gordon used it to represent younger women who attract the attention of older men. This attention, she noted, typically comes at the expense of a loss of interest in women of their own age whom Gordon refers to as "Janets," a popular female name from a previous generation. Janet was often the middle-aged spouse who had worked hard for years to earn status and equity. We have been struck by how often this phenomenon occurs in academic medicine.

Frequent examples of Jennifer fever occur in words and actions among middle-aged or older men in academic medicine, whom we call "Daves." For example, at a reception not long ago, one Dave, a senior administrator, said to one of us, "You won't have anything to worry about in terms of women in medicine; you should see the caliber of the women medical students who are entering medical school now." Similarly, in a local newspaper article on why the school was unable to keep senior women physicians on its faculty, a senior Dave's response to this query was that the young women in medical school would solve the problem. These statements are emblematic of the persistent disregard for women who have been enter-

ing medical school in large numbers since the early 1980s² and the inattention to senior women physicians who are currently members of the Daves's own faculty. We have observed that the experience and talent of senior women in academic medicine remain underused, and these Janets are often passed over for leadership positions when they arise in favor of frequently lesser qualified Daves.

We notice, with considerable regularity, that when the issue of the need for more women in academic medicine is brought up, the Daves generally begin to talk about students, residents, fellows, or very junior faculty. They are frequently quite supportive of women at these early career stages. These junior women physicians are pleased with the attention, as Barbara Gordon noted that Jennifers are pleased with the attention of older men. We have observed, however, that when women advance to more senior levels—Janets, if you will—where they have competence, experience, opinions they may wish to voice, and a legitimate claim over institutional resources, they are abandoned. This abandonment comes in the form of being passed over for promotional opportunities, relegated to such positions as being in charge of women's issues, or assigned organizational tasks in response to mandates from higher lev-

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els of administration (e.g., devising mentoring plans, sitting on child care task forces).³ We have both had young women faculty members inform us that gender issues were a thing of the past in academic medicine. These same women have come to us in frustration years later when they were hit by the bias against Janets for the first time.

How do these bright, competent, hard-working women once viewed as promising stars by senior men then become marginalized? We have witnessed a pattern of what we call "mythologizing and justified distancing." If a Janet in any way threatens a Dave—requesting space for research, seeking a leadership position that would put her in charge of a Dave, making a scientific discovery that challenges a Dave's existing work—we note that the Janet begins to be described by one or more Daves as someone who is "difficult to work with," "hard to get along with," or "not a team player." Sometimes, more derogatory gendered descriptors, such as strident or bitchy, are used. Once this myth gains traction, it is used to justify distancing the Janet from those things she would need to succeed. She may be left off key decision-making committees, closed out of communication loops where important information is shared, and denied access to essential resources needed to sustain or advance her academic career. This behavior toward the Janet can of course be justified because of belief in the myth that "she is difficult to work with." Sometimes, the myth actually does become reality because the Janet in academic medicine begins to feel betrayed by those she assumed were supporters or colleagues and becomes frustrated or angry, further justifying the exclusionary behavior of the Daves toward her. These scenarios are familiar outside the professional realm, where the middle-aged wife is portrayed as nagging, unreasonable, and unexciting in order to provide some legitimacy for replacing her with a novice Jennifer who is impressed by Dave's stature and who is grateful simply for acknowledgment.

It is noteworthy that all NIH training grants must report their success in recruiting women and underrepresented minority scientists at the level of Jennifers, yet there is no such accountability for institutions in terms of advancing women and underrepresented minorities into

senior leadership positions. The new Clinical and Translational Sciences Award (CTSA) from the NIH is a stark example of how individual academic medical centers and the major public research-funding agency can successfully collude to exclude Janets from participating in leadership.⁴ These large awards have been made to 12 male principal investigators. The NIH mandates that the CTSA subsume some funded, peer-reviewed programs led by women and that their budgets be redistributed into the hands of the single powerful Daves who lead the CTSA. An important part of the CTSA is, of course, recruiting young Jennifers into training grants.

Academic medicine exists in a broader culture where women have historically occupied low status positions. Women at early stages in their medical careers also occupy low status positions in the hierarchy of academic medicine. The power dynamic between senior male faculty and younger women imitates the gender roles occupied by men and women throughout most of history and still to a large extent in U.S. society. When the first wave of women physicians to be eligible for senior leadership positions found them to be unobtainable, they did what women so often do—they blamed themselves. This spawned multiple programs dedicated to "fixing the women." We saw the growth of conferences on mentoring, negotiation, effective communication, and the like. This resulted in even better prepared women physicians passed over for leadership positions.

Studies document multiple barriers to women's success in leadership in academic medicine. Among them are feelings of isolation, lack of role models, lack of formal and informal mentorship, an environment perceived as denigrating to women, frank gender discrimination, a lack of institutional support for family issues that continue to fall predominantly on women, and traditional models of pedagogy that negatively impact women's self-efficacy to lead a research program.^{5,6} We suggest one additional barrier: Jennifer fever.

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Viewpoint: A Challenge to Academic Health Centers and the National Institutes of Health to Prevent Unintended Gender Bias in the Selection of Clinical and Translational Science Award Leaders

Molly Carnes, MD, MS, and Carole Bland, PhD

Abstract

In controlled studies, both men and women preferentially select men over women for leadership positions, even when credentials are identical and despite field studies demonstrating women's equivalent or slightly better leadership effectiveness. The assumption that men will make better leaders than women is attributed to the pervasive existence of unconscious stereotypes that characterize both men and leaders as agentic or action oriented and women as dependent.

The Clinical and Translational Science Award (CTSA) from the National Institutes of Health (NIH) Roadmap is a

novel, prestigious award that will place considerable power in the hands of one principal investigator—conditions that predict activation of bias in favor of selecting male leaders. The authors review research supporting this assertion. To mitigate the impact of this bias and broaden the pool of potential leaders for this transformative initiative, the authors offer the following suggestions. To academic health centers they suggest (1) internal search committees comprised of at least 35% women that establish a priori the desired qualities for the CTSA leader and broadly solicit applicants, (2) explicit specification of the full range of desirable skills of a CTSA leader, and

(3) systematic efforts to increase awareness of the negative impact of unconscious gender bias on women's advancement. To the NIH they suggest (1) the new multiple principal investigator rule for the CTSA program, (2) a statement in the request for applications (RFA) encouraging diversity among principal investigators, (3) repetition in the RFA of the public NIH statement of the importance of work life balance for young investigators, and (4) constitution of study sections with at least 35% women.

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In the spring of 2005, the National Institutes of Health (NIH) released a program announcement soliciting proposals for Clinical and Translational Science Awards (CTSA) as part of the NIH Roadmap for Medical Research.¹ These sizeable and auspicious awards will merge several discrete NIH programs currently devoted to furthering clinical and translational research and career development. Heading up these programs at each academic health center (AHC) will be a single principal investigator (PI) where previously there may have been two or three. The budgets of these awards will be large—as much as \$14 million dollars of direct costs annually for AHCs that already have

certain NIH-funded programs in place. Although the ability to submit grant proposals with multiple PIs is being piloted by the NIH,² it will not apply to the CTSA program. Competition for these grants will be fierce, and success will confer considerable prestige and power on the individual PIs of selected programs—individuals who are most likely to be male.

Despite the clearly articulated commitment of the NIH to the advancement of women in biomedical and behavioral research,^{3,4} decades of study in cognitive and social psychology^{5–7} predict that the conditions the NIH has established for the development and funding of CTSA will result in the preferential selection of men over women to lead the program at each applicant institution. In this article we examine why men, compared with women, are far more likely to be selected as PIs in CTSA proposals. We describe research on the characteristics of effective leadership and research relevant to the impact of unintended biases on women's success. On the basis of this background, we offer suggestions to the NIH and

academic institutions for facilitating the selection of the best person—man or women—to lead a CTSA program.

Characteristics of Effective Leadership

Although in the past several decades, women have achieved entry into nearly every field traditionally held by men, elite leadership positions from Fortune 500 companies⁸ to department chairs and deans of medical schools still rest solidly in the hands of men.^{9,10} Could it be that men are more likely to rise to high-level positions because they are more effective leaders than women? To answer this question, we looked at contemporary research on leadership. This literature demonstrates that in nearly every organization studied, a leadership style termed “transformational” is most effective.^{11,12} Transformational leaders inspire, innovate, mentor, and empower their followers to move toward a shared vision.¹³ The two other predominant styles of leadership are termed “transactional,” where leaders manage within the existing norms of the

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organization providing rewards for satisfactory performance, and “laissez-faire,” which is marked by a lack of involvement and failure to take responsibility.¹³

Bernard Bass, one of the foremost researchers on leadership, asserts that transformational leaders are best able to effect changes in organizational culture.^{13,14} Because a goal of the CTSA initiative is to change the prevailing institutional culture for clinical and translational research and career development, it follows that transformational leaders would be highly desirable for the PI role. Of relevance, Brown and Moshavi¹⁵ examined the leadership effectiveness of 70 university department chairs from the perspective of 440 members of their departments and confirmed that leaders who exhibited transformational-style behaviors were viewed as most effective. Eagly et al¹⁶ performed a meta-analysis of 45 studies in which male and female leaders were compared on standardized measures of transformational, transactional and laissez-faire leadership styles. Although differences were small, female leaders emerged as being more transformational in their leadership style than male leaders. Confirming this female advantage in academic settings, Rosser¹⁷ examined the leadership effectiveness of 16 male and 6 female deans at a major research university from the perceptions of 865 faculty members and administrative staff. Controlling for respondent variables, on five-point Likert scales female deans were rated as significantly more effective leaders than their male counterparts on all seven dimensions of leadership assessed.

In sum, research on organizational leadership confirms that nothing about women’s intrinsic traits or socialized behaviors would prevent them from effectively leading CTSA. On the contrary, there is evidence to suggest that women leaders, who seem to be more likely than men to exhibit transformational styles of leadership, may be ideal leaders to effect the change in institutional culture sought by the NIH.¹⁸

The Impact of Unconscious Assumptions about Men and Women

In the face of convincing evidence of women’s leadership effectiveness in

academic and other organizations, why is it unlikely that women will be put forth as PIs of the CTSA?

The explanation for the persistent selection bias for male leaders rests on the existence of stereotyped assumptions about the intrinsic traits and expected behaviors of men and women. We describe some of these stereotyped assumptions, how those assumptions are activated and applied, and strategies for mitigating unintended bias.

What are the socially ingrained assumptions about men and women?

One measure of gender-based stereotypes is the Bem Sex Role Inventory.¹⁹ Although first developed 30 years ago, recent studies of the Bem Inventory find that both men and women continue to indicate that it is more desirable for men to be “assertive,” “dominant,” “forceful,” act “as a leader,” and have “leadership abilities”; for women, it is considered more desirable to be “gentle,” “compassionate,” “soft spoken,” and “yielding.”^{20,21} Overall, the stereotyped behaviors for men are categorized as agentic or action oriented and for women as predominantly dependent or communal.^{5,6} The stereotyped assumptions about the intrinsic traits and expected behaviors of a good leader are also generally agentic and thus more aligned with unconscious assumptions about male attributes than female attributes.^{5,7} Studies consistently find that men are assumed to possess intrinsic qualities that make them more competent leaders than women^{7,22,23} even when male and female applicants have identical credentials, experience, and work history.^{5,24–26}

The unconscious linking of stereotypically male with stereotypically leader traits, at least in part, relates to the paucity of women in elite leadership positions. Davidson and Burke²² demonstrated this in a meta-analysis of 49 experimental studies in which both male and female applicants were rated. Synthesizing data across studies, they found that male applicants received higher ratings and were offered higher compensation than equally qualified female applicants when the job was one traditionally occupied by men. Similarly, when Cejka and Eagly²³ asked evaluators to rate the attributes necessary for 10 occupations, those in which men

comprised more than 75% of the workforce were more likely to be rated as requiring stereotypically male attributes and also as having greater prestige and higher wages. Kawakami et al²⁸ found that even after counterstereotype training to assist evaluators in recognizing and resisting biases against women, when subsequently asked to hire someone for a leadership position, men were overwhelmingly more likely than women to be selected.

The prejudice against female leaders in traditionally male jobs is multifaceted. Heilman et al²⁶ found, for example, that when irrefutable evidence of competence at a traditionally male job (assistant vice president) was provided to evaluators, men and women were rated as comparably competent. However, if the target in question was a woman, she was assumed to be interpersonally hostile and unlikable compared with a target male with identical credentials. Heilman et al²⁶ then showed that likeability and competence were independently associated with evaluators’ willingness to recommend an employee for higher pay or institutional rewards. Relevant to the issue of biases against women’s competence, particularly with the growing emphasis on the need for research to be conducted in teams, is a series of studies by Heilman and Haynes,²⁷ which found that in mixed-sex work groups the contribution of female members may be discounted.

The presumed assumption of male leadership competence is so deeply embedded in people’s attitudes, that when Sczesny et al²⁹ had evaluators view photographs of target individuals and subsequently rate their leadership competence solely on appearance, they found that even among men, those with a more typically “masculine” appearance in photographs were viewed as more competent leaders than men with more “feminine” physical attributes. Demonstrating how easily the unconscious bias against women as leaders is activated and applied, in another experiment³⁰ this group of authors found that reviewers examining theoretical applicants for a manager position gave more favorable evaluations to applications written on paper that had been sprayed with a “masculine” perfume than identical applications on paper

sprayed with a perfume determined a priori to be “feminine.”

Although the unconscious bias toward selecting male leaders is strong, it is important to emphasize that among the 20 items in the questionnaire most widely used to assess transformational leadership behaviors^{11,31} only one item aligns with male agentic stereotypes: “manifesting power and confidence.” Most of the other measures of effective leaders are gender neutral; for example, “concern for moral and ethical aspects of decisions,” “enthusiasm about goal accomplishment,” and “facilitating problem understanding from different perspectives.” Some of the items are communal and thus more aligned with female stereotypes; for example, “transcending self-interest for collective good” and “helping subordinates develop their strengths.” Nevertheless, as illustrated in the few examples provided, when assessments of leadership qualifications are based on perceptions of attributes rather than actual attributes, the evidence overwhelmingly indicates that men will be selected over women. Furthermore, the more prestigious and powerful the leadership position, such as the PI of a CTSA, the greater the likelihood that automatic stereotypes will be activated, envisioning a man in this position.

How do stereotyped assumptions get activated?

Some conditions enhance activation of automatic, unconscious stereotypes in a way that would further disadvantage women being evaluated for a position of leadership. Ambiguous performance criteria or an emphasis on the *potential* to perform in a leadership role—both conditions surrounding development and review of the CTSA—will favor the selection of men over women.⁶ Recalling Heilman’s study of assistant vice presidents, only when performance criteria were ambiguous were men consistently viewed as being more competent.²⁶ In the absence of predetermined criteria for a position, evaluators can also redefine the merit of men’s and women’s accomplishments to fit the desired outcome. Uhlmann and Cohen³² found this reconstruction of the merit of an applicant’s accomplishments both to favor selection of a male over a female applicant for a traditionally male job, as well as to favor selection of a

female over a male for a traditionally female job. A study by Steinpreis et al³³ illustrates both reconstruction of merit to fit the unconscious gendered view of a job as well as the disadvantage against women when potential for success is required. The authors sent to a national sample of academic psychologists identical curriculum vitae with a gendered male or female name of a junior or more senior applicant for a faculty position. Despite the applicants’ identical records, only at the senior level, where potential had been proven, were evaluations of competence comparable between the male and female candidates. For the junior applicants, identical teaching and research accomplishments were weighted differently depending on the gender of the applicant to the woman’s disadvantage. Thus, combined with the unconscious assumption that an elite leader will be male, men will be further favored for selection as CTSA PIs by the lack of explicit specification of qualifications and the emphasis on the potential for success in a novel program, particularly in the absence of an opportunity to provide clear evidence of competence.

Having a small proportion of women in a group of evaluators generally disadvantages a female target. Kanter³⁴ in her studies of organizations has indicated that the relative numbers of men and women in groups are critical in shaping a group’s dynamics. She asserts that as women enter groups of men, only when a ratio of women to men of approximately 35:65 is reached will the culture of the group change. Confirming the importance of the proportion of women in groups evaluating and selecting applicants, Yoder et al³⁵ studying 93 academic psychology departments found that only when women comprised 36 to 65% of the faculty were men and women equally likely to be hired. In meta-analyses of both experimental and field studies, the percentage of male evaluators also had significant effects on judgment about job performance such that when raters were all male, men were rated significantly more highly than women, whereas when raters were mixed males and females there was either no evidence of gender bias, or women were rated more highly.^{36–38} Although a number of changes were made in the solicitation and review process in the NIH Director’s Pioneer Awards between 2004 and

2005,^{39,40} the potential impact of raising the proportion of women scientific reviewers from 4 of 64 (6%) to 28 of 64 (44%) cannot be ignored in the increase of women from zero to 43% of the awardees.^{41,42} Traditional means of selecting a PI for a prestigious program like the CTSA is through appointment by a single top administrator. This method precludes the opportunity to have a group of 35% women evaluating candidates for the position and would predict preference for selection of a male PI.

Can activation of these automatic stereotypes be mitigated?

If institutions established internal search committees to select the CTSA PIs, it would create the opportunity to reduce the bias-activating conditions detailed above. This committee could make explicit the full range of desired attributes for the ideal CTSA leader. Not unexpectedly, many of the desirable attributes for a CTSA PI are the traits of a transformational leader and might include good communication skills to a variety of audiences; experience with consensus building and inspiring others to work toward a shared vision; a history of building programs with full participation of multiple disciplines; examples of nurturing the careers of women and others underrepresented in academic health sciences; role modeling a balanced life; and clear demonstration of an understanding of the relational complexities in building a new multidisciplinary program. All these skills are gender neutral. An internal committee would also provide the opportunity for applicants to submit clear evidence of their qualifications, which should override the assumption that men will be more competent leaders than women.^{26,29,33,43} These committees could be constituted to include at least 35% women, further reducing the likelihood for activation of gender stereotypes.

Some actions can further reduce the activation and application of unconscious biases. Exposure to admired individuals who represent a counterstereotype image^{44,45} is effective. Lowery et al⁴⁶ found, for example, that when the individual conducting a study on biases was black, students were less likely to exhibit antiblack biases in measures of their unconscious stereotypes. Similarly,

a greater proportion of distinguished women scientists on any review committee would be expected to provide ample opportunity for counterstereotype images. Explicitly instructing individuals to resist stereotyped responses has also been demonstrated to reduce measurements of automatic bias.^{46,47} The CTSA request for applications does not contain any specific encouragement from the NIH to consider diversity in selection of PIs.⁴⁸ It is difficult to know if such a statement can influence activation of bias; however, given the starkly different proportion of women awardees between the first and second years of the NIH Director's Pioneer Awards it is noteworthy that in the second but not the first round, the request for applications (RFA) specifically encouraged women to apply.

Summary Comments and Recommendations

Women currently hold approximately half of awarded medical degrees and doctoral degrees in biological sciences. Relevant to CTSA leadership, however, is that women have comprised over 30% of medical school classes since 1983⁹ and have received over 25% of doctoral degrees in biological sciences since 1985,⁴⁹ allowing sufficient time for a substantial number of women to become established leaders in academic health sciences. As evidence of this, women receive approximately 25% of NIH R01s.⁴¹ Women's participation as full and equal partners in the future of academic health sciences will only occur if women are included in the highest strata of leadership. We are confident that it was not the intention of the NIH to stack the deck against the selection of women as leaders in CTSAs. Indeed most of the systematic bias against women's advancement in traditionally male fields is unconscious, but nevertheless exclusionary.⁷ We predict that the current strategy is unlikely to result in a single woman appointed principal investigator of a CTSA proposal, and undoubtedly women will head less than 25% of the proposals submitted or awarded. Rather than avoiding application of the multiple PI rule to CTSAs, we suggest that to prevent further institutionalizing barriers to the advancement of women in academic health sciences, this is exactly the program in which multiple PIs are

needed. Multiple PIs would allow women who have risen to leadership in such programs as the General Clinical Research Centers, Clinical Research Curriculum Awards, and Multidisciplinary Clinical Research Career Development Program to continue as leaders at their institutions and nationally. In several public forums where the CTSA was presented by NIH directors, the importance of considering the work environment and work-life balance in the career development of young scientists was specifically stated.⁵⁰ The RFA, however, contained no encouragement for CTSAs to consider such issues.⁴⁸ Although work-life balance and work place climate is important to both men and women, it is of particular importance to women at all career levels.^{51–54}

We need the best leaders—male or female—to lead this transformative initiative. To minimize the impact of gender bias on selection of CTSA PIs, broaden the pool of potential leaders, and prevent the loss of women leaders in the existing NIH clinical and translational research programs, we offer the following suggestions. We suggest that AHCs (1) constitute internal search committees comprised of at least 35% women that establish a priori the desired qualities for the CTSA leader and broadly solicit internal applicants, (2) develop explicit criteria, including the full range of desirable skills of a CTSA leader, which may include those that are stereotypically male, female, and gender neutral, and (3) undertake systematic efforts to increase awareness of unconscious gender stereotypes and their negative impact on women's academic career advancement, particularly as they move toward top leadership. We suggest that the NIH (1) allow the new multiple PI rule to apply to the CTSA program, (2) include a statement in the RFA encouraging gender and ethnic/racial diversity among principal investigators, (3) repeat in the RFA the public statement made by NIH Roadmap leaders regarding the importance of work-life balance for young investigators, and (4) strive to constitute study sections to contain least 35% women. The NIH could also fund research on interventions to reduce the activation and application of gender bias in academic environments.

In short, we challenge the current leaders of AHCs and all those involved in review of the CTSAs at the NIH to make a conscious effort to work against the inexorable force of social conditioning, which predicts that when conditions demand selection of a single, top leader for a highly prestigious program with considerable power and a large budget, that single leader will be male.

Note added in proof.

Since we finished writing this article and at the time it went to print, 12 CTSA sites have been awarded, and all 12 have male PIs. Of the 35 applications received, none had a female PI. The goal of the NIH is to have 60 CTSAs—will they all be led by men?

Acknowledgments

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WISELI In the Press

77 comments

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By Laura L. Mays Hoopes

Help women stay in science

Add your thoughts to the growing discussion on the role men should play in helping women stay in science

[Published 27th September 2007 02:48 PM GMT]

Editor's Note: In this piece, which will run in the January issue of The Scientist, Laura L. Mays Hoopes outlines suggestions for helping men help women scientists. Hoopes is a writer and the Halstead-Bent Professor of Biology and Molecular Biology at Pomona College. We're publishing the article early to spark discussion online of gender bias in science. Please suggest other things men can do to level the playing field by clicking here. We'll publish the best comments in print along with the article.

1. Call a woman scientist from time to time, to chat about science, a recent breakthrough, your puzzling results, their puzzling results. Even better, call one once a week.
2. Every time you have to recommend a scientist to speak at your seminar series, replace "young man" in your thoughts with "young woman" or even "old woman."
3. If you're on a hiring or tenure committee, don't start reading the files until after you review the primary literature on unconscious bias. You can access references from Jo Handelsman's site.
4. Support the development of a child care center at your university or college. Women produce babies and they need the day care.
5. When you are organizing a scientific meeting, invite some women scientists to be speakers.
6. When you walk through the posters, where women who were not invited present their work, stop and talk with them about what they've been doing. When you do, don't look over her shoulder, listen. If it helps, pretend she's a man.
7. When you chat with a woman scientist at a scientific meeting, invite her to join you and your friends for a lunch or dinner. She may eat in her room to avoid eating alone in a restaurant while watching you and your (male) friends laughing at the next table.
8. When you think about someone to appoint to an editorial board or to write a review article, be sure to consider women as well as your particular favorite young men and male cronies.
9. When you are looking for a nominee for an award (I'm not talking about the awards for the BEST WOMAN, I'm

talking about research awards in general), replace that "young hotshot man" image with a "young hotshot woman" image. Or even an "old hotshot woman." If you don't know anyone to consider, email me at lhoopes@pomona.edu and I can suggest someone.

10. When you're spoiling for a fight, call the National Library of Medicine and complain that you can't properly track the publications women have produced for your award committee because they have no way to let PubMed know all of their different names so they can be connected in one list of publications.

Links within this article:

K. Grens, "NAS issues report on gender bias," *The Scientist*, September 18, 2006
<http://www.the-scientist.com/news/daily/24803/>

Jo Handelsman
<http://www.plantpath.wisc.edu/fac/joh/joh.htm>

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[Comment posted 2007-10-30 16:16:45]

From the posts and my own experience, family issues are of greater concern than outright discrimination and not being taken seriously by men. Here are some additional points that I think need attention:

1. In ecology and evolution, for women (or men) who have primary responsibility for children it is difficult or impossible to conduct fieldwork, an essential component of much of that type of research. Fieldwork often occurs in far away or remote places where you simply can't take the children with you.
2. Infants/children have different temperaments and needs, and there needs to be different options available. Some babies might be fine in full time daycare from early on, others need more time with a parent. For example, some babies/toddlers might be ok in daycare until 6pm, but others need to get home earlier because they do best when they are in bed for the night by 7pm. Also some children have special needs and require a greater degree of parental involvement.

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Why are there so few women at the highest levels of academic science and engineering, and what can be done about it? Three documentary videos follow the progress of a five-year, NSF-funded ADVANCE Institutional Transformation project at the University of Wisconsin-Madison, led by co-Directors Molly Carnes and Jo Handelsman. They formed the Women in Science & Engineering Leadership Institute (WISELI) to create a visible, campus-wide entity to centralize all of the ADVANCE programs and research, and to promote the participation and advancement of women in academic science and engineering.

WISELI: Advancing Institutional Transformation presents a brief history of women in science and engineering at UW-Madison, and documents the beginnings of the WISELI project. *WISELI: Building on a Legacy* includes detailed information about the new programs and research started by WISELI. The final film, *WISELI: FORWARD with Institutional Transformation*, provides an overall summary of the first five years of WISELI, including results of WISELI interventions.



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Institutional
Transformation

Building
On A
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Reviewing Applicants

Research on
Bias and Assumptions



WISELI Research/Evaluation Report:

Sheridan, Jennifer. February 8, 2007. “Climate Change for Faculty at UW-Madison: Evidence from the 2003 and 2006 *Study of Faculty Worklife*.” Report prepared for the Campus Diversity Plan Oversight Committee.

Climate Change for Faculty at UW-Madison: Evidence from the 2003 and 2006 Study of Faculty Worklife

Introduction

The Study of Faculty Worklife at the University of Wisconsin-Madison

The *Study of Faculty Worklife at UW-Madison* survey was conceived of in 2001, as an element of the proposed ADVANCE project at UW-Madison. The ADVANCE project was funded (WISELI, the Women in Science & Engineering Leadership Institute, is the research center that was formed to centralize all ADVANCE activities), and development of the survey instrument began in 2002 with in-depth interviews of 26 women faculty in the biological and physical sciences. Their comments formed the basis of an instrument designed to investigate gender differences in workplace experiences of men and women faculty in biological and physical sciences. In late 2003, just before the instrument was to be fielded, the Office of the Provost requested that the survey be sent to all faculty in all divisions, and funded the additional costs associated with the expansion of the survey. This survey was implemented from February through June of 2003, and received a 60.2% response rate.

In 2006, as proposed in the original ADVANCE grant, WISELI re-surveyed the faculty in order to evaluate the impact of the ADVANCE grant on campus, and document any changes that

occurred between 2003 and 2006. The 2006 instrument was nearly identical 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.

The two surveys in 2003 and 2006 now provide the UW-Madison campus with a rich source of faculty attitude data. The datasets are reasonably representative of the faculty at large, with some exceptions. As is common in most surveys, women tended to respond at higher rates than men, and response rates also varied quite widely across schools and colleges, with the Law School and School of Business showing the lowest response. In the 2003 survey, women faculty of color responded at the same or higher rates as majority faculty women, and men faculty of color tended to respond at lower rates, particularly Asian males. In 2006, all faculty of color (men and women, all racial/ethnic groups) tended to respond at lower rates than their majority counterparts, and in contrast to their high participation in the 2003 survey. Aside from these differences, response was quite consistent across measurable demographic characteristics of the faculty (see <http://wiseli.engr.wisc.edu/initiatives/survey/results/facultypre/resprates/summary.htm> for more detail.)

Analysis Plan

In the analyses that follow, we will investigate differences among faculty based on their response to the items reproduced in Appendix 1. Two main

types of analyses were performed for the main climate-related variables:

1. Faculty responses were compared for several variables, including:
 - a. Gender
 - b. Race/ethnicity
 - c. Department chair status
2. Responses in 2006 are compared to 2003 responses for all items that appeared on both instruments.

It is important to highlight the cross-sectional nature of these data. We cannot ascertain causation in any of the findings contained in this report; these are correlations only. When significant differences are found among groups, we will often need more in-depth data to really understand the relationship. Certainly some characteristics of the working environment might be affecting the groups differently, but it is also possible that faculty who are in those groups vary on some individual characteristics that we did not measure which could also cause the observed relationship.

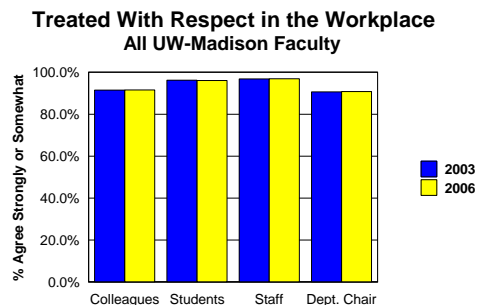
Results

Graphics created to highlight selected results are included in this report. Where a red asterisk is included (*) in the graphic, the difference illustrated is statistically significant at the $p < .05$ level (t-test); where a red tilde is included (~), the difference is significant at the $p < .10$ level.

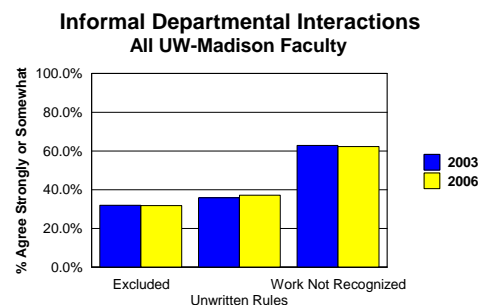
Self-Reported Experiences of Climate

Little significant change was seen in the responses of faculty on climate items asking about the faculty member's *own*

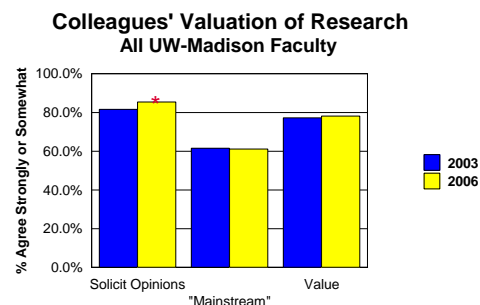
experiences between 2003 and 2006. Faculty report about the same levels of respect by colleagues, students, staff, and their department chairs.



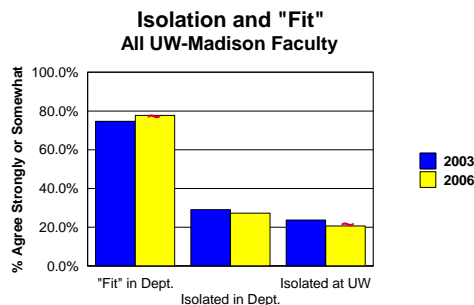
They report feeling excluded from informal networks, encountering unwritten rules, or performing work that is not recognized in their departments in about the same proportions in both surveys.



They perform non-mainstream research and their research is valued at about the same in 2006 as it was in 2003, and they feel isolated in their departments in about the same proportions in 2006 as in the past. Only three items showed differences between 2003 and 2006, and they are climate *improvements*. Faculty are more likely to agree in 2006 that their opinions are solicited about work-related matters,

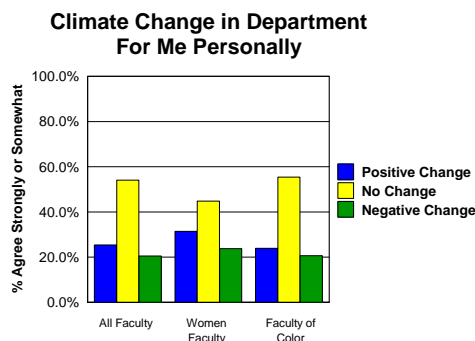


they more often feel like they “fit” in their departments, and they feel less isolated on the UW-Madison campus overall.



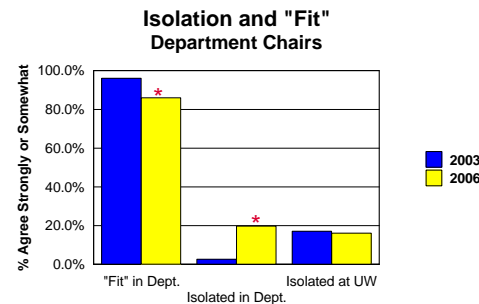
These trends appear for women faculty and faculty of color as well, although the differences between 2003 and 2006 are not always significant.

We asked faculty to report their own perceptions of climate *change* between 2003 and 2006. Most faculty reported no change in their own experiences of either departmental climate, or campus climate. For those who did indicate a change, more faculty indicated a positive climate change than a negative one. This is true for faculty as a whole, for women faculty, and for faculty of color as well.



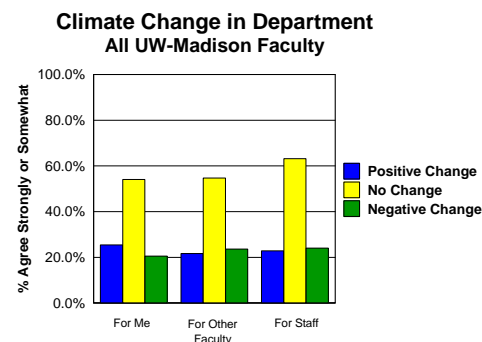
When measured from an individual perspective, one could say that climate is either the same or slightly improved between 2003 to 2006 for faculty who responded to our survey. The only group that has been reporting a decline in some specific experiences of

departmental climate is department chairs.

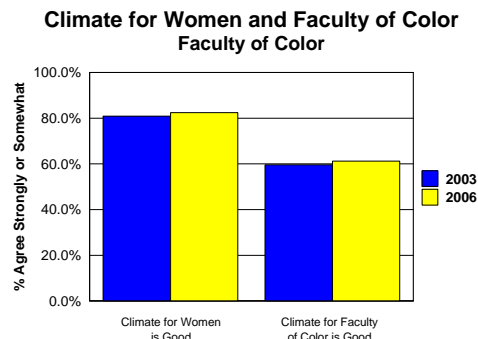
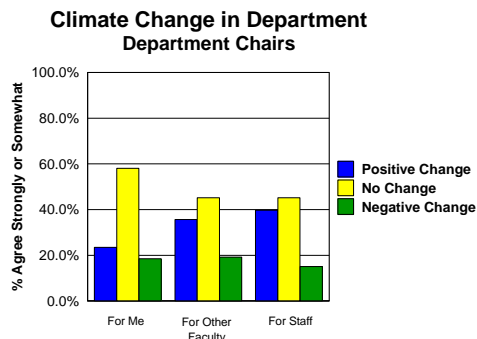


Perceptions of Climate Experienced by Others

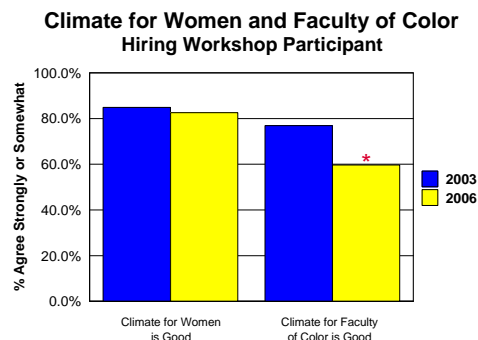
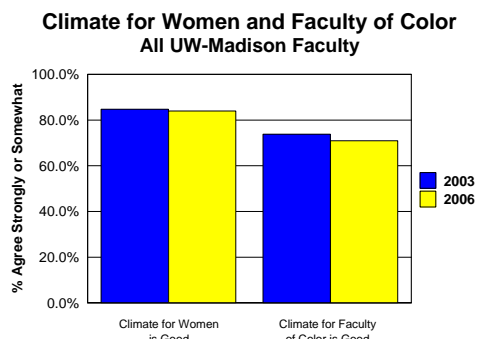
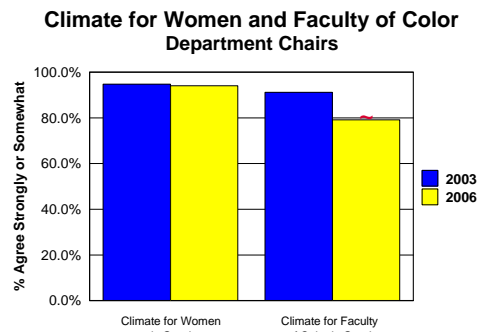
At the same time that faculty are reporting slightly improved climate for themselves, they are generally less optimistic about the climate experienced by others. When faculty are asked to report on climate change for other faculty and staff in their departments, they generally report worse climate in 2006 than they saw in 2003, and this is in contrast to the climate they report experiencing themselves.



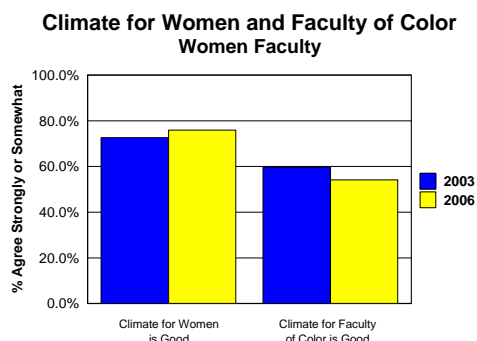
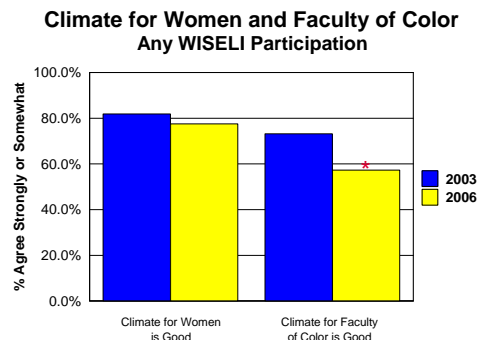
Department chairs appear to be the only group that is positively evaluating climate change over time in their departments for faculty and staff.



At the same time that faculty are reporting their perceptions of things getting worse for other faculty in their departments, we saw a genuine decrease in the percentage of faculty who report that “climate for faculty of color in my department is good” between 2003 and 2006.



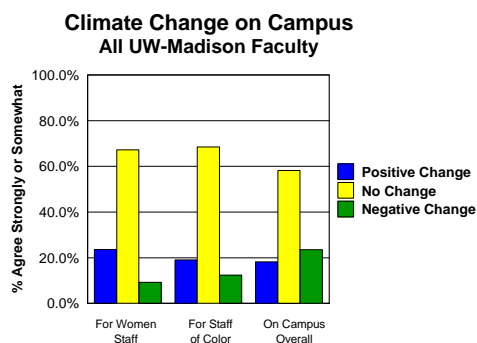
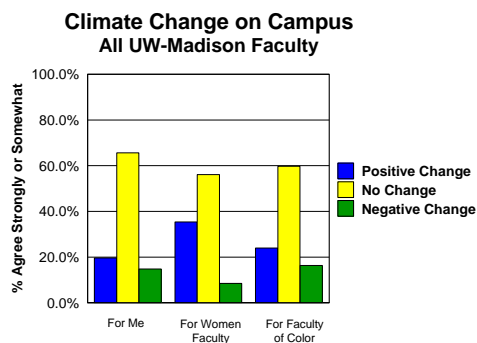
Women faculty, department chairs, and faculty who participated in WISELI events (in particular the hiring workshops) appear to show the biggest decline in agreement on this item between 2003 and 2006 (and in contrast to the slight *increase* in agreement for faculty of color).



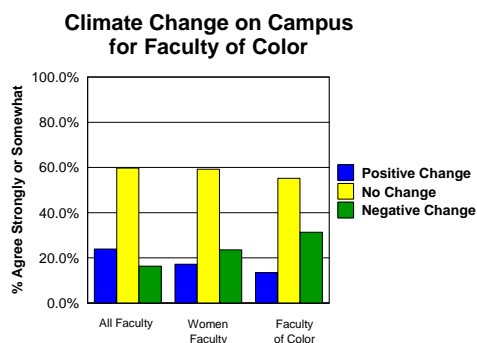
Affirmative response to the item “the climate for women in my department is good” decreased between 2003 and 2006 for some groups (e.g., men, faculty who participated in WISELI events), even while it increased for women.

Faculty respondents’ perceptions of overall climate on campus for various

groups shows some optimism for the climate for women (faculty and staff), but slightly more negative perceptions of negative climate change for faculty and staff of color...and a perception of negative climate change overall.



Women and faculty of color detected negative climate change on campus for faculty of color, but overall most faculty saw no change or positive change:



Summary

There are two ways one might interpret the different findings for self-reported climate, and perceptions of others' climate. On the one hand, the lower

rating of climate for others might indicate that climate has indeed gotten worse on campus, especially for persons of color where the largest changes occurred. It may well be that this is the case; more analysis of the response patterns of faculty of color between the 2003 and 2006 survey will help answer this question. At the same time, it may well be that the reporting of more negative climate in 2006 for others is related to the climate efforts across campus. The resulting education of faculty and department chairs to the differential experiences of climate of women and faculty of color may explain the more negative ratings for others—faculty respondents are looking at the environment and reporting the reality for these other groups, rather than assuming that everything is fine, or that the experiences of these underrepresented faculty members are similar to one's own. That is, it may be that the majority faculty are beginning to see the reality of climate experienced by underrepresented groups. This awareness is, we hope, just the first step towards making real, lasting change at both the departmental and campus levels.

*Report submitted to the Campus
Diversity Plan Oversight Committee by
Jennifer Sheridan, Research Director,
Women in Science & Engineering
Leadership Institute (WISELI)
February 8, 2007*

Appendix I: Climate Items, 2006 Study of Faculty Worklife at UW-Madison

19. How much do you agree or disagree with the following statements about your interactions with colleagues and others in your primary department/unit? Please answer using the department or unit that you consider to be your primary department or unit.

<i>Circle one number on a scale of 1 to 4 for each statement.</i>		Agree Strongly 1	Agree Somewhat 2	Disagree Somewhat 3	Disagree Strongly 4
a.	I am treated with respect by colleagues.	1	2	3	4
b.	I am treated with respect by students.	1	2	3	4
c.	I am treated with respect by staff.	1	2	3	4
d.	I am treated with respect by my department chair.	1	2	3	4
e.	I feel excluded from an informal network in my department.	1	2	3	4
f.	I encounter unwritten rules concerning how one is expected to interact with colleagues.	1	2	3	4
g.	I am reluctant to bring up issues that concern me about the behavior of my departmental colleagues for fear it might affect my reputation or advancement.	1	2	3	4
h.	Colleagues in my department solicit my opinion about work-related matters (such as teaching, research, and service).	1	2	3	4
i.	In my department, I feel that my research is considered mainstream.	1	2	3	4
j.	I feel that my colleagues value my research.	1	2	3	4
k.	I have to work harder than my departmental colleagues to be perceived as a legitimate scholar.	1	2	3	4
l.	I do a great deal of work that is not formally recognized by my department.	1	2	3	4
m.	I feel like I "fit" in my department.	1	2	3	4
n.	I feel isolated in my department.	1	2	3	4
o.	I feel isolated on the UW campus overall.	1	2	3	4

Institutional and Departmental Climate Change

If you were first hired at UW-Madison after January 2003, please go to items 35-36 on the next page.

The UW-Madison is continually working to improve the working, teaching, and learning climate for all University employees and students. We are interested to know to the extent to which you have seen or experienced change in the following areas *in the past three years*.

32. Since January 2003, how has the climate changed, if at all, for the following individuals or areas? See item #21 for a definition of "climate."

<i>Circle one number on a scale of 1 to 5 for each statement.</i>	Significantly More Positive 1	Somewhat More Positive 2	Stayed The Same 3	Somewhat More Negative 4	Significantly More Negative 5	Don't Know
a. For me personally on campus	1	2	3	4	5	DK
b. For me personally in my department	1	2	3	4	5	DK
c. For other faculty in my department	1	2	3	4	5	DK
d. For staff in my department	1	2	3	4	5	DK
e. For women faculty on campus	1	2	3	4	5	DK
f. For women staff on campus	1	2	3	4	5	DK
g. For faculty of color on campus	1	2	3	4	5	DK
h. For staff of color on campus	1	2	3	4	5	DK
i. On the UW-Madison campus, overall	1	2	3	4	5	DK

WISELI Research/Evaluation Report:

Benting, Deveny. March 26, 2007. "Evaluation of 'Searching for Excellence and Diversity: A Workshop for Search Committees'. Presented at UW-Stout on March 1, 2007."

**EVALUATION OF “SEARCHING FOR EXCELLENCE AND DIVERSITY: A WORKSHOP
FOR SEARCH COMMITTEES”**

PRESENTED AT UW-STOUT ON MARCH 1, 2007

**Evaluation Report by Deveny Benting
March 26, 2007**

This workshop had a response rate of 10 out of 25 (40% responding).

1. Your title or role on your campus:

Title	
Program Director/Manager	5
Chair or Dean	3
Professor	2

2. Your role on the search committee or in the search process:

- Have been chair of 2, member of 3 searches.
- Work with them.
- Human Resources.
- Oversee the formation, roles and functions of comm.
- Member of search committee.
- Member.
- Chair.
- Chair [of search and screen committee] for unclassified position.
- I am the first sign-off.
- Organizer.

3. Please rate the value of each of the following aspects of the workshop using the scale from 1-3. Also, feel free to include additional comments about the presentation or small-group discussions.

	Not at all Valuable	Somewhat Valuable	Very Valuable	Didn't Attend
Introduction	0	6 (60%)	4 (40%)	0
Element #1: Running an Effective and Efficient Search Committee	0	2 (20%)	8 (80%)	0
Element #2: Actively Recruiting an Excellent and Diverse Pool of Candidates	0	1 (10%)	9 (90%)	0
Element #3: Evaluating the Pool of Applicants	0	6 (60%)	4 (40%)	0
Element #4: Ensuring a Fair and Thorough Review of Candidates	0	4 (40%)	4 (40%)	1 (11%)
Element #5: Developing and Implementing an Effective Interview Process	0	3 (30%)	6 (60%)	1 (10%)
Element #6: Closing the Deal	0	3 (30%)	6 (60%)	1 (10%)

Comments:

Element #2: Actively Recruiting an Excellent and Diverse Pool of Candidates

- I learned several new ideas in the discussion. Molly did a great job with this topic.
- The definition of “diversity” came into the discussion a few times; there are many different diversity considerations; the discussion was a bit inconclusive regarding how to prioritize diversity objectives; how to be intentional about making sure objectives are addressed.
- This was most helpful because I didn't realize [that during] the search part we can treat people differently and should be making personal contacts.

Element #3: Evaluating the Pool of Applicants

- At Stout, our tools are completed and approved by AA/EOE before screening. So this was less appropriate for our campus.

Element #4: Ensuring a Fair and Thorough Review of Candidates

- I liked the time spent on this topic.

Element #5: Developing and Implementing an Effective Interview Process

- A bit more useful than #3 and #4.

Element #6: Closing the Deal

- Good discussion.

4. Please identify up to three things that you gained at this workshop and will apply in your role as Chair or as a member of a search committee:

- The information about language in recommendation letters was very enlightening and I will be sure to bring it to the attention of my staff and colleagues.
- I found the discussion of the role play scenario helpful as well as the importance of laying out the ground rules at the beginning of the search.
- Inviting applicants to apply is OK. Minority candidates aren't actively sought for positions many times.
- That it is OK to pre-solicit applicants before the search begins.
- Reinforced good concepts.
- This was a very good refresher of rules, procedures & will be very useful.
- Broadening the pool is important.
- It takes vision and a commitment.
- Advertising for diversity - thanks for the discussion of the pros and cons.

5. Please provide us with ideas or suggestions that would have improved your experience in this workshop:

- My back was to the screen (which will teach me to get to the presentation much earlier) so I would suggest having the facilities staff set up the tables so they are slanted which would put fewer backs to the screen. It's not a perfect solution. Also, it wasn't a huge problem. It's just a suggestion.
- Longer time on topics.
- More ideas on increasing pool size.
- Perhaps a bit more sharing between tables after the small group discussion would enhance the overall learning; some facilitators were a bit domineering; some in our group weren't drawn into the conversation at all.
- Allow a bit more time for discussion.
- Maybe a panel discussion of chairs of previous search committees.

6. What topics did you hope would be covered in this workshop, yet were not?

- My expectations were met.
- Met my expectations.
- Special considerations for hiring for small offices where positions are staff, not faculty.
- Should department chairs serve as search committee chairs? Or should these be separate?
- Was unable to make entire session so other important things may have been covered.

7. Please provide an overall rating for this session.

Not at all useful	0
Somewhat useful	1 (10%)
Very useful	9 (90%)
Total	10 (100%)

8. Would you recommend this workshop to others?

Yes	10 (100%)
No	0
Total	10 (100%)

Comments:

- People are the greatest asset of a university and the search process is very critical, yet we seem to rely on the assumption that committee members will automatically know the “best practices” to employ. This training is very necessary to recognize poor practices and learn the better ones.
- It was refreshing to be treated like adults. Many of these types of events do not. The workshop had pertinent information to impart.
- Materials distributed are very useful & amount of material covered in a short block of time was also good use of time. I'm surprised more individuals didn't register to attend.
- Fantastic discussions! It got people talking about the process; good and bad aspects both.
- It really got you thinking about the search process in general, rather than the position you are trying to fill. It is important to follow the best processes.

9. Any other comments?

- Thanks for presenting the training to our campus.
- Having served on searches for many years, this workshop reinforced much of what I already knew. That's why I rated most of the sections somewhat valuable, not very valuable.
- Had application to the research.
- Thank you for the efforts--and for being on campus despite the bad weather :).
- I hope everyone got home safely. We appreciate the travel during such horrid weather. Thank you very much for offering this at Stout. I think it was very valuable.

WISELI Research/Evaluation Report:

Benting, Deveny. March 28, 2007. "Evaluation of the Workshop: 'Implementing Training for Search Committees'. Presented to the Washington University Danforth Campus on March 6, 2007."

**EVALUATION OF THE WORKSHOP:
“IMPLEMENTING TRAINING FOR SEARCH COMMITTEES”
PRESENTED TO THE WASHINGTON UNIVERSITY DANFORTH CAMPUS ON MARCH 5, 2007**

**Evaluation Report by Deveny Benting
March 28, 2007**

This workshop evaluation had a response rate of 12 out of 34 (35% responding).

1. Your title(s) or position(s):

Title	
Faculty member	6
Program Coordinator/Director	4
Special Assistant	2
Dean, Associate or Assistant	1

2. How did you hear about this workshop?

- E-mail.
- From the Chancellor's office.
- Wash U Central Admin.
- Was one of the planners.
- My dean.
- WU.
- E-mail from HR.
- Leah Merrifield.
- Invited to attend by Leah Merrifield.
- Notice from Chancellor's Special Assistant for Diversity Initiatives.
- Other HR professional on campus.
- From the Chancellor's Office.

3. How valuable was each of the components of the workshop?

	Not at all Valuable	Somewhat Valuable	Extremely Valuable	N/A
The presenters	0	1 (8%)	11 (92%)	0
Your table facilitator	1 (8%)	4 (33%)	4 (33%)	3 (25%)
Small group/table discussions	0	5 (42%)	7 (58%)	0

“Search for Excellence & Diversity” guide book	0	2 (17%)	10 (83%)	0
Research article activity	1 (8%)	3 (25%)	8 (67%)	0
Case study activity	1 (8%)	7 (58%)	3 (25%)	1 (8%)
Large group discussions	0	4 (33%)	8 (67%)	0

4. Please use this space to explain any of your responses to question #3.

- Overall, it was a good day. Research article activity was better when presented by lead person at podium.
- I served as a table facilitator therefore I could not rate this factor.
- The entire program was extremely valuable. It was good to have small and large group discussion to get some of the issues out there.
- Not sure what's to be explained. I should say that the elements added up extremely well. The variety, pacing, resources, and the basic information communicated -- it all worked together in an exemplary way.
- I thought the research article activity was very important to identify relevant research related to faculty hiring. As this is geared to change hiring practices of search committees, I think that a workshop grounded in research is vital.
- We didn't have time to explore the case study; by that time in the program, the issues were quite obvious. The research articles were quite helpful. I would have liked the full set.

5. Please indicate the level to which your skill in each of the following areas increased, if at all, due to the workshop.

	This skill remained unchanged	This skill increased somewhat	This skill increased to a great extent	Did not attend
Running an effective search committee	1 (8%)	6 (50%)	5 (42%)	0
Teaching others to run an effective search committee	0	8 (67%)	4 (33%)	0
Recruiting a diverse pool of candidates	1 (8%)	9 (75%)	2 (17%)	0
Teaching others how to recruit a diverse pool of candidates	0	7 (58%)	5 (42%)	0
Applying the research about unconscious biases and assumptions in the search process	0	4 (33%)	8 (67%)	0

Teaching others about social science research to improve a search process	0	6 (50%)	6 (50%)	0
Thoroughly reviewing the candidates	1 (8%)	11 (92%)	0	0
Teaching others how to thoroughly review candidates	0	10 (83%)	2 (17%)	0
Implementing an effective interview process	1 (8%)	8 (67%)	2 (17%)	1 (8%)
Teaching others to implement an effective interview process	0	7 (58%)	4 (33%)	1 (8%)

6. Please use this space to explain any of your responses to question #5.

- I do a lot of work in this area anyway so I didn't learn a lot personally. I did become convinced, though, of the need to convince my Dean to have our search committee properly trained.
- I have a lot of experience in interviewing and sourcing candidates, the information was valuable, but I already had a knowledge base.
- I have not yet had an opportunity to test any new skills, but I think I am better able to draw on research to argue for certain search practices and to communicate with others about how they might participate.

7. How do you plan to use the materials and information you received when you participate in search committees?

- Dispense information about reviewing candidates and discuss the articles about biases and assumptions.
- I think one of the most useful things could be just to remind committee members of biases and to try to avoid them.
- Short presentation.
- I'll share them with colleagues and will consult them next time I run a search.
- I am hopeful that we can facilitate a series of shorter workshops on this topic with other faculty who were not able to attend last week.
- Want to institute a better process of initial screening for all candidates.
- Train them about bias and how to have a clear frank discussion prior to the interview process.

8. How should the Washington University Danforth Campus use the materials and information provided in the workshop?

- We need mandatory training of all people serving on search committees, appointment committees and all who participate in hiring/promotion decisions.

- Training sessions for all dept. chairs.
- Not sure. We should perhaps have some small-group meetings for heads of search committees every year -- perhaps 6 in each group, with a goodly representation of people who have gone through the workshop. We might want to make attendance a prerequisite for AA approval of the search.
- I think they should be used to train every search committee prior to being given permission to conduct the search.
- The Chancellor needs to continue to raise awareness of the importance of this undertaking. The various Deans must provide resources to implement these ideas.
- Trainers can use it in working with various search committees - if not throughout the process then at least at the initial charge-up of the committee.
- I would like to see all faculty trained on this.

9. What challenges might you or your campus face when implementing your changes to your search procedure?

- Resistance to change.
- The usual self-righteousness or the usual excellence/diversity framing.
- Resistance to change.
- Some resistance by certain departments and schools and by some individuals who will see diversity training as making special allowances for searches for women and minority faculty.
- The nay-sayers who don't want to acknowledge their own biases.
- Classic problems of a decentralized faculty hiring model. I also think campus climate with regard to women and underrepresented minorities continues to be a factor.
- Each department is already doing this differently so developing a uniform process will be an initial challenge.
- None, except the faculty itself once candidates are identified.
- Inertia and routine are likely to be the major obstacles.

10. What types of resources and/or follow-up might you or your Medical campus need to implement changes in your search procedures?

- Continued support from the Chancellor and Vice Chancellors.
- Another training session for trainers and some efforts to use trainers for search committees.
- I think the dean should debrief with chairs of search committees in groups of 8-10 every year.
- Continued buy-in from senior Deans.
- Guidelines/handbook similar to the one developed by WISELI that lays out the various aspects of the search process.

11. Were your expectations for this workshop met?

Yes	12 (100%)
No	0
Total	12 (100%)

Comments:

- Very well done - I wasn't sure what to expect but I thought it was an excellent use of my time.
- Provided research materials and other ways of explaining to others the importance of diversity.
- My expectations were exceeded.

12. Would you recommend this workshop to other Medical Schools?

Yes	12 (100%)
No	0
Total	12 (100%)

Comments:

- Should be mandatory for all!

13. What other topics would you have liked addressed at this workshop, yet were not?

- Probably need another workshop for this: mentoring and retention are neglected, mysterious, critical.
- I'd like you to make app participants take an IAT at the start of the workshop!
- Identifying diverse candidates. At one point this was much easier because of schools attended, organizational memberships etc. Today now that persons are attending schools other than minority institutions it is much more difficult to even know if there are underrepresented minorities in the pool - especially if they don't have the "recognizable" name.

14. Please provide us with ideas or suggestions to improve this workshop.

- Shorter so that content is a bit more dense.
- This was very professional; tone was great. Besides reworking the handouts so they're not so Wisconsin-specific -- a labor that might not be worth the trouble -- I can imagine no changes that I'm sure would improve it.
- Could have benefited from more time in the table discussions - especially with large groups its hard to get everyone's input in 10 minutes or less.
- One of the valuable features of the workshop was the opportunity to compare specific practices across units. Devoting more time to description of these practices with discussion of benefits and limitations would be advantageous.

15. Please provide an overall rating for this workshop.

Not at all Useful	0
Somewhat Useful	1 (8%)
Very Useful	11 (92%)
Total	12 (100%)

WISELI Research/Evaluation Report:

Benting, Deveny. March 29, 2007. "Evaluation of the Workshop: 'Implementing Training for Search Committees'. Presented to the Washington University Medical School on March 5, 2007."

**EVALUATION OF THE WORKSHOP:
“IMPLEMENTING TRAINING FOR SEARCH COMMITTEES”
PRESENTED TO THE WASHINGTON UNIVERSITY MEDICAL SCHOOL ON MARCH 6, 2007**

**Evaluation Report by Deveny Benting
March 29, 2007**

This workshop had a response rate of 33 out of 56 (59% responding).

1. Your title(s) or position(s):

Majority of respondents answering this question indicated a “Professor” or “Faculty” title: 64%; others were directors of various programs.

2. How did you hear about this workshop?

- Dr. Diana Gray.
- Email from GME office.
- Was asked to participate.
- Chairman.
- From my chairman.
- Medical school Office of Faculty Affairs.
- Faculty email.
- Dr. Gray contacted me.
- E-mail from Program Director.
- Dianna Gray, the organizer.
- Email from Office of Faculty Affairs.
- Vice Chancellor at our University.
- Through Molly Carnes.
- From my chairman.
- Dean's office.
- Diana Gray.
- Office of Faculty Affairs.
- Diana Gray.
- Chairperson.
- Invited.
- Through office of faculty affairs.
- Email from Faculty Affairs Office.
- Washington University.
- My boss.
- Wash U.

3. How valuable was each of the components of the workshop?

	Not at all Valuable	Somewhat Valuable	Extremely Valuable	N/A
The presenters	0	5 (15%)	28 (85%)	0
Your table facilitator	1 (3%)	13 (39%)	18 (55%)	1 (3%)
Small group/table discussions	0	12 (36%)	21 (64%)	0
“Search for Excellence & Diversity” guide book	0	9 (27%)	23 (70%)	1 (3%)
Research article activity	2 (6%)	14 (42%)	17 (52%)	0
Case study activity	3 (9%)	12 (36%)	18 (55%)	0
Large group discussions	1 (3%)	10 (30%)	22 (67%)	0

4. Please use this space to explain any of your responses to question #3.

- This was an excellent program.
- Superb workshop overall -- the discussion format intertwined with the formal presentations was perfect.
- Not much access to articles before the seminar.
- Tasks for the small group discussions could be made more focused and explicit.
- Thought some of the elements went on too long.
- Sufficient time to reflect on concept under discussion.
- The presenters were great. The person presenting the statistics had not really done them nor could she explain what she had done. Weakest part of day.
- It was valuable to hear the activities of the individual depts and academic units in our private university compared to public universities.
- Very interesting material, especially some of the research.
- This is a well-intentioned exercise, but time required was out of proportion to value for me.
- The presenters were all very well informed and did a good job of introducing topics without too much detail, just enough to prime the small group discussions. The most intriguing aspect of the small group discussions was learning about the processes used (or not) in other areas of the medical school.
- I thought this session was good and covered material I had in previous diversity training several years. This was beneficial since it involved faculty versus staff.
- I learned a lot about my colleagues' beliefs. There were some big biases.

- I didn't like having to spend my lunch reading research articles. If you feel that are that important, send them out ahead of time, as you did the other article, and we can enjoy lunch, or have a shorter day.
- Overall, the presentations were very effective. I think some familiarity with medical schools such as ours may help with future presentations. It seemed there was a lot of familiarity but also quite a bit of differences between Univ. of Wisconsin and us. The principles presented were great though.
- I thought it was all very helpful, some people at our table thought the cases were too skewed or not factual enough, they wanted it to be more realistic or balanced, with info on several of the candidates, not just Manuela.
- As a major supporter of women and diversity in our institution, I thought there was an emphasis on stating the problem and less on how to remedy the problem. Unfortunately, the room was filled with advocates; the people that are most egregious in NOT supporting women and diversity were not in the room. That said, I thought it was a very worthwhile experience.

5. Please indicate the level to which your skill in each of the following areas increased, if at all, due to the workshop.

	This skill remained unchanged	This skill increased somewhat	This skill increased to a great extent	Did not attend
Running an effective search committee	2 (6%)	16 (48%)	15 (45%)	0
Teaching others to run an effective search committee	3 (9%)	14 (42%)	16 (48%)	0
Recruiting a diverse pool of candidates	1 (3%)	18 (55%)	13 (39%)	1 (3%)
Teaching others how to recruit a diverse pool of candidates	5 (15%)	16 (48%)	11 (33%)	1 (3%)
Applying the research about unconscious biases and assumptions in the search process	1 (3%)	11 (33%)	21 (64%)	0
Teaching others about social science research to improve a search process	5 (15%)	16 (48%)	12 (36%)	0
Thoroughly reviewing the candidates	6 (18%)	18 (55%)	9 (27%)	0
Teaching others how to thoroughly review candidates	7 (21%)	18 (55%)	8 (24%)	0
Implementing an effective interview process	5 (15%)	20 (61%)	8 (24%)	0
Teaching others to implement an effective interview process	6 (19%)	18 (56%)	8 (25%)	0

6. Please use this space to explain any of your responses to question #5.

- Since I am currently [practicing some of these methods], some of this information was more a reinforcement of what we do.
- We needed more concrete examples about how this should be done.
- I have served on search committees for [many] years. Many of these suggestions were incorporated into the process over the years.
- Realized the key role unconscious biases play in decision-making.
- You don't have a column for "already do this." When we can find a candidate, our reviewing, interviewing are tops. Our situation is either no applicants, as there is currently no pool of well-funded PhD's out there, or they will not come to work for us.
- I have already implemented some of the lessons that I learned at the presentation.
- Since none of the skills have yet been utilized, it is difficult to say how much they have been increased.
- It was very informative to learn about biases and how they are applied to recruitment. I am much more aware of my own unstated biases.
- Having recruited [a large number of] faculty to this institution, I have run a number of searches, while I did not learn a lot [of] new [information], I did get more objective information, and tools to become even more effective.

7. How do you plan to use the materials and information you received when/if you participate in search committees?

- To work with [others] to identify other offerings to further disseminate the information.
- Would pretty much follow the outline's suggestions.
- I will make my colleagues aware.
- I will pass on to other committee members and follow the guidelines.
- To remove biases by confronting them.
- To support what I tell the committees.
- Highlight unconscious bias as cause of our actions when working with my internal recruitment group as we plan and recruit for next year.
- I will share with my group.
- Will use to introduce principals for effective recruitment.
- I will re-read them before participating in a search committee and use them as guidelines.
- I plan to use this for all recruiting both for faculty and staff. I also will begin training of my staff and junior faculty in these issues.
- Review materials prior to joining the committee and during evaluation process.
- Try to step back and remove any biases, communicate openly, ensure search for women and minorities.
- Apply the principles learnt in my evaluation process.
- I would like to institute having search committees, a novel idea for our faculty.
- Will distribute to committee members.

- I will refer to it, and make a more intentional effort than perhaps I would have before these sessions to assure optimal representation of diversity.
- To do train the trainer sessions here and replicate it.
- I feel like I will be a better recruiter and interviewer for all candidates -- underrepresented and others -- but the proof will be in how our practice demographics changes after a few more spots are filled.
- Intend to recommend to Program Director that the search committee members have a copy of the materials we were given at the seminar. Plan to emphasize the importance of increasing the search process. Intend to recommend that members work together on important questions to ask candidates and review questions that should not be asked.
- I have already shared it with colleagues.
- I will use this to help others and myself do searches in our school.
- Call the social science data to the attention of committee members.
- I plan to champion the process of recruiting underrepresented minorities and women.
- I will refer to the notes/handout to remember & employ best methods for diverse recruitment & search, efficient interviewing and successful hiring.

8. How should the Washington University Medical School use the materials and information provided in the workshop?

- Dean should make search committees and acceptance of their judgments mandatory.
- They should be shared with the Executive Faculty to hopefully improve their insight into the problems of recruiting a diverse faculty.
- The excellent written materials should be distributed to everyone involved in recruiting and interviewing. It would be nice if Wash U developed some in-house web-accessible resources similar to those from Madison. Specific training sessions are probably needed at least for search committee heads (or the whole committee) before any major recruiting/hiring (at least for chairs, deans, etc.).
- Emphasize the resource commitment required of the search members.
- We should develop our own plan and spread the word on campus.
- I think the research articles should be more widely disseminated. The first step towards addressing unconscious biases is recognizing them, and these articles quantify our biases in a scientifically sound manner.
- To increase fairness in recruitment.
- Educate faculty & leaders in the methods best suited for diverse recruitment & search, including utilization of formal search committees.
- Provide across departments.
- Maintain a high level of interest in opportunities to enhance diversity throughout out institution.
- All search committees should have copies of the materials and be required to review the materials.
- We need to make sure every person at the university involved in search committees, or hiring residents, postdocs or faculty has learned this material.
- Attendees should disseminate the information to all Departments.

- Create a more formal search pathway for candidates even at the junior faculty level.
- Only people who have been trained should be allowed to be on committees.
- Should institute search committees in clinical departments.
- Further and broader education.
- Should be mandated for ALL faculty search committees, even entry level.
- We should disseminate the information to all those involved in recruitment.
- Develop procedures for search committee operation. Make search committees mandatory in all departments for faculty positions.
- The Dean should make this a mandate to all Department Chairs to attend such a workshop. He should also find a way to ensure that the Chairs try to implement proper procedures.
- Implement official search committee in all medical school departments for any entry-level faculty positions.
- They should make WU-specific info from the Wisconsin info and disseminate it to all chairs, division heads and search committees.
- Provide to all search committees.
- We should begin to formulate a basic template for recruiting women and minorities across depts in the med center.

9. What challenges might you or your Medical School face when implementing your changes to your search procedure?

- No one to recruit. So we grow our own.
- Inertia. We have been successful so far. Why change. (People forget about the dinosaurs, I'm just waiting for the Ice Age to begin).
- There are few search committees for faculty in the Department of Medicine. There are many fixed ideas about what kinds of faculty are needed and how they should be retained and promoted.
- Search committees not routinely employed in clinic departments.
- We may meet with resistance from the departmental chairpersons particularly those that did not attend the meeting.
- Resources will need to be allocated for recruitment at all levels.
- Lots of folks stuck in their ways.
- Resistance to change.
- Convincing search members of their unconscious biases.
- We had a select group of people committed to the cause. There will be resistance from a vocal minority.
- Often searches are word of mouth with many preconceptions that may interfere with unbiased recruiting.
- We do not use a search for most posts, because there are not dedicated resources for most posts. To make effective and powerful search committees, resources and targets for recruitment would need to be established more overtly ahead of time.

- Our process is quite formalized already compared to many other areas of the medical school. The main challenge will continue to be finding prospective candidates because of the shortages of faculty candidates in our discipline.
- Enforcement from the Dean.
- Very de-centralized school. This will be difficult to implement without a concerted effort from many people.
- Not all are into diversity, not all faculty are recruited through searches.
- Inertia. Ignorance. General bias.
- The chair may not have been trained or even want to use the materials.
- The fact that many departments do not have searches.
- Resistance to the underlying concepts. Lack of funds for couple recruitments. Long history of concern.
- If there is a lack of mandate by the dean or chairs, the procedures will fail.
- Acceptance that diversity is needed.
- Overcoming habit.
- Lack of true leadership and transparency.
- It is change and change brings resistance with newness versus what is familiar.
- The selection of the search committee is the critical step that needs to be clarified and structured.

10. What types of resources and/or follow-up might you or your Medical School need to implement changes in your search procedures?

- To be determined.
- We will need yearly boosters. The dean should acknowledge that these are major issues. All search committees should be comprised of 35% women. All slates should be expected to have at least 35% women included.
- Needs top-down approach with the Dean insisting that Chairs conduct searches.
- Funds for couple recruitments. Process for same.
- Comprehensive follow-up by Chair and Dean.
- Cultural competency training and a focus on unconscious assumptions.
- Money for recruitment.
- Gender equity and diversity committees need to follow up to ensure university guidelines for search committees are modified.
- Have on-going discussions on the topic.
- There needs to be some sort of accountability if there is going to be a significant commitment to a more diverse faculty.
- Record success of diversity initiatives.
- More resources, funds, space, time.
- Perhaps some additional information regarding the actual interview process.
- More workshops; perhaps trained facilitators on search committees.
- We need the Dean to make it clear this is important.
- Follow up from each Dept. each year on searches done, what happened, how they were done, etc.

- More training, more support for training and search committees.
- Social science information as provided by WISELI.
- Diversity on the committee. Instructions to the committee. Accountability of the committee and of the decision making process.
- Refresher courses in operating successful and diverse searches.
- Access to diverse candidate list.
- Most likely time to plan and implement a more standardized recruitment process then try to apply across all academic units in the medical center.
- Probably having more facilitators, etc., in widening the participation of esp. senior faculty and administrators in this type of workshop.

11. Were your expectations for this workshop met?

Yes	33 (100%)
No	0 (0%)
Total	33 (100%)

Comments:

- Workshop reinforced what I knew to do regarding recruitment period! I also saw weaknesses of the workshop regarding the research that they presented, i.e., the majority of the presenters and the audience really did not understand the research and were unable to evaluate the quality of the research.
- Very helpful information that can be acted upon.
- I learned more than I expected to.
- I already have a commitment to the topic, and it was obvious that this exercise represented an institutional commitment to it. However, fundamental changes are likely difficult to achieve even when everyone is well intentioned.
- I did not have high expectations but I learned a lot and my interest was maintained throughout the day.
- Actually, they were exceeded.
- Exceeded my expectations -- I was not expecting so much detailed and thoughtful information.
- I frankly didn't know what to expect and gained much.
- It was better than I thought. I enjoyed the research papers the most.
- Awareness and identification of diversity in recruitment was my major objective and learning we ALL need to strive to reduce and overcome biases to make it truly implemented.
- But as a supporter, I learned some new facts and some new techniques that may make me more effective - still the worst offenders were not in the room. Only 4 executive faculty participated for any length of time.

12. Would you recommend this workshop to other Medical Schools?

Yes	31 (97%)
No	1 (3%)
Total	32 (100%)

Comments:

- Because every medical school should be using similar procedures--the old boys/girls network has died so it should be in the ground.
- Extremely well organized and very valuable information.
- Much unconscious bias exists among faculty. This workshop raises the issues in a non-confrontational manner and makes everyone think about these issues.
- Well organized and informative. The materials and the interactive nature of the workshop made the information and insights have a greater impact than just a series of lectures.
- Too time consuming. The outside consultants may not have been that necessary.
- Absolutely.
- It was very helpful.
- Everyone has the same issues, whether they admit it or not.
- Useful and well-presented content that is generally not found elsewhere in the academic medical/research curriculum.
- Raising awareness to this issue is extremely important.

13. What other topics would you have liked addressed at this workshop, yet were not?

- Information on techniques to avoid bias and to correct for it at a systems level.
- The topics were broad and comprehensive, and could not be adequately [addressed] in the short time allowed.
- Retention of staff as well as recruitment. Promotion issues.
- Retaining faculty would be helpful.
- Maybe it is not in the scope of the workshop, but issues of retention and the working environment for women and minorities are also important.
- How to deal with people who say outright that they do not want to hire women who are going to take leave due to pregnancy. This is not a subconscious bias. They are quite aware they DO NOT want women on maternity leave. How do we deal with that?
- Special considerations for the promotion/tenure decision.
- Widen the scope to include retention and promotion of URM and Women.
- It was pretty thorough.
- More procedural examples regarding successful and unsuccessful recruitment strategies.

- More emphasis on African American, Native American, Hispanic and other minorities. Emphasis was on hiring women, which is not the only problem we face in diversity.
- I guess more techniques for expanding participation and for more uniform adoption throughout the institution.

14. Please provide us with ideas or suggestions to improve this workshop.

- It was great, thank you.
- Be more detailed about the ways we can implement this change.
- From my perspective could have been shorter.
- Make it two days, and supplement the presenters' emotional presentation with more rational presenters, i.e., experts in social-psychological research concerning women and minorities. Also, some medical schools have departments that are biased for females > males (e.g., allied health, wtc.). The topic not even acknowledged, let alone, addressed. The workshop needs to go further and propose that the procedures advocated be applied to ALL faculty and administrator hires, and perhaps all staff also.
- When presenting to a research 1 faculty, have your statistics ready. If you are not gathering outcomes, then you do your program and grant a disservice.
- The beginning of the workshop was fuzzy. I would start with a more direct approach about the goals for the day. It took me about 30 min to understand the purpose and goals.
- Possibly more time in to read the article or hand out in advance. A 25-page article in a different discipline is not easy to digest in an hour.
- As noted, if this is going to be at a future med school, perhaps there are more things that can [be] useful in recruitment of clinical candidates applied to the current workshop.
- Give it often.
- Provide science to participants earlier (perhaps institution specific).
- When presenting WISELI study results to clinicians & researchers, apply statistical tests to the findings (even if preliminary or descriptive). Otherwise, attendees will not be able to assign significance or importance to the findings, and results will lack face validity.
- Have more real -life examples of recruitment at ALL levels of academic levels.

15. Please provide an overall rating for this workshop.

Not at all Useful	0 (0%)
Somewhat Useful	8 (24%)
Very Useful	25 (76%)
Total	33 (100%)

WISELI Research/Evaluation Report:

Pribbenow, Christine Maidl and Jennifer Sheridan.
April 2007. “Evaluation of the Vilas Life Cycle
Professorships Program.”

Evaluation of the Vilas Life Cycle Professorships Program

Christine Maidl Pribbenow and Jennifer Sheridan

April 18, 2007

This report details the process and outcomes for the Vilas Life Cycle Professorship (VLCP) program at the University of Wisconsin-Madison, funded by the Estate of William F. Vilas. The report is presented in three sections to the Vilas Trustees and the Office of the Provost:

Section I: Administrative details of the program.

Section II: The experiences of the recipients of Vilas Life Cycle Professorships.

Section III: Research progress of the recipients (2005/06 and 2006/07 cohorts).

The public will have access to only Sections I and II.

Section I: Administrative Details

The Vilas Life Cycle Professorship (VLCP) program is administered by the Women in Science & Engineering Leadership Institute (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.

WISELI has enlisted the following faculty/staff to read applications and make funding decisions:

- **Jennifer Sheridan.** An assistant scientist and a sociologist by training, Dr. Sheridan represents the social studies division. Dr. Sheridan has administered the original Life Cycle Research Grant (LCRG) program since its inception, as well as serving on the review panel from the beginning.
- **Amy Wendt.** A professor in the Electrical and Computer Engineering Department, Dr. Wendt represents the physical sciences division. Dr. Wendt has served on the review panel of the former LCRG program since its inception.
- **Cecilia Ford.** Dr. Ford is a professor of English, and represents the arts & humanities division. Dr. Ford has also served on the review panel for the original LCRG program since the beginning.
- **Nancy Mathews.** Dr. Mathews is an Associate Professor in the Gaylord Nelson Institute for Environmental Studies, and represents the biological sciences division. Dr. Mathews is herself a former recipient of the original LCRG program.

Because flexibility is of utmost importance to faculty who are experiencing life crises, we established three deadlines for applications for the Vilas Life Cycle Professorship program for 2006/07:

- **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 will be 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).

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| <ul style="list-style-type: none"> • 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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Demographically, Vilas Life Cycle Professorship applicants and recipients are very diverse:

	Applicants	Recipients
Gender		
Female	15	14
Male	6	4
Race/Ethnicity*		
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

* 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".

New Issues Arising in 2006. As this program became more widely known, and as we gained experience with new constituencies across campus, several new issues arose in 2006.

- Faculty who need this program also need the flexibility to use their VLCP award across the fiscal year boundary; these awards help the most when the faculty member can decide which 12 months they would like to spend their award. We worked with Research and Sponsored Programs (RSP) so that we can allow VLCP recipients to have an award that spans a fiscal year boundary. The Provost has agreed that in the event the

Vilas Trustees do not fund a year of VLCP, his/her office would cover any remaining commitments that spanned a fiscal year boundary.

- For the first time, we had two applicants who are permanent PIs (one was partially funded), and had two other inquiries from academic staff who are PIs and are interested in applying, but are unable to because they have not achieved permanent PI status. A consultation with the Provost's and Chancellor's offices confirmed that the criteria for inclusion in the VLCP program for academic staff at UW-Madison would continue to be "permanent PI status."
- One committee member would like to resign; she has been on the VLCP evaluation committee since the inception of the pilot LCRG program. We will be looking for a new faculty representative for the arts & humanities division for 2007.
- More assistant professors applied in 2006 than in 2005. In 2005, five of 27 applicants were junior faculty (18.5%), and in 2006, twelve of 21 applicants were assistant professors (57.1%). The committee gives assistant professors priority when making these awards; thus, in 2006 we made awards to over 85% of our applicants, compared to 67% of our applicants in 2005. Because we wanted to make more awards than we had funds, we made many partial awards in 2006. For our 2007 budget we requested an increase of approximately 10%, as we expect that assistant professors will continue to apply in larger proportion than other ranks (based on the experience of our pilot program; the first year of the VLCP program appears to be an anomaly with a high number of full professors applying).

Special Recognition of Vilas Life Cycle Professorship Program. In May 2006, Chancellor John Wiley was notified that the Vilas Life Cycle Professorship Program was selected as a recipient of the Alfred P. Sloan Award for Faculty Career Flexibility, funded by the American Council on Education (ACE) and the Sloan Foundation. The VLCP program was recognized for its "innovation in career flexibility for tenured and tenure-track faculty." As the award letter states:

"The Vilas Life Cycle Professorship Program exemplifies a true model of innovation in career flexibility for tenured and tenure-track faculty. This outstanding program provides financial support and personal attention to faculty who encounter critical junctures in their careers that affect both their research and personal lives. It demonstrates your university's commitment to changing the structure of the traditional academic career path in ways that both improve the lives of the faculty and contribute to the retention of valued faculty at the University of Wisconsin-Madison."

The \$25,000 award was used in support of WISELI's administration of the program. The ACE/Sloan organizations also presented the UW-Madison with a beautiful crystal bowl to commemorate the award.

Section II: Experiences of Vilas Life Cycle Professors

Awardees were asked to complete a questionnaire about their experiences and the outcomes due to the VLCP program, and to also report their research progress. Experiences of the recipients

awarded in both 2005/06 and 2006/07 are summarized in this section (five from Round 1; seven from Round 2). Research summaries are found in Section III.¹

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, diagnoses 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 greatly helpful to receive the Vilas Life Cycle Professorship, 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.²

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

¹ Participants' names are withheld in Section II to protect their privacy. Participants' names are provided in Section III to acknowledge the outcomes that they directly attribute to the award.

² She did indeed achieve tenure and was promoted to an Associate Professor.

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.

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 member 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.

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 postdoc, 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.

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.

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.

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 programs 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.*

Section III: Research Progress of Vilas Life Cycle Professors

Section III has been removed to protect the confidentiality of the VLCP recipients.

WISELI Research/Evaluation Report:

Sheridan, Jennifer. May 2007. "Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006."

http://wiseli.engr.wisc.edu/initiatives/researcheval/By_the_Numbers.pdf .

Gender Equity By The Numbers: Status of Women in Biological & Physical Sciences at the University of Wisconsin-Madison, 2002-2006

Prepared by: Jennifer Sheridan, May 2007

Introduction and History

In 2002, the Women in Science & Engineering Leadership Institute (WISELI) became one of the first nine sites to receive an ADVANCE Institutional Transformation (ADVANCE: IT) award from the National Science Foundation (NSF). Any site that receives an ADVANCE: IT award is required to submit certain data to NSF annually regarding gender equity. As outlined in the cooperative agreement received by each site:

“Awardee will maintain a uniform database of quantitative indicators of activity and progress. NSF will provide general guidelines for the collection of data in order to provide coordination across ADVANCE Institutional Transformation projects and to establish the basis for evaluation of the ADVANCE program.”
(University of Wisconsin-Madison/NSF Cooperative Agreement, page 4.)

The “general guidelines” for the collection of the data were created at the first annual ADVANCE Principle Investigator (PI) meetings at NSF in April of 2002. At that meeting, at least one PI from each of the first nine ADVANCE: IT sites attended, and as a group created a list of important quantitative indicators of gender equity, including:

- 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 (both teaching and research)
- 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 (by department, rank, years in rank)
- Space allocation (by gender, other controls)
- Start-up packages (include different components of package, include controls)

After this initial list was generated, each site was asked to rate each item in the list by whether (1) they could collect the data easily, (2) it would not be easy to collect, but they would like to do it, and (3) it would be impossible to collect the data. A table was created summarizing the distribution of the 9 sites for each of these 12 indicators, and the “NSF 12” group of gender equity measures was created. In Appendix 1 of this report, we reproduce a summary of this

meeting that appears in the NSF ADVANCE “Toolkit 1¹”, as well as the two documents generated at the April 2002 ADVANCE PI meeting.

In addition to generating the gender equity indicators each ADVANCE site was to collect, we discussed a number of important considerations for the reporting of the data. First, we decided to establish a “baseline” of data against which to evaluate the results of the ADVANCE: IT project by agreeing to collect the data as of 2000 or 2000/01 academic year. Second, we decided that except for the indicator tracking non-tenure-track scientists and engineers, we would concentrate our data collection on tenured and tenure-track faculty only. Third, we agreed that collection could be restricted to only science and engineering faculty (that is, data from arts and humanities departments do not need to be collected), but that social sciences *must* be included in the definition of “science and engineering”, even if the ADVANCE: IT site is not focusing on the social sciences. Finally, some categories of gender equity indicators (climate, productivity, family/work-friendly policies, non-institutional indicators) were acknowledged to be important, but were not “required” for collection or delineated further.

At the University of Wisconsin-Madison, PIs Jo Handelsman and Molly Carnes, and Research Director Jennifer Sheridan, took this mandate from the NSF to what was then the Office of Budget, Planning & Analysis (OBPA), led by Dr. Martha Casey. In the original grant proposal, the Provost agreed that OBPA would donate time for collection of data in the form of “cost share” towards the grant. Dr. Casey assigned Margaret Harrigan, Senior Policy Analyst, to work with Jennifer Sheridan on the collection and reporting of the required data. Together, they worked on issues of how to report each indicator within the constraints imposed by the human resources and salary databases maintained by the University. Some of the issues discussed included:

1. Whether to report by headcounts, or FTE
2. What departments should be included under particular disciplinary groupings
3. How to report tenure and promotion outcomes
4. Which indicators the OBPA could not assist with

The most difficult decision was how to group departments by division. In the original proposal, Drs. Handelsman and Carnes proposed to only work with “biological and physical science” faculty. It is somewhat easy to determine whether a faculty member is in the biological or physical sciences based on his or her individual divisional committee membership, but the NSF required data reporting at the *departmental* level. Therefore, we needed to assign entire departments to a divisional affiliation, and this is not always easy to do as some departments might include faculty from more than one division (e.g., biochemistry includes faculty from both the biological sciences (BS) and physical sciences (PS) divisions; we assigned this department to the biological sciences because more faculty are BS than in PS.) In the end, we prepared a list that is reproduced in Appendix 2. When departments housed faculty in more than one division, the entire department was assigned the division to which the majority of faculty members belonged.

¹ Frehill, Lisa; Cecily Jeser-Cannavale; Priscilla Kehoe; Ellen Meader; Jennifer Sheridan; Abby Stewart; and Helena Sviglin. 2005. “Toolkit for Reporting Progress Toward NSF ADVANCE: Institutional Transformation Goals.” http://www.nmsu.edu/%7Eadvprog/Final%20toolkit_1_-_indicators%5B1%5D.pdf.

Because some data are not included in databases OBPA traditionally uses to produce their reports, the indicators that OBPA would not be providing WISELI include:

- Tenure promotion outcomes by gender (tenure awarded or denied)
- Number of women in endowed/named chairs
- Number and percentage of women S&E faculty on promotion and tenure committees
- Space allocation for S&E faculty
- Startup packages for S&E faculty

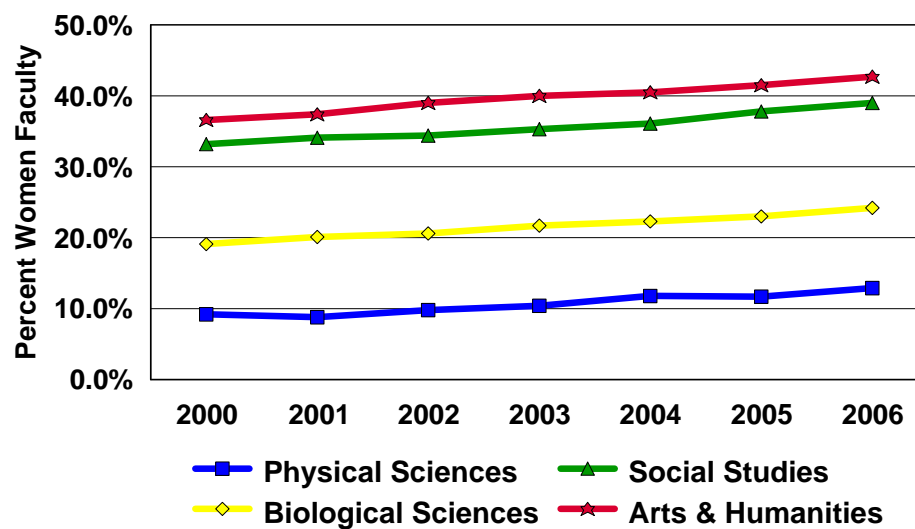
Finally, one major indicator was missing from the “NSF 12” list created in April 2002. Numbers and percentages of women newly hired each year was not included in this list. This indicator was added to the list during the creation of “Toolkit 1.” These data are also collected by OBPA and provided to WISELI.

In the report that follows, the “NSF 12” (now 13 with the addition of hiring data) are grouped based on the major research questions they can answer, in a format developed by Lisa Frehill and outlined in “Toolkit 1.” We use the indicator data we have collected from 2000-2006 to provide analysis of the four questions or their sub-questions, and end each section with a summary of findings including recommendations for further study if appropriate, and we also end with a recommendation regarding further collection of the indicator (which could include keeping the collection as-is, altering the parameters of the reporting in some way, or eliminating the indicator in the future.) We focus on the status of women in the biological science (BS) and physical science (PS) departments in this report. Where comparisons with social studies (SS) and/or arts & humanities (AH) departments are illustrative, we include them as well.

Distribution of biological and physical faculty and staff by gender, rank and department

Percentages of Women Faculty in STEM . The great news is that percentages of women faculty in biological (BS) and physical (PS) sciences at UW-Madison have generally been increasing since 2000, as has the proportion of women in all divisions.

Figure 1. Percent Women Faculty, by Division



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% women 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.

The increases in percentages are driven primarily by an increase in women, but a decrease in men is also helping to increase the percentages of women on the faculty. In the PS division, for example, the FTE count of women faculty increased by 5.7% each year (from 42.25 in 2000, to 59.5 in 2006) while the FTE count of men faculty in the PS division decreased slightly, by 0.6% each year. Similar trends appeared for all divisions.

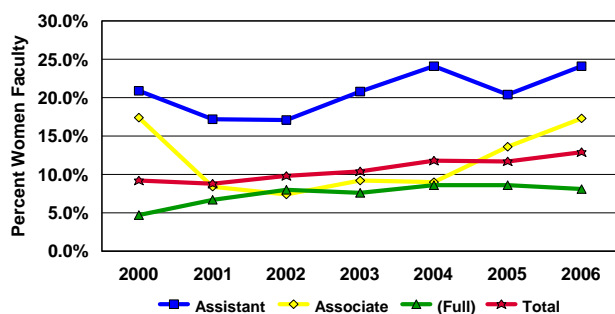
Table 1. Increases in Percent Women Faculty, 2000 - 2006

Division	2000			2006			Percentage Change/Year, 2000 - 2006		
	Women FTE	Men FTE	% Women	Women FTE	Men FTE	% Women	Women FTE	Men FTE	% Women
Physical Sciences	42.25	414.79	9.2%	59.50	400.80	12.9%	5.7%	-0.6%	5.6%
Biological Sciences	139.26	590.54	19.1%	185.31	580.79	24.2%	4.8%	-0.3%	3.9%
TOTAL SCIENCE	181.51	1005.33	15.3%	244.81	981.59	20.0%	5.0%	-0.4%	4.5%
Social Studies	194.61	391.31	33.2%	230.20	360.23	39.0%	2.8%	-1.4%	2.7%
Arts & Humanities	136.47	235.99	36.6%	158.25	212.23	42.7%	2.5%	-1.8%	2.6%
TOTAL NON-SCIENCE	331.08	627.30	34.5%	388.45	572.46	40.4%	2.7%	-1.5%	2.6%

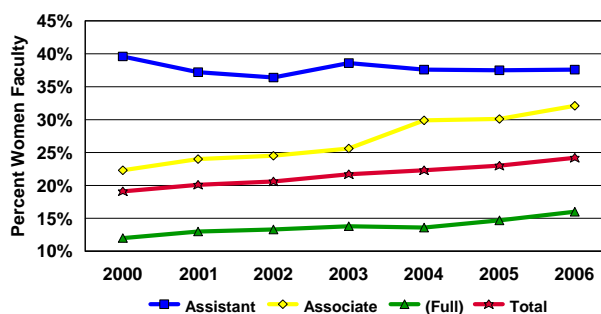
Examining trends by rank, we can see some areas of positive change for women in PS and BS departments, but also an area of concern. For assistant professors in PS departments, the trend

has generally been an overall increase in the percentage of women assistant professors. In BS departments this trend has been flat or even slightly decreasing. This decline in BS departments is especially problematic considering that the pool of potential women faculty is so much larger in the BS departments. For both PS and BS departments, the percentage of women among our associate ranks has been increasing during the past several years. This is very encouraging, as it 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 much more turnover in the lower ranks. Overall, we are encouraged by the rising proportion of women at all ranks except at the assistant professor rank for women in the BS departments.

**Figure 2a. Percent Women Faculty, by Rank
Physical Science Departments**



**Figure 2b. Percent Women Faculty, by Rank
Biological Science Departments**



Findings: The percentage of women on the UW-Madison faculty has been increasing in all divisions. This increase is primarily due to adding more women to the faculty, although the declining numbers of men are also contributing to the overall trends. The percentage of women assistant professors in BS departments has been declining slightly over this period for unknown reasons; this trend requires further investigation and explanation.

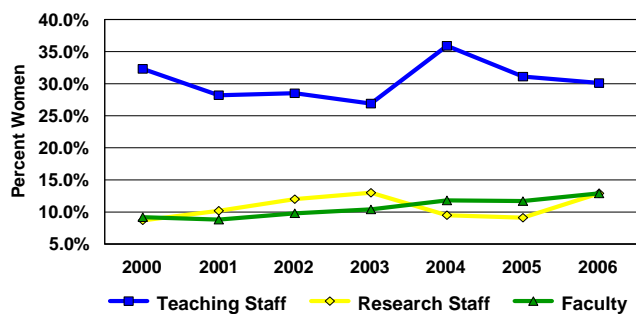
Recommendations: Continue to collect these data by gender, rank, and department. Although we usually summarize these data at the divisional level, having departmental-level data is important so that percentages can be calculated for schools/colleges, or other groupings of departments as required. FTE counts are an appropriate way to collect the data at the department level in order to account for faculty with multiple appointments; however, a new table that shows headcounts of faculty by rank and individually-declared divisions would be a welcome addition. It is imperative that data are at least disaggregated by division, as the much higher numbers of women in SS and AH divisions could mask changes (either positive or negative) occurring in PS and BS divisions. Parallel data should be collected for racial/ethnic minority groups.

Percentages of Women Academic Staff in STEM. It is thought that many women who earn PhDs in STEM (Science, Technology, Engineering and Mathematics) fields are “stuck” in less-prestigious, less-visible jobs on the non-tenure-track faculties and staffs of many universities. These women may be lecturing, working in research labs, advising students, or other such

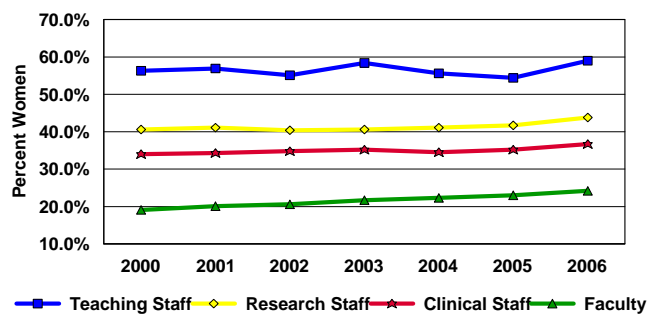
positions. NSF required the collection of data on these non-tenure-track academic workers in order to monitor whether the University is tending to differentially steer women towards these jobs rather than the academic leadership position conferred by a job on the ladder faculty.

WISELI worked with the OBPA to more clearly define what “# of women in S&E who are in non-tenure-track positions (teaching and research)” means at UW-Madison. Non-tenure-track positions at UW-Madison are known as “academic staff.” The difficulty arises when we must decide which academic staff are in science and engineering, which staff are teaching, and which staff are conducting research. We decided to track six title series (all ranks) that we believed had the highest probability of containing academic staff with PhDs or equivalent degrees—the academic staff who *could* have been faculty had they pursued a tenure-track position. We selected two title series to define the teaching staff (Lecturer and Faculty Associate); two title series to define the research staff (Researcher and Scientist); and two title series to define a third category of staff who could have been faculty—the clinical staff (Clinical Professor and Professor (CHS)). To designate whether an academic staff member in one of these title series is in a BS or PS (or some other division), we assigned divisions based on the department of their appointment(s). As with the faculty counts above, we used FTE rather than headcounts to account for staff in more than one department, and also to look at differences in appointment percentages that may arise between women and men academic staff.

**Figure 3a. Percent Female Academic Staff
Physical Science Departments**



**Figure 3b. Percent Female Academic Staff
Biological Science Departments**



Women at UW-Madison are over-represented in the teaching positions, relative to their presence in the research and/or clinical positions. The percentage of women in research positions in the PS departments is very similar to their presence in the faculty, while women are much more strongly represented in the teaching positions. Women are also more highly represented in teaching positions in the BS departments, compared to their presence in the research or clinical tracks. Women’s participation in any of these non-ladder tracks is much higher than their participation in the tenure-track faculty in BS departments.

Although tracking these trend is interesting, it is less clear what we should do with this information. What would it mean if the percentage of women in the academic staff teaching positions in the BS or PS departments were to decrease over time? What if women were increasingly being hired into the tenure-track faculty positions and this is why their percentage in the teaching staff decreases, or alternatively, what if the percentage of women overall increases so that their percentages in all tracks—research, teaching, clinical and faculty—increase as well

over time. While these data are illustrative of the tendency for women to be more strongly represented in non-tenure-track positions, tracking the trends over time does not appear to provide useful information for institutional change.

Findings: Women are over-represented in the teaching tracks for PS and BS departments relative to their presence on the faculty. In the BS departments, all non-tenure-track positions have a higher proportion of women than their faculty counterparts, while in the PS departments women's presence on the research track mirrors their presence on the faculty.

Recommendations: There is no need to track these data from year-to-year. Spot checks every 3-5 years to uncover the gendered appointments of tenure-track and non-tenure-track scientists and engineers will accomplish the same goals. Spot checks would also be useful to gauge whether under-represented minorities are being hired more often in non-tenure track positions.

Outcomes of institutional processes of recruitment and advancement for men and women faculty in the biological and physical sciences

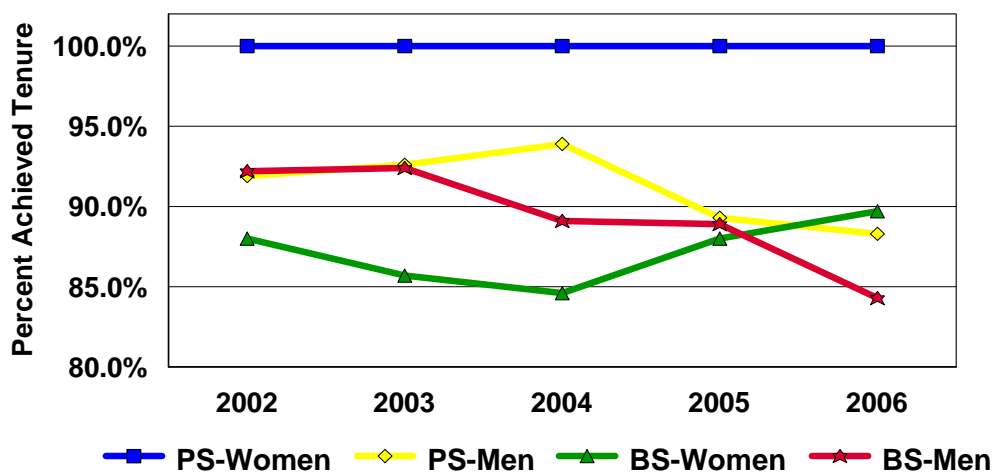
Tenure Promotion Outcomes. Hiring women faculty is important, but it is also important to retain them. The women assistant professors we bring into the UW-Madison must be mentored, encouraged, and given the resources and support they need to succeed in their quest for tenure. If we do not tenure the women we hire, we cannot transform the leadership in academic science and engineering at UW-Madison. At UW-Madison, the usual path is for an incoming assistant professor to be given six years to compile a portfolio of teaching, research and service. Each assistant professor is assigned a mentoring committee, and yearly progress towards tenure goals is noted. If an event that might delay productivity, such as having/adopting a child, occurs during these six years, the faculty member can be granted a tenure clock extension—increasing the number of years s/he has to accomplish the qualifications of a tenured faculty member. When the faculty member is ready, they prepare a dossier of their accomplishments and letters from outside reviewers are requested, to ascertain the junior faculty's visibility in the field nationally (or internationally.) The packet and letters are reviewed by the department's executive committee, and voted upon. If the department votes to award tenure to the assistant professor, then the chair writes a letter indicating the department's support of the person and the entire packet is forwarded to one of four divisional committees (PS, BS, SS, and AH). The divisional committee ultimately votes to award or deny tenure based on an independent review of the tenure packet and accompanying letters. Divisional committees have been known to decline to tenure, even in cases where the department submitted a positive vote.

Thus, measurement of tenure outcomes at UW-Madison is best done in two different ways. First, it is important to know the raw percentages of women and men who submit dossiers to the divisional committee for tenure and receive it, so "tenure rates" at the divisional level should be reported. However, many junior faculty do not even make it far enough in the process to submit their materials to the divisional committees. They may be encouraged to leave before they even submit their materials to their departments, or they may submit their materials at the department level but the department may vote not to forward their tenure packet to the divisional committee. To ascertain whether there is gender equity in the dossiers submitted to the divisional committee (that is, whether women are disproportionately forced out before they even get to the divisional

committee review), a cohort/longitudinal approach is required. We have been using both methods of measurement at UW-Madison from 2000 to 2006, although we changed our procedures for the cohort analysis in 2004.

Regarding the raw percentages of women vs. men who are awarded tenure, given that they have submitted their materials to the appropriate divisional committee, we find little gender difference in the tenure rates. We measure “tenure rates” as a rolling 5-year rate, summing the numbers reviewed and numbers awarded over a five year period, and each year we remove 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. We found that 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.

**Figure 4. Tenure Rates, by Gender and Division
Physical & Biological Science Faculty Only**



As noted above, these rates do not take account of the junior faculty who never make it to the divisional committees; faculty who are either encouraged to leave before submitting their materials to their departments (e.g., after their third-year review), or who receive a negative vote at the department level and are never evaluated by the divisional committee. To measure whether men and women faculty are differentially leaving pre-tenure, we use a cohort approach. From 2000 to 2003, we used the approach OBPA uses in their annual reports to the Committee on Women and the Data Digest. Five-year incoming cohorts of faculty are followed and tenure rates within six years, and nine years, are calculated. Using this method, we saw some dramatic differences in tenure rates for men and women faculty in PS and BS departments for faculty hired between 1991 and 1996.

Table 2. Tenure Promotion Outcomes by Gender, 2003

Physical Sciences										
Entering Cohort*	Women					Men				
	Total Hired	Within 6 Years		Within 9 Years		Total Hired	Within 6 Years		Within 9 Years	
		Count	Percent	Count	Percent		Count	Percent	Count	Percent
1987-91	17	12	70.6	15	88.2	87	55	63.2	66	75.9
1991-95	7	3	42.9	3	42.9	36	22	61.1	29	80.6
1992-96	7	2	28.6	3	42.9	32	21	65.6	27	84.4

Biological Sciences										
Entering Cohort	Women					Men				
	Total Hired	Within 6 Years		Within 9 Years		Total Hired	Within 6 Years		Within 9 Years	
		Count	Percent	Count	Percent		Count	Percent	Count	Percent
1987-91	29	8	27.6	16	55.2	101	57	56.4	70	69.3
1991-95	27	11	40.7	19	70.4	81	48	59.3	61	75.3
1992-96	28	12	42.9	20	71.4	78	46	59.0	57	73.1

The problem with this approach is that a cohort does not appear on the table until at least six years after they enter the University, at which time it is too late to stop any trends in attrition that are manifesting. Also, from the table it is hard to know who has not achieved tenure in six years because they left the University, or because they received a tenure extension. Thus, we changed the cohort reporting in 2004 so that trends in tenure promotion outcomes would become apparent sooner in a cohort's career and might permit implementation of interventions.

Table 3. Tenure Promotion Outcomes by Gender, 2006

Physical Sciences								
Entering Cohort	Women				Men			
	Total Hired	% Still	% Left w/o	%	Total Hired	% Still	% Left w/o	%
		Probation	Tenure	Tenured		Probation	Tenure	Tenured
1987-91	16	0.0%	12.5%	87.5%	87	0.0%	24.1%	75.9%
1991-95	7	0.0%	57.1%	42.9%	35	0.0%	20.0%	80.0%
1995-99	10	0.0%	40.0%	60.0%	34	0.0%	11.8%	88.2%
1999-03	15	46.7%	13.3%	40.0%	76	34.2%	13.2%	52.6%
2003-07	20	100.0%	0.0%	0.0%	57	94.7%	1.8%	3.5%

Biological Sciences								
Entering Cohort	Women				Men			
	Total Hired	% Still	% Left w/o	%	Total Hired	% Still	% Left w/o	%
		Probation	Tenure	Tenured		Probation	Tenure	Tenured
1987-91	27	0.0%	40.7%	59.3%	103	0.0%	32.0%	68.0%
1991-95	26	0.0%	26.9%	73.1%	82	0.0%	24.4%	75.6%
1995-99	23	4.3%	21.7%	73.9%	49	2.0%	26.5%	71.4%
1999-03	46	45.7%	17.4%	37.0%	86	40.7%	20.9%	38.4%
2003-07	30	96.7%	3.3%	0.0%	57	94.7%	3.5%	1.8%

NOTE: Numbers in **BOLDFACE** are final; numbers in normal typeface are in flux and will change year-to-year as new faculty are hired, are tenured, and/or leave the UW without tenure.

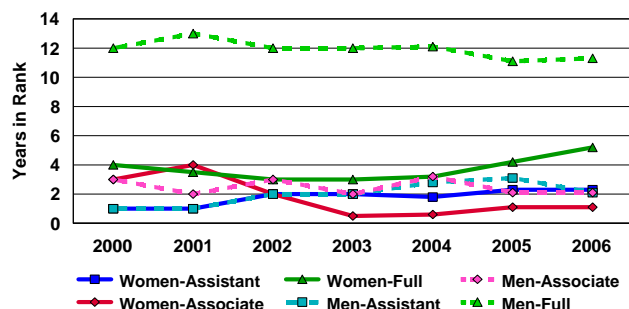
Using this new format, we can observe from year-to-year how the cohorts of junior faculty are faring. The cohort that began their employment at UW-Madison in 1995-99, which would have been coming up for tenure during the time that WISELI was operating, was equitable for men and women assistant professors in the BS departments, but not in the PS departments. A much higher percentage of women in PS departments (40.0%) left without tenure from the 1995-99 cohort, compared to their male peers (11.8%). Fortunately, this trend seems to have stopped for the more recent cohorts in both PS and BS departments. In the PS departments, women and men tend to be leaving without tenure at approximately the same rates. Men are getting tenure a bit faster than women (52.6% of the men in that cohort have tenure in 2006, compared to 40.0% of the women in that cohort), but this is to be expected because women are more likely to use tenure clock extensions. Similarly, in the BS departments, the percentages of women who are leaving without tenure in the current cohorts is approximately similar to those of men, and interestingly their tenure rates are about the same as well.

Findings: Large gender differences in tenure outcomes for women as measured using the cohort approach were evident in the 1987-1999 cohorts in PS departments. Smaller but still noticeable gender differences occurred in BS departments for the 1987-1995 cohorts. The most recent cohorts of junior faculty do not appear to be either achieving tenure or leaving the UW prior to tenure at rates that differ by gender. Once a tenure case is submitted to the divisional committee, there do not appear to be differential tenure outcomes by gender for any cohort.

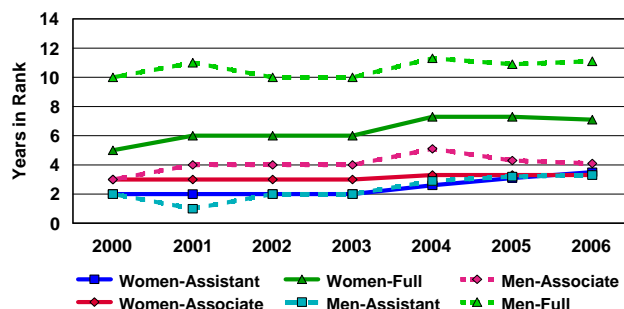
Recommendations: Continue to collect both the divisional committee data, and the cohort data as defined beginning in the 2004 indicators, to ensure that men and women are achieving tenure at equitable rates. Begin collecting these data by racial/ethnic group membership as well.

Median years in rank and time at institution. The ADVANCE: IT PIs decided to include these measures in the list of gender equity indicators in order to assess gender differences especially at the associate rank. In many universities, the time a faculty member spends at the associate rank is long and indefinite, and anecdotally many women get “stuck” in this rank. On the other hand, time at institution is correlated with many institutional rewards such as leadership opportunities, salary, access to resources, etc.

**Figure 5a. Median Time in Rank, by Gender
Physical Science Departments**



**Figure 5b. Median Time in Rank, by Gender
Biological Science Departments**

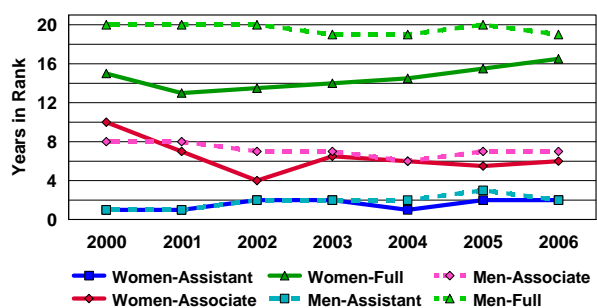


Clearly, male full professors in BS and PS departments have the most years in rank. Women full professors in BS departments are catching up, however; the gap is only four years in 2006, while

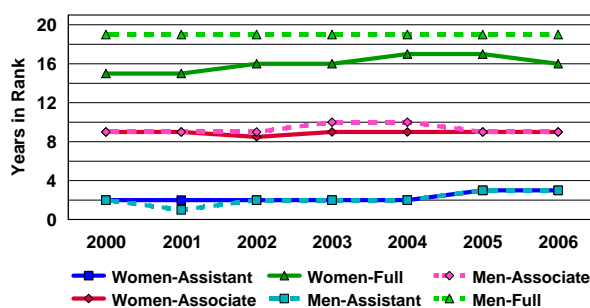
it was five years in 2000 (and the gap is 6.1 years for full professors in PS). Among associate and assistant professors, however, very little difference between men and women is observed. There may actually have been a tendency for men in BS departments to remain in the associate rank longer than women (the opposite problem than the original reason the measure was proposed); however, the median years in the associate rank has reached gender parity by 2006.

Time at the UW-Madison shows even less interesting patterns. Men and women in PS and BS departments in the assistant and associate ranks tend to have the same median years at UW-Madison. Only when you get to the full professor level do you see large gaps between the median years at UW-Madison for men and women, and these gaps are closing over time, as more women move through the system and more men who have been at UW-Madison for many years retire.

**Figure 6a. Median Time at UW-Madison
Physical Science Departments**



**Figure 6b. Median Time at UW-Madison
Biological Science Departments**



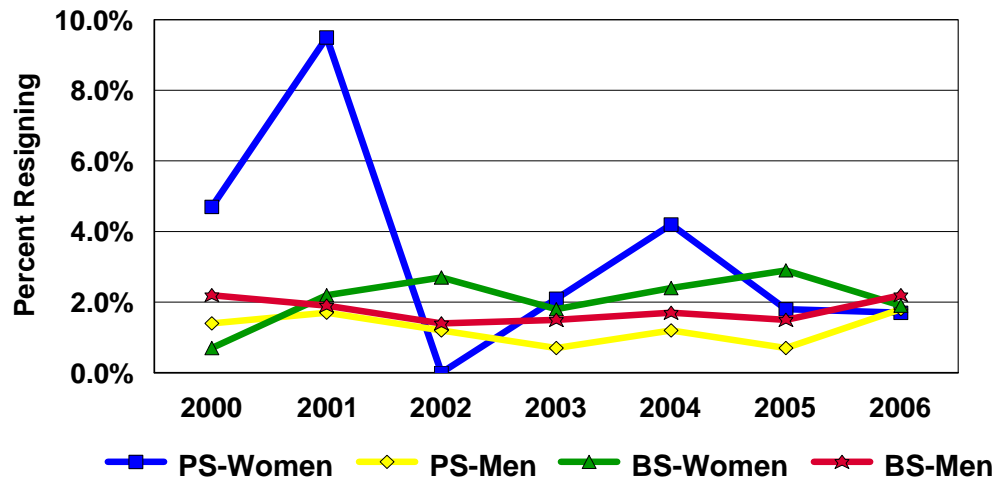
Findings: No real differences in either time in rank, or time at UW-Madison, for assistant and associate professors. Large gender differences in time in rank and time at UW-Madison appear for full professors, but this is not unexpected and is closing over time. UW-Madison does not appear to have a problem with women staying in the associate ranks for much longer periods of time compared to their male peers (in fact, the opposite may be the case, particularly in the BS departments.)

Recommendations: Do not track these variables on an annual basis.

Attrition. We clearly want to know if women faculty are leaving the University at greater rates than are men, but it is important to distinguish between retirements, and attrition for other reasons. Unfortunately, we cannot know if a faculty member who officially “retires” from the UW-Madison is actually retiring and then taking another position elsewhere and continuing along his/her career. That happens often, as many faculty have enough years of service to “retire” and begin collecting his/her state pension, even while they are gainfully employed elsewhere.

Nevertheless, to the extent possible we do distinguish between those who have left the UW-Madison to retire, and others. We used age (55) as a cutoff—if a faculty member left the UW-Madison at age 55 or older we assumed a retirement, and if the faculty member was younger than 55 we assumed it was real attrition. We recognize this is an imperfect measure.

**Figure 7. Percent Resigning from UW-Madison
Physical & Biological Science Faculty Only**



At UW-Madison, we clearly have some issues of differential attrition of women and men faculty. PS women have much higher rates of leaving the UW compared to men, even if the data are “smoothed” across all of the years we tracked. Women in BS, too, have higher rates of attrition than their male peers. We used these findings to explore the issues further in our “Why Women Leave” exit interview issue study,² and WISELI will continue to explore this issue for the entire campus as we take over the exit interview process for all faculty at the UW-Madison beginning in Summer 2007.

Findings: Women faculty leave the UW-Madison prior to age 55 at higher rates than their male counterparts, in both the PS and BS divisions.

Recommendations: Continue tracking this indicator, adding information about racial/ethnic differences in attrition, and study the issue further using exit interviews.

Hiring of New Junior and Senior Faculty. One of the first places an ADVANCE: IT site often sees change manifested is in the hiring of women faculty. Tracking the percentage of women among new faculty to the institution is very important because it is the entry-point to the university. If an IT site has a focus on hiring, then it is doubly-important to measure the percentage of women newly hired.

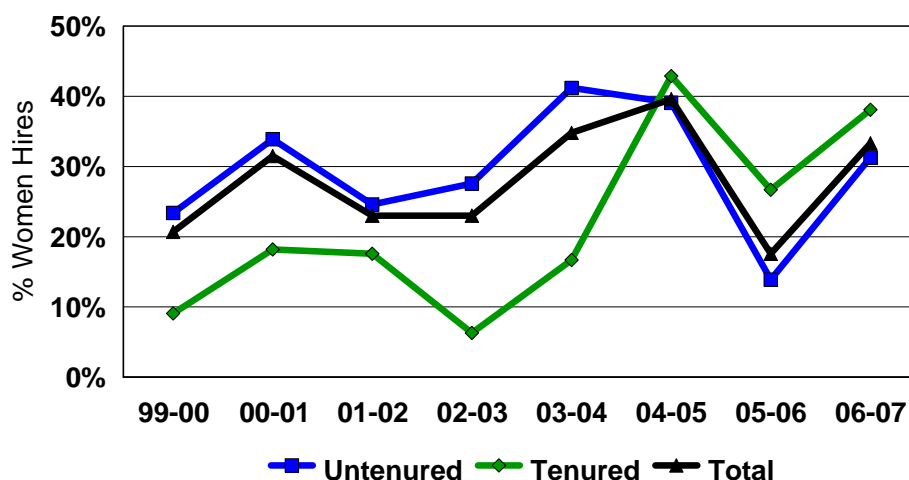
Because this measure was not part of the original “NSF 12”, we began tracking the percentage of women hired using less-reliable data than that provided “officially” through the OBPA. Each year, as a matter of public record, the newly hired faculty are listed by name in the fall of the academic year. We used that list to compile our early hiring statistics. The source of names on this list, the completeness of the list, etc. were unknown, but because it was a constant source of

² O’Connell, Kathleen; Christine Maidl Pribbenow; and Deveny Benting. March 2006. “The Climate at UW-Madison: Begins Sunny and Warm, Ends Chilly.”

data we made the assumptions that any limitations of the data would be repeated from year to year, and thus the *trends* would be accurate, even if the details were not.

Eventually, the Committee on Women in the University saw these hiring trends as useful indicators as well, and asked OBPA to track them by division; therefore, WISELI now has access to “official” OBPA hiring data, which has replaced our old system of tracking.

**Figure 8. Women as Percentage of New Hires
Physical & Biological Science Faculty Only**



The percentage of new hires in PS and BS departments, both tenured and untenured, who are women has increased at UW-Madison since the beginnings of the WISELI project in 2002. A glaring exception is academic year 2005-06, when for some reason the percentage of new hires who were women dropped to very low levels, especially for hiring of untenured faculty. We believe this had to do with the very low actual numbers of positions open that year and the previous year; a small number of positions and the perception that new positions might not be available in the future makes it “riskier” to hire a woman candidate. That one year aside, however, the UW-Madison has been increasing the numbers and percentage of women new hires very well in the past 3-4 years. It is especially wonderful to see that 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 division, and for untenured vs. tenured hires.

Findings: The UW-Madison has shown success in increasing the percentage of new hires in STEM who are female, with the notable exception of one year (2005-06).

Recommendations: Continue to track these data by gender and tenure status at time of hire, and add race/ethnicity measures to this as well to track the hiring of underrepresented minority faculty.

Gender distribution of faculty in leadership positions at UW-Madison

Formal administrative positions. Of course, the “L” in WISELI stands for leadership, and so tracking the presence of women in important leadership positions within the UW-Madison is imperative. The presence of women in administration is a key measure, 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. We tracked four different categories of “administrative leaders”: Department chairs, deans (including assistant and associate deans if they also have a faculty position), center directors, and faculty leaders in the central administration (chancellor’s and/or provost’s office.)

Figure 9. % Women in Administrative Positions*
Physical & Biological Science Faculty Only

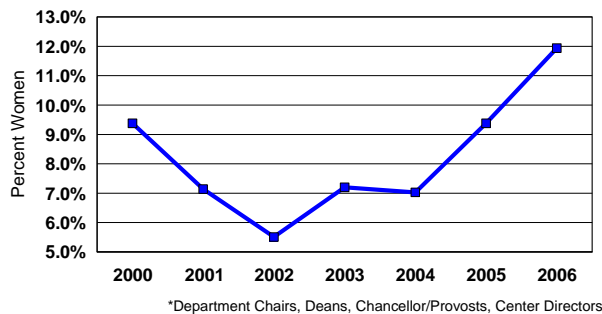


Figure 10. Percent Women Department Chairs
Physical & Biological Science Faculty Only

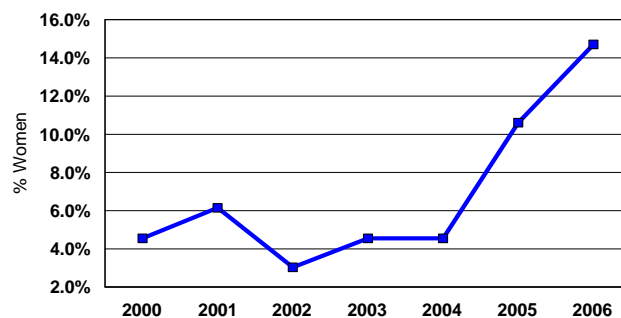
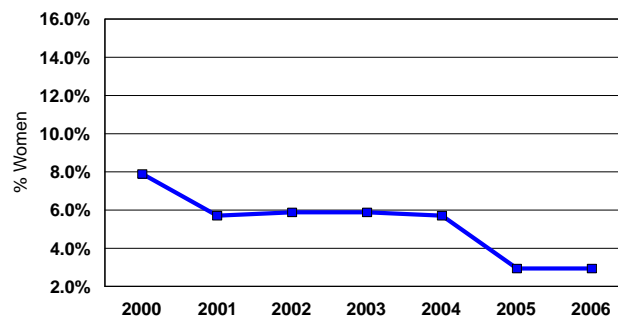


Figure 11. Percent Women Center Directors
Physical & Biological Science Faculty Only



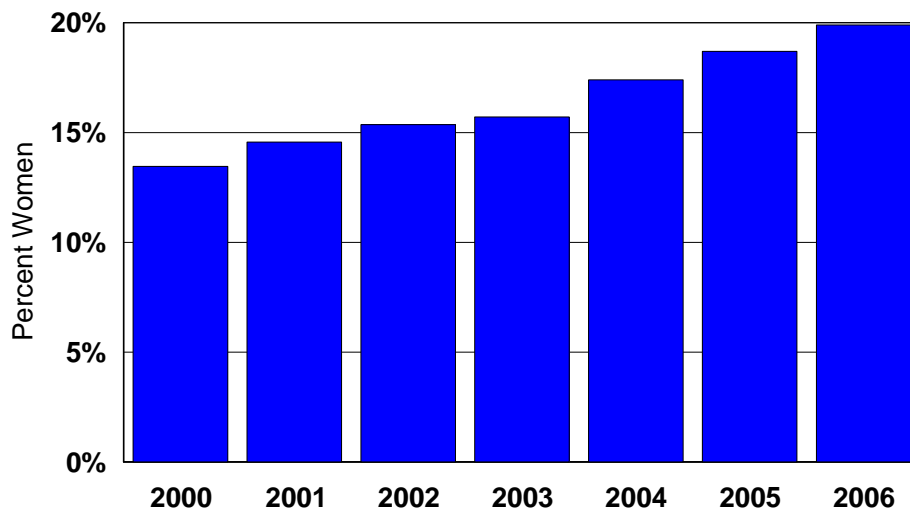
Overall we can see a large increase in the percentage of women PS and BS faculty who are entering formal leadership positions at UW-Madison. The year 2002 seemed to be a low point, with rapid increases after that. Much of the change is driven by the large increase in women department chairs in the approximately 70 departments comprising the physical and biological sciences. In 2002 we had only 2 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 3 in 2002 to only 1 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. This might be an area for future WISELI intervention.

Findings: Over the course of WISELI's tenure, the number of women department chairs in PS and BS departments has increased dramatically, while the number of women in other formal administrative leadership positions has remained stagnant. Future WISELI efforts might focus on women's leadership of centers and institutes.

Recommendations: Continue tracking these leadership positions, and begin tracking the race/ethnicity of our administrative leaders as well.

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.

**Figure 12. Percentage of Endowed Professors Who Are Women
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 12”, 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*.

Figure 13a. Percentage of Major Prizes Awarded to Women*
All Divisions

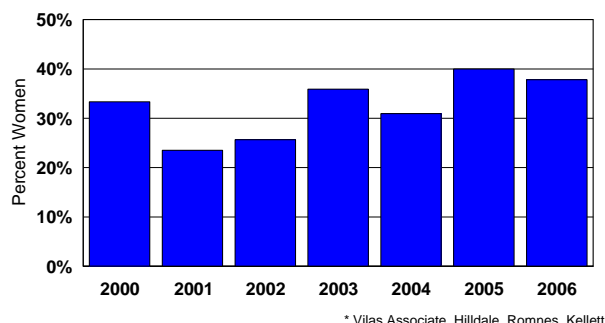
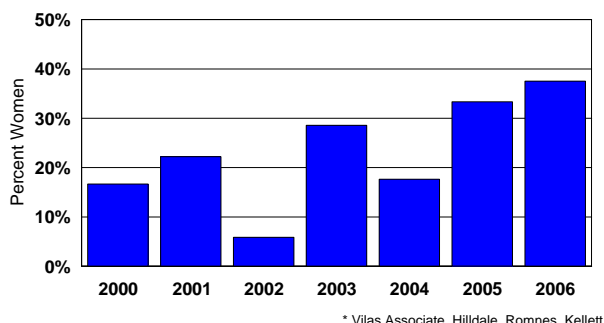


Figure 13b. Percentage of Major Prizes Awarded to Women*
Physical & Biological Science Faculty Only



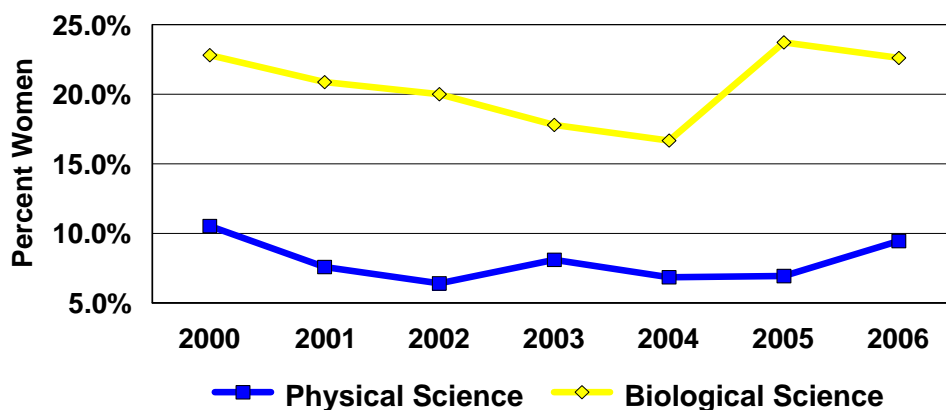
When all divisions of faculty are combined, we see some improvement in the percentages of women receiving these four prestigious campus awards over time. We see a similar improvement when only the PS and BS faculty are tracked. The trend is increasing percentages of women, except that 2004 seemed to 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. The report submitted to the Graduate School deans is reproduced in Appendix 3.

Findings: Women at UW-Madison are generally increasing their representation among the recipients of the most prestigious awards on campus, including women in the PS and BS departments. However, there are some specific awards and processes that are in need of attention; educating evaluation committees for these particular awards is recommended.

Recommendations: Continue to track these important campus awards, and begin tracking for race/ethnicity as well. In the future, it might be worthwhile to break down the endowed professorships data by division as well as by gender/race.

Committee memberships. 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 track a number of key committees.

**Figure 14. Percent Women Committee Members*
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.)

Findings: While declines in the participation of women on important campus committees from 2000-2004 look alarming, women's participation has generally been consistent with their 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.)

Recommendations: Continue to track women's participation in these important campus committees, and track the participation of ethnic and racial minorities as well.

Allocation of resources for biological and physical science faculty by 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 men³. At UW-Madison,

³ West, Martha S. and John W. Curtis. 2006. "Organizing Around Gender Equity." AAUP Gender Equity Indicators 2006. <http://www.aaup.org/AAUP/pubsres/research/geneq2006toc.htm>.

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 reviews⁴. A review of faculty perceptions of the gender pay equity studies and policies at UW-Madison was completed in April 2006 by WISELI⁵.

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.

Figure 15a. Women's Median Salary as % of Men's Median Salary
Physical Science Departments

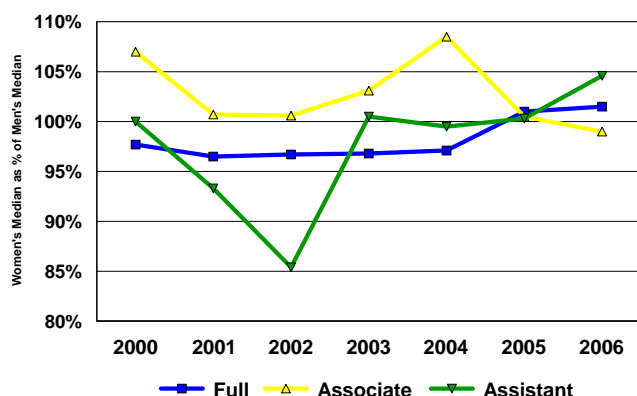
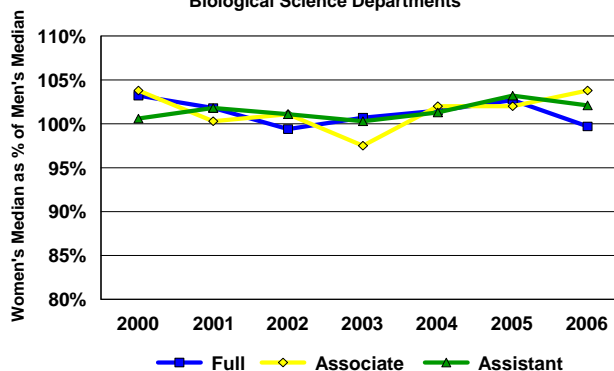


Figure 15b. Women's Median Salary as % of Men's Median Salary
Biological Science Departments



The first thing to note is that there is a great deal more variation in the PS departments than in the BS departments. 2002 was an especially bad year for women 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, appear 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.

Findings: 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.

Recommendations: Continue 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

⁴ Faculty Salary Equity Review policy. <http://www.provost.wisc.edu/salaryequitypolicy.html>.

⁵ Winchell, Jessica K. and Christine Maidl Pribbenow. April 2006. "Evaluation of the Gender Pay Equity Study and Equity of Faculty Salaries Policy at the University of Wisconsin-Madison."

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.

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)⁶, 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.

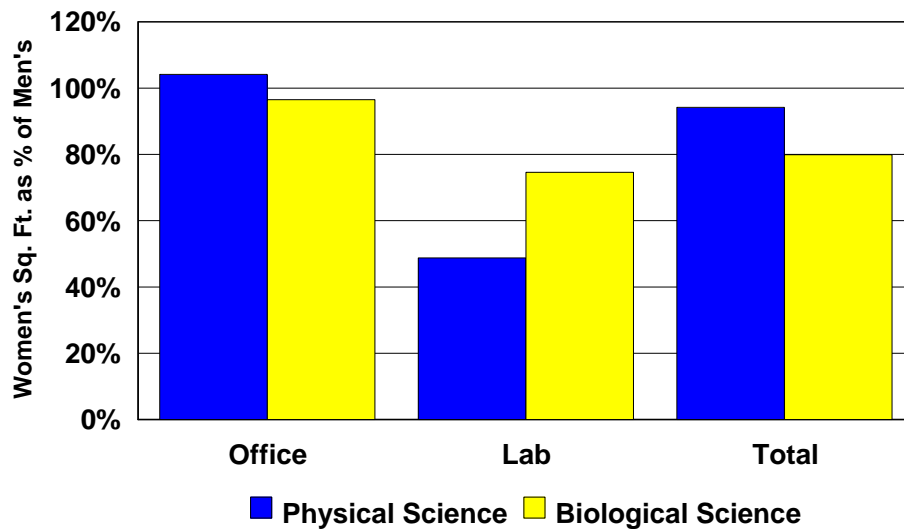
Data were gathered at the school/college level. Requests were made to the deans of the six schools/colleges with whom WISELI works⁷ for lists of faculty office and lab space square footage. Not all schools/colleges provided data in the same format, and some did not provide data at all. L&S provided only 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. Over 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 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.

⁶ 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>.

⁷ 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).

Figure 16. 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.

Table 4. Gender Differences in Lab Space (Sq. Ft.) in Three UW-Madison Colleges*

	Model 1: Without Control			Model 2: With Control		
	B	SE	Pr> t	B	SE	Pr> t
Female	-355.97	(172.71)	0.0409	-252.66	(165.97)	0.13
Ln(Total Grant Dollars)				225.63	(39.93)	<.0001
Intercept	1019.13	(69.41)	<.0001	-2221.14	(577.89)	0.0002
Adjusted R-Square		0.0199			0.182	
N		160			156	

* College of Engineering, School of Veterinary Medicine, School of Pharmacy

Because office space, and total combined office/lab space, appear 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. Now that leadership in each of the non-participating colleges has changed, the time may be right for a new look at this question of whether lab space at UW-Madison is allocated fairly.

Findings: 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.

Recommendation: 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*⁸, 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.

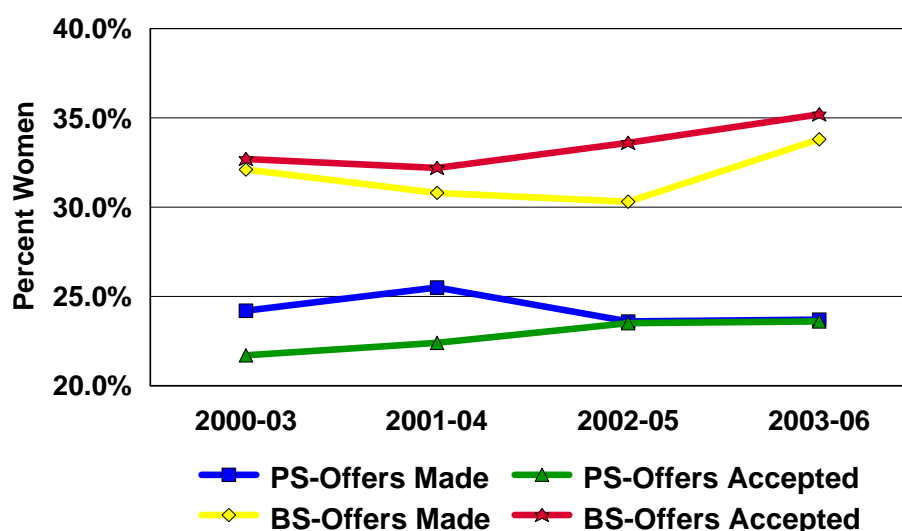
It took some time to arrange collection of the starting salary and startup data, as WISELI had to make arrangements with each of the 6 schools/colleges to obtain it; these data were not available centrally. In 2003, we collected the data for the first time, asking for the data back to 2000. As we began 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

⁸ Babcock, Linda and Sara Laschever. 2003. *Women Don't Ask: Negotiation and the Gender Divide*. Princeton University Press.

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 report three outcomes using the offer data. First, we examine the gender distributions of offers made and offers accepted. It is helpful to know whether women in STEM are getting offers from UW-Madison but not accepting them, or whether they just aren't getting the offers, if increasing the numbers of women faculty is a goal.

Figure 17. Percent Female, New Faculty Offers



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 2002-05 years, this seems to have been corrected, and now the percentages 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. Thus, 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.

We next 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:

Figure 18a. Women's Median Starting Salary as % of Men's Untenured Faculty Only

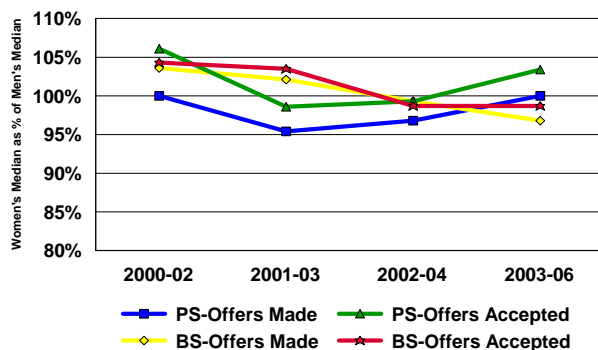
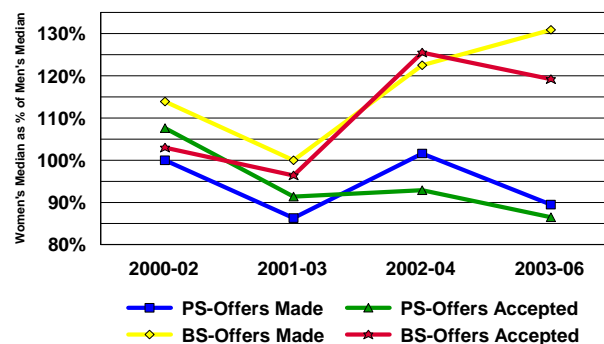


Figure 18b. Women's Median Starting Salary as % of Men's Tenured Faculty Only



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 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 ratio is almost at parity. The story is different for senior women, however. In the PS departments, it is clear that women faculty are not in general 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.

Finally, we examined startup packages. Although Toolkit 1 recommends separating startup packages into components for analysis (e.g., moving expenses, equipment, RAs/PAs, etc.), we found that looking at total startup was probably adequate for UW-Madison. The main reason is that most new faculty get all of their startup in one large fund. Even if the offer letter specifies how much they will receive for each spending category, in reality the funds are flexible and faculty can spend them any way they want upon arrival. A faculty member who does not spend his or her entire moving allowance does not lose the balance, but rather has that amount available to spend on a computer or towards a student hourly worker. The exception to this is course release.

We analyzed total startup 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.

Figure 19a. Women's Median Total Startup as % of Men's Untenured Faculty Only

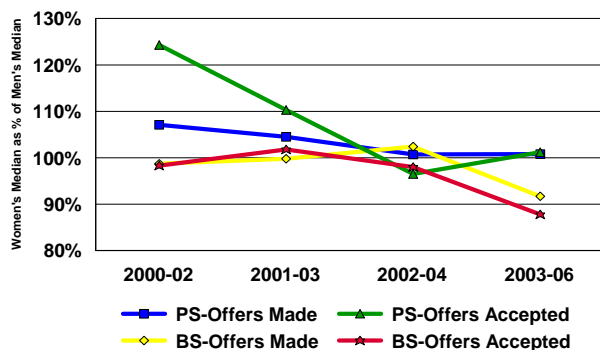
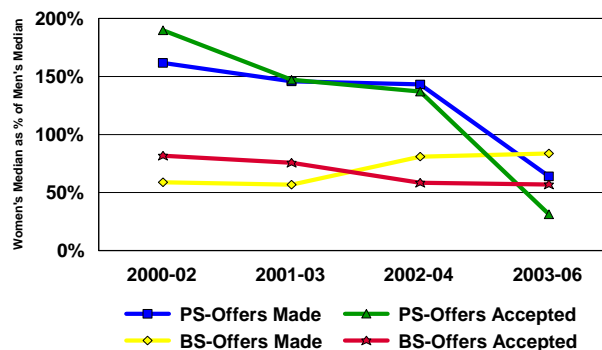


Figure 19b. Women's Median Total Startup as % of Men's Tenured Faculty Only



For junior faculty, there were clearly some women with very high startup that 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 percent 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.

Findings: 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.

Recommendations: Continue to track offers, starting salary, and startup. Reporting median starting salary and startup funds only for all offers would be adequate; additional analyses of medians for accepted offers could be performed if needed. Reporting the range of salary and startup is also probably not necessary. A new analysis of equity in who receives teaching release would add valuable information to these analyses, although it would be necessary to ensure that these data have been collected uniformly across all colleges (some colleges only report a total startup number and do not specifically note when a teaching release has been

granted.) As with all other indicators in this report, similar analyses for racial/ethnic groups should be added.

Summary of Findings and Recommendations

As WISELI moves forward without major support from NSF, we have the opportunity to refine the collection of our “indicator” data, retaining those indicators which have been useful, modifying those that are important but not quite what are needed, and eliminating those that do not inform about the status of women faculty in the BS and PS departments at the UW-Madison. We also have the opportunity to look at the trends over the past five years, and determine some future directions for WISELI.

In the future, WISELI should continue to annually track (Table numbers refer to ORIGINAL NSF 12 indicator):

- Numbers and percentages of women faculty (FTE), by department and rank (Table 2)
- Tenure promotion outcomes by gender (Tables 3a and 3b)
- Attrition rates by gender (Table 5b)
- Numbers and percentages of women new hires, by department and tenure status (Table 13)
- Numbers and percentages of women faculty in department chair, dean, center director, and central administration positions (Tables 7a-7d)
- Numbers and percentages of women faculty receiving endowed/named professorships (Table 8)
- Numbers and percentages of women faculty receiving Vilas Associate, Hilledale, Romnes, and WARF Kellet awards (Table 8)
- Numbers and percentages of women faculty serving on key campus committees, especially Faculty Senate, Divisional Committees, and Graduate School Executive and Research Committees (Table 9)
- Median salary of women and men faculty, by rank and department (Table 10b)
- Startup packages, starting salaries, and offers made to men and women faculty, by department and tenure status (Tables 12a-12c).

Changes to the process followed in the past include:

- No longer need to report Tables 1, 4, 5a, 6, 10a
- Named professorships and major campus awards (Table 8) should be broken out by division as well as by funding/award source
- University committee membership should be broken out by division (Table 9)
- Ranges of starting salary and startup packages need not be reported in Tables 12b and 12c
- Only the most recent year of new hire demographics need be reported in Table 13.

Some indicators need to be collected/analyzed only every five years, including:

- Numbers and percentages of women on non-tenure-track positions, by track (research, teaching, clinical) and division (Table 6)

- Office and laboratory space by department and gender, with controls for rank and grant funding (Tables 11a-11c)
- A report such as this reporting 5-year trends in gender equity should be prepared and disseminated.

Some additional recommendations for future directions of WISELI based on the findings above include:

- Data that is parallel to all of the tables and reports outlined above should be collected to ascertain the status of faculty of color at the UW-Madison, including a 5-year report similar to this gender equity report
- Investigate in detail 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 Hildale, 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, and explore ways to analyze office/lab *location* as an enhancement of this study.

Overall, the “NSF 12” indicators provide evidence 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.

Appendix 1: The Original NSF 12 Indicators

(Reproduced from “Toolkit for Reporting Progress Toward NSF ADVANCE: Institutional Transformation Goals, Appendix 1.” Pages 24-25.)

Evolution of the Reporting Requirements

How did these reporting requirements evolve? In April 2002, the nine first-round ADVANCE: IT awardees met at their first PI meeting. The last session of the meeting consisted of a brainstorming session and discussion about what data we thought would be essential to collect to document women’s relative status. The 1999 MIT Report formed the basis for much of the discussion. There were a number of issues that were important during the discussion. First, the ADVANCE: IT awards had been set up as cooperative agreements, which meant that awardees would have a certain amount of leverage to gain access to data that is sometimes not readily available. So, during the discussion, there was a strong sense that this was an opportunity to have more comprehensive data than what we may have been able to previously access given that our institutions had formally agreed to do so. Second, there was much debate concerning the “ease” of collecting each of the indicators. After the list of indicators had been generated representatives from each school indicated the ease with which they thought they could comply with the reporting requirement:

- (1) “can do easily”
- (2) “not easy, but would like to do”
- (3) “just can’t do, i.e., no way”

After discussing these issues, the group agreed on 12 indicators of institutional transformation, which are shown later in this appendix. In addition to the 12 initial indicators, the group reached a consensus that data from climate surveys, productivity analysis, and analysis of family/work friendly policies would also be important to gather. At the time, none of the institutions had collected all of the data or set up reporting for the indicators, so the first-round awardees informally collaborated with each other on how to set up tables for reporting. Finally, the first round awardees were keenly aware of the opportunity to collect a number of indicators across institutions to serve both an evaluative purpose for the ADVANCE: IT program and a research purpose of understanding the impact of different approaches to institutional change upon women’s status in STEM. The PIs were interested in developing a dataset that could be used to accomplish these goals, while serving as a model for other institutions that wanted to study the status of women.

For the 2003 PI meeting, Frehill attempted to compile a common dataset based upon the reports of all ADVANCE: IT institutions⁹. She found that it was impossible to make the kinds of comparisons that were originally of interest to ADVANCE: IT awardees. At the 2004 ADVANCE conference she presented a new set of indicators. This presentation led to the formation of the ADVANCE: IT Indicators Working Group, which convened in January 2005, under Lisa Frehill’s leadership, to evaluate the previous recommendations and make new ones.

⁹ Frehill examined reports or data from: UC-Irvine, University of Colorado, Georgia Tech, University of Michigan, NMSU, University of Washington and University of Wisconsin.

(Reproduced from “Core Data.doc”; list of indicators generated at the April 2002 ADVANCE PI meetings. NSF: Washington, DC.)

Baseline – 2000 and 2001

Rate: (1) Can do easily

(2) Not easy but would like to do

(3) Just can't do – i.e., no way

[Where possible, it would be helpful to have ethnicity on many outcomes.]

Number and percentage of women faculty in science/engineering

- by dept.

Number of women in tenure-line positions by rank

- by department

- by ethnicity (?)

Tenure promotion outcomes – baseline (handful of years prior to) and during grant

Years in rank by gender

Time at institution and differential attrition

Numbers of women in non-tenure track positions

- teaching

- research

Number and percent of women scientists and engineers in administrative positions (from chair up, including Center/Institute Directors)

Number of women scientists and engineers in endowed/named chairs

Number and percentage of women scientists and engineers on promotion and tenure committees (college-wide and higher)

Salary of scientists and engineers (controlling for department, rank, years in rank)

Space allocation by faculty (women versus men faculty with additional controls)

Start-up packages (desirable; need to be able to be clear about components, including controls)

(Reproduced from "Rankings-numbered.doc"; list of indicators generated at the April 2002 ADVANCE PI meetings. NSF: Washington, DC.)

Outcome	1	2	3
1. # and % of women faculty in science/engineering by department	9		
2. # and % of women I tenure-line positions by rank and department	9		
3. Tenure promotion outcomes by gender	4	5	
4. Years in rank by gender	8	1	
5.a.Time at institution and b.attrition by gender	9, 5	0,3	0,1
6. # of women in S & E who are in non-tenure-track positions (teaching and research)	5	3	1
7. # and % of women scientists and engineers in administrative positions	8	1	
8. # of women S & E faculty in endowed/named chairs	5	4	
9. # and % of women S & E faculty on promotion and tenure committees	7	2	
10. Salary of S & E faculty by gender (controlling for department, rank, years in rank)	6	3	
11. Space allocation of S & E faculty by gender (with additional controls such as dept., etc.)	4	2	3
12. Start-up packages of newly hired S & E faculty by gender (with additional controls such as field/department, rank, etc.)	3	4	2

Baseline – 2000 and 2001

Rate: (1) Can do easily

(2) Not easy but would like to do

(3) Just can't do – i.e., no way

Non-institutional Indicators

Climate

Productivity

Family/work-friendly policies

Appendix 2: Departmental Division Assignments

Physical Sciences

Biological Systems Engineering
Soil Science
Chemical & Biological Engineering
Civil & Environmental Engineering
Electrical & Computer Engineering
Biomedical Engineering
Industrial Engineering
Mechanical Engineering
Materials Science & Engineering
Engineering Physics
Engineering Professional Development
Astronomy
Chemistry
Computer Sciences
Geology & Geophysics
Mathematics
Atmospheric & Oceanic Sciences
Physics
Statistics

Biological Sciences

Agronomy
Animal Science
Bacteriology
Biochemistry
Dairy Science
Entomology
Food Microbiology & Toxicology
Food Science
Genetics
Horticulture
Nutritional Sciences
Plant Pathology
Forest Ecology & Management
Natural Resources - Wildlife Ecology
Kinesiology
Nelson Institute for Environmental Studies
Botany
Communicative Disorders
Zoology
Anatomy

Anesthesiology
Biostatistics & Medical Informatics
Family Medicine
Genetics
Obstetrics & Gynecology
Medical History & Bioethics
Human Oncology
Medicine
Dermatology
Medical Microbiology
Medical Physics
Neurology
Neurological Surgery
Oncology
Ophthalmology & Visual Sciences
Orthopedics & Rehabilitation
Pathology & Laboratory Medicine
Pediatrics
Pharmacology
Biomolecular Chemistry
Physiology
Population Health Sciences
Psychiatry
Radiology
Surgery
School of Pharmacy
Animal Health & Biomedical Sciences
Medical Sciences
Pathobiological Sciences
Comparative Biosciences
Surgical Sciences

Social Studies

Agricultural & Applied Economics
Life Sciences Communication
Rural Sociology
Natural Resources-Landscape Architecture
Urban & Regional Planning
School of Business
Counseling Psychology
Curriculum & Instruction
Educational Leadership & Policy Analysis
Educational Policy Studies
Educational Psychology
Rehabilitation Psychology & Special Education
School of Human Ecology
Law School

Anthropology
Afro-American Studies
Communication Arts
Economics
Ethnic Studies
Geography
LaFollette School of Public Affairs
School of Journalism & Mass Communication
School of Library & Information Studies
Political Science
Psychology
Social Work
Sociology
Urban & Regional Planning
School of Nursing
Professional Development & Applied Studies

Humanities

Art
Dance
African Languages & Literature
Art History
Classics
Comparative Literature
East Asian Languages & Literature
English
French & Italian
German
Hebrew & Semitic Studies
History
History of Science
Linguistics
School of Music
Philosophy
Scandinavian Studies
Slavic Languages
Languages & Cultures of Asia
Spanish & Portuguese
Theatre & Drama
Women's Studies Program
Social Sciences
Liberal Studies & the Arts

Appendix 3: Gender Equity in Four Major Graduate School Awards and Honors



Gender Equity in Four Major Graduate School Awards and Honors

In March, 2005, the recipients of the Romnes Fellowships and the Kellett Mid-Career awards were announced, and none went to women in the biological or physical sciences divisions. Concerned that there might be gender bias inherent in the process for choosing these awards, the Graduate School researched and made available data on the gender distribution of the nomination pools and awards for these and two other prestigious honors chosen by the Graduate School Research Committees (Vilas Associate awards, and WARF Professorships.)

To answer the question of whether there is gender bias in the selection of recipients of four major Graduate School awards, it is important to look separately at the nomination pools and the awards, because the remedy might be different depending on the stage in the process at which women become underrepresented. Table 1 presents the actual numbers of women and men being nominated for and achieving four Graduate School honors, while table 2 calculates the probability of achieving at least the observed numbers of women in the nomination pool and awards, given the numbers available at the previous stage, and assuming each person has an equal chance at making it to the next stage. For example, in 2000-2003, approximately 9.0% of all faculty in physical sciences are women. The probability is .3842 that of the 70 nominations for the Vilas Associate Award received, at most 5 were nominations for women—less than even odds. Throughout Table 2, I have set to **BOLD** those probabilities less than 0.5 as indicating cases where women are underrepresented, given their availability and assuming equal chances of selection. The findings include:

1. Although it looks bad to see so few women in the Physical Sciences receiving these awards, considering the pool there is really fairly good representation in both the nomination and award pool in the last three years. The exception is the Kellett Mid-Career Award, but even that is not completely improbable, given that only three were awarded in the past three years.
2. Things seem to be getting worse for women in the Biological Sciences Division. For most of the awards (all but Vilas), the probability of having so few women in the award group is small, given the nomination pool. There are few Biological Sciences women being chosen for these honors, and at the same time the percentage of women in the nomination pool is rising, making

these omissions especially glaring. No women in Biological Sciences have won a Romnes, Kellett, or WARF professorship since 2001/02, despite being 20%-30% of the nomination pools. The good news is that discrepancies in the nomination pools for Biological Sciences that existed in the 2000-03 timeframe seem to have disappeared in the current (2003-06) period.

3. The problems for the Social Studies and Humanities divisions occur primarily at the highest level of award—the WARF named professorships. Both divisions have a rather bad record of nominating their women faculty for these professorships (in the 2000-03 period, only 8.3% of Social Studies nominations were for women, out of a pool that is approximately 27.3% women! This improved by 2003-06, but is still not equitable.) In addition, the Humanities division did not award even one of these professorships to women in the 2003-06 period—a double-whammy.

From these observations, some recommendations:

1. While all of these committee members could undoubtedly do with some education about the effects of biases and assumptions on the evaluation process, the Biological Sciences committee in particular might be a good place to start.
2. While all Department Chairs need reminders about the importance of nominating their women faculty for awards and honors, those in the Social Studies and Humanities divisions in particular seem to need a nudge. Perhaps these departments less often have standing awards committees?
3. Are the chairs preparing nomination packets for women that are as good as the ones prepared for men? These data tell us little about the actual content of the nomination packets. Letters are such an important part of the nomination packages for these awards, and we know that letters written for women tend to have many features that would downgrade the women's accomplishments (Trix and Psenka 2003). Perhaps all faculty, especially department chairs, need training on how to write a good letter of recommendation that is free of bias.

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April 21, 2005

Table 1. Selected Graduate School Awards and Nominations, by Gender

	2000-2003						2003-2006					
	Nominations			Awards			Nominations			Awards		
	Women	Men	% Women	Women	Men	% Women	Women	Men	% Women	Women	Men	% Women
Vilas (All Ranks)												
Physical Sciences	5	65	7.1%	4	30	11.8%	9	35	20.5%	4	14	22.2%
Biological Sciences	11	31	26.2%	6	21	22.2%	10	12	45.5%	5	4	55.6%
Social Studies	27	32	45.8%	13	21	38.2%	16	30	34.8%	7	15	31.8%
Humanities	35	30	53.8%	21	14	60.0%	24	35	40.7%	12	17	41.4%
ALL DIVISIONS	78	158	33.1%	44	86	33.8%	59	112	34.5%	28	50	35.9%
Romnes (Associate)												
Physical Sciences	3	16	15.8%	1	3	25.0%	2	17	10.5%	1	3	25.0%
Biological Sciences	4	20	16.7%	1	5	16.7%	6	14	30.0%	0	4	0.0%
Social Studies	6	6	50.0%	2	2	50.0%	9	11	45.0%	2	2	50.0%
Humanities	6	7	46.2%	1	3	25.0%	6	9	40.0%	3	1	75.0%
ALL DIVISIONS	19	49	27.9%	5	13	27.8%	23	51	31.1%	6	10	37.5%
Kellett (Full)												
Physical Sciences	1	20	4.8%	1	4	20.0%	4	14	22.2%	0	3	0.0%
Biological Sciences	2	30	6.3%	0	5	0.0%	9	27	25.0%	0	5	0.0%
Social Studies	5	16	23.8%	2	3	40.0%	6	15	28.6%	2	2	50.0%
Humanities	7	13	35.0%	1	4	20.0%	10	15	40.0%	1	2	33.3%
ALL DIVISIONS	15	79	16.0%	4	16	20.0%	29	71	29.0%	3	12	20.0%
Named Professorship (Full)												
Physical Sciences	0	13	0.0%	0	5	0.0%	3	13	18.8%	1	3	25.0%
Biological Sciences	0	18	0.0%	0	5	0.0%	5	20	20.0%	0	3	0.0%
Social Studies	1	11	8.3%	0	3	0.0%	3	11	21.4%	1	2	33.3%
Humanities	2	5	28.6%	2	1	66.7%	3	9	25.0%	0	4	0.0%
ALL DIVISIONS	3	47	6.0%	2	14	12.5%	14	53	20.9%	2	12	14.3%

Table 2. Binomial Probability of Gender Composition for Selected Graduate School Awards

	2000-2003					2003-2006				
	% women			Probability		% women			Probability	
	Pool	Nominations	Awards	Nominated	Awarded	Pool	Nominations	Awards	Nominated	Awarded
Vilas (All Ranks)										
Physical Sciences	9.0%	7.1%	11.8%	0.3842	0.9081	10.7%	20.5%	22.2%	0.9843	0.6991
Biological Sciences	19.6%	26.2%	22.2%	0.8948	0.4146	21.5%	45.5%	55.6%	0.9970	0.8271
Social Studies	33.7%	45.8%	38.2%	0.9805	0.2403	35.3%	34.8%	31.8%	0.5404	0.4822
Humanities	37.0%	53.8%	60.0%	0.9980	0.8155	39.8%	40.7%	41.4%	0.6080	0.6088
ALL DIVISIONS	24.3%	33.1%	33.8%	0.9991	0.6162	26.2%	34.5%	35.9%	0.9936	0.6511
Romnes (Associate)										
Physical Sciences	13.1%	15.8%	25.0%	0.7692	0.8800	8.6%	10.5%	25.0%	0.7787	0.9425
Biological Sciences	23.2%	16.7%	16.7%	0.3171	0.7368	26.6%	30.0%	0.0%	0.7327	0.2401
Social Studies	43.1%	50.0%	50.0%	0.7817	0.6875	36.7%	45.0%	50.0%	0.8409	0.7585
Humanities	44.8%	46.2%	25.0%	0.6487	0.3723	46.2%	40.0%	75.0%	0.4140	0.9744
ALL DIVISIONS	30.2%	27.9%	27.8%	0.4002	0.6848	29.3%	31.1%	37.5%	0.6114	0.7983
Kellett (Full)										
Physical Sciences	5.7%	4.8%	20.0%	0.6583	0.9794	8.1%	22.2%	0.0%	0.9881	0.4705
Biological Sciences	12.5%	6.3%	0.0%	0.2182	0.7242	13.6%	25.0%	0.0%	0.9813	0.2373
Social Studies	27.3%	23.8%	40.0%	0.4711	0.9086	30.4%	28.6%	50.0%	0.5339	0.9267
Humanities	32.0%	35.0%	20.0%	0.7071	0.4284	34.1%	40.0%	33.3%	0.7992	0.6480
ALL DIVISIONS	18.2%	16.0%	20.0%	0.3382	0.7957	20.4%	29.0%	20.0%	0.9849	0.3268
Named Professorship (Full)										
Physical Sciences	5.7%	0.0%	0.0%	0.4636	1.0000	8.1%	18.8%	25.0%	0.9651	0.8381
Biological Sciences	12.5%	0.0%	0.0%	0.0902	1.0000	13.6%	20.0%	0.0%	0.8868	0.5120
Social Studies	27.3%	8.3%	0.0%	0.1205	0.7703	30.4%	21.4%	33.3%	0.3427	0.8819
Humanities	32.0%	28.6%	66.7%	0.6009	0.9767	34.1%	25.0%	0.0%	0.3712	0.3164
ALL DIVISIONS	18.2%	6.0%	12.5%	0.0123	0.9327	20.4%	20.9%	14.3%	0.6072	0.4150

WISELI Research/Evaluation Report:

Pribbenow, Christine Maidl; Jennifer Sheridan; Brenda Parker; Jessica Winchell; Deveny Benting; Kathy O'Connell; Cecilia Ford; Ramona Gunther; and Amy Stambach. July 2007. "Summative Evaluation Report of WISELI: The Women in Science and Engineering Leadership Institute."

http://wiseli.engr.wisc.edu/initiatives/researcheval/FINAL_WISELI_Sum_Eval_Report.pdf .



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

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Table of Contents

Summary of Findings	6
Background	20
Evaluation Design	20
Research Questions	21
Sources of Data and Methods of Collection	22
Chapter I: Evaluation of WISELI, Overall.....	26
The Effects of WISELI: A View from the Top	26
The Effects of WISELI: A View from the Trenches	28
Enhanced Awareness of Gender Issues	28
Mentorship, Leadership, and Advocacy	31
WISELI, the Center of Research	32
WISELI Research: Campus Value of WISELI Results from Surveys, 2003 and 2006	34
Summary: Evaluation of WISELI, Overall.....	35
Chapter II: The Climate at UW-Madison	37
WISELI Research: UW Climate Results from Surveys, 2003 and 2006.....	40
Summary: The Climate at UW-Madison	44
Chapter III: Departmental Climate.....	45
Perceptions of Change	45
WISELI Research: Departmental Climate Results from Surveys, 2003 and 2006.....	54
WISELI Issue Study #1: Department Chair and Climate	64
Perceptions of Climate.....	64
Workplace Interactions	64
WISELI Initiative: Climate Workshops for Department Chairs.....	70
WISELI Evaluation: Climate Workshops for Department Chairs.....	73
Evaluation by Workshop Participants.....	74
Summary: Departmental Climate	79
Chapter IV: Hiring Practice and Policies.....	81
WISELI Research: Hiring Trends and Survey Results through 2006	81
Percentages of Female Faculty in STEM.....	81
Hiring Trends	81
Recruitment of Female and Minority Faculty.....	82
Accepting a Position at UW	84
Experience of New Hires	85
WISELI Initiative: Searching for Excellence & Diversity Workshops	86
Evaluation of the Workshops by Participants	87
Evidence of Workshop Success	89
WISELI Research: Hiring Workshop Results from Surveys, 2003 and 2006.....	91
Effects of the Workshops on Offers and Hires	93
WISELI Evaluation: Dual Career Hiring Program	97
WISELI Issue Study #2: Why Women Leave and Dual Career Hiring Study	98
Summary: Hiring Practice and Policies	102
Chapter V: Leadership.....	105
Leadership Roles and Experiences	105
Motivations for Current and Future Leadership Roles	106

Rewards and Benefits of Leadership	107
Drawbacks of Leadership Positions.....	108
Leadership, by the Numbers	110
Campus Committee Leadership.....	111
Interest in Formal Leadership	112
Summary: Leadership	115
Chapter VI: Networking and Visibility	117
WISELI Initiative: Town Hall Meetings	117
Electronic Means of Networking.....	118
WISELI Initiative: Documentary Series	120
WISELI Initiative: Celebrating Women in Science and Engineering Grant Program	121
WISELI Evaluation: Celebrating Women Grant Program	121
WISELI Initiative: Seminar Series	122
WISELI Evaluation: Seminar Series	124
General Patterns of WISELI Seminar Attendance.....	124
Topics of Interest and Benefits of Seminars	126
Networking: Areas for Improvement.....	128
Summary: Networking and Visibility.....	129
Chapter VII: Tenure Process and Policies	131
Female Faculty Perspectives on Tenure and Success	132
Parenting and Academic Careers	132
Tenure-related Policies and other Institutional Supports.....	135
WISELI Evaluation: The Tenure Clock Extension Policy at UW-Madison	137
The Tenure Process at UW-Madison.....	138
Summary: Evaluation of the Tenure Clock Extension Policy	139
WISELI Issue Study #3: Moving Academic Staff into Tenure-track Faculty Positions	139
Recommendations.....	140
Summary: Tenure Process and Policies.....	143
Chapter VIII: Work-Life Balance.....	145
Coping Strategies	146
WISELI Research: Work-life Balance Results from Surveys, 2003 and 2006	148
Balancing Professional and Personal Lives	148
Health Concerns.....	150
WISELI Initiative: Life Cycle Research Grants	150
Initial Life Cycle Research Grant Program	151
Current Vilas Life Cycle Research Professorship Program.....	152
WISELI Research: Life Cycle Grant's Use and Value results from Surveys, 2003 and 2006.....	157
WISELI Evaluation: Campus Childcare.....	158
Summary: Work-Life Balance.....	161
Chapter IX: Institutional Resources and other Gender Issues	164
WISELI Research: Examination of Institutional Resource Distribution by Gender	164
Office and Laboratory Space	164
Startup Packages and Starting Salary	166
Salary	168
WISELI Evaluation: Gender Pay Equity Study and Equity of Faculty Salaries Policy	169
WISELI Evaluation: Sexual Harassment Information Sessions.....	170

Chapter X: Satisfaction and the Decision to Stay or Leave	173
Areas of Satisfaction	174
Areas of Dissatisfaction	177
WISELI Research: Satisfaction and Attrition Results from Surveys, 2003 and 2006.....	178
Faculty Attrition.....	181
WISELI Issue Study #2: Why Women Leave	185
Summary: Satisfaction and the Decision to Stay or Leave	192
Chapter XI: WISELI-Funded Campus Research	194
The WISELI Discourse Study: Women Talking in Workplace Meetings.....	195
Ethnographic Studies	198
Laboratory Talk: Gendered Interactions and Research Progress in Graduate Science Education	198
Chapter XII: WISELI Continuation and Future Priorities	200
Institutionalize WISELI	200
Broaden the Focus.....	202
Continue to Develop and Expand Workshops	203
Lead the Discussion about “Leadership”	206
Continue to Function as a Center of Research.....	207
Disseminate Successful Interventions.....	209
Appendix A: Interview Methodology.....	211
Appendix B: Survey Methodology	223
Appendix C: Summative Evaluation Interviews.....	226

SUMMARY OF FINDINGS

Christine Maidl Pribbenow

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?***

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.

- 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 faculty, 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.

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.